

NEW ISSUES – BOOK-ENTRY ONLY

RATINGS: Moody's: "A1"
Fitch: "A"
SEE "RATINGS" HEREIN

In the opinion of Co-Bond Counsel, under existing law, (i) interest on the Series 2018A Bonds is excludable from gross income for federal income tax purposes, except for any period during which a Series 2018A Bond is held by a person who is a "substantial user" of the facilities financed or refinanced with the proceeds of the Series 2018A Bonds or a "related person" to such a "substantial user," each within the meaning of section 147(a) of the Internal Revenue Code, as amended, as described under "TAX MATTERS" herein and (ii) interest on the Series 2018A Bonds is an item of tax preference that is includable in alternative minimum taxable income for purposes of determining a taxpayer's alternative minimum tax liability. Furthermore, in the opinion of Co-Bond Counsel, under existing law, (i) interest on the Series 2018B Bonds is excludable from gross income for federal income tax purposes, and (ii) the Series 2018B Bonds are not "private activity bonds." See "TAX MATTERS" herein for a discussion of the opinion of Co-Bond Counsel.

\$415,770,000

**CITY OF HOUSTON, TEXAS
AIRPORT SYSTEM**



\$130,550,000
**SUBORDINATE LIEN
REVENUE AND
REFUNDING BONDS,
SERIES 2018A (AMT)**

\$285,220,000
**SUBORDINATE LIEN
REVENUE AND
REFUNDING BONDS,
SERIES 2018B (NON-AMT)**



Interest Accrual Date: Date of Delivery

CUSIP Prefix: 442349

Due: July 1, as shown on inside cover

This Official Statement is provided to furnish information in connection with the offering by the City of Houston, Texas (the "City") of its Airport System Subordinate Lien Revenue and Refunding Bonds, Series 2018A (AMT) (the "Series 2018A Bonds") and Subordinate Lien Revenue and Refunding Bonds, Series 2018B (Non-AMT) (the "Series 2018B Bonds" and together with the Series 2018A Bonds, the "Series 2018 Bonds").

Proceeds of the sale of the Series 2018A Bonds will be used to (i) provide financing for Authorized System Purposes, (ii) refund certain of the City's Outstanding Airport System Senior Lien Notes, (iii) fund the Subordinate Lien Bond Reserve Fund, and (iv) pay related costs of issuance of the Series 2018A Bonds. Proceeds of the sale of the Series 2018B Bonds will be used to (i) refund certain of the City's Outstanding Airport System Senior Lien Notes, (ii) refund certain of the City's Outstanding Airport System Subordinate Lien Bonds, (iii) fund the Subordinate Lien Bond Reserve Fund, and (iv) pay related costs of issuance of the Series 2018B Bonds. See "PURPOSE AND PLAN OF FINANCING."

The Series 2018 Bonds will be issued in fully registered form in denominations of \$5,000 or any integral multiple thereof. Interest on the Series 2018 Bonds will accrue from their Date of Delivery (as defined below) until maturity or prior redemption and is payable semi-annually on each July 1 and January 1, commencing July 1, 2018. The Bank of New York Mellon Trust Company, National Association (the "Paying Agent/Registrar") is the initial Paying Agent/Registrar.

The Series 2018 Bonds, when issued, will be registered in the name of Cede & Co., as registered owner and nominee for The Depository Trust Company, New York, New York ("DTC"), which will act as securities depository for the Series 2018 Bonds, until DTC resigns or is discharged. The Series 2018 Bonds will be available to purchasers only in book-entry form. For as long as Cede & Co. is the exclusive registered owner of the Series 2018 Bonds, the principal of and interest on the Series 2018 Bonds will be payable by the Paying Agent/Registrar to DTC, which will be responsible for making such payments to DTC Participants for subsequent remittance to the owners of beneficial interests in the Series 2018 Bonds. The purchasers of the Series 2018 Bonds will not receive certificates representing their beneficial ownership interests therein.

The Series 2018 Bonds are special obligations of the City which, together with the Outstanding Subordinate Lien Bonds and any Additional Subordinate Lien Bonds hereafter issued, are payable from, and equally and ratably secured by, a lien on the Net Revenues of the Houston Airport System, subject and subordinate to the prior and superior lien of Outstanding Senior Lien Obligations and Additional Senior Lien Obligations, if any, all as defined herein and provided in any ordinance authorizing the issuance of such obligations, and certain Funds established pursuant to such ordinances. See "COVENANTS AND TERMS OF THE ORDINANCE."

THE SERIES 2018 BONDS DO NOT CONSTITUTE AN INDEBTEDNESS OR GENERAL OBLIGATION OF THE CITY. OWNERS OF THE SERIES 2018 BONDS SHALL NEVER HAVE THE RIGHT TO DEMAND PAYMENT OF THE PRINCIPAL OF OR INTEREST ON THE SERIES 2018 BONDS FROM ANY FUNDS RAISED OR TO BE RAISED BY TAXATION.

The Series 2018 Bonds are subject to redemption prior to maturity, as described herein. See "THE SERIES 2018 BONDS – Redemption."

SEE INSIDE COVER PAGES FOR MATURITY, PRICING SCHEDULES, AND CUSIP NUMBERS

This cover page is not intended to be a summary of the terms of, or the security for, the Series 2018 Bonds. Investors are advised to read the Official Statement in its entirety to obtain information essential to the making of an informed investment decision.

The Series 2018 Bonds are offered by the Underwriters listed below when, as and if issued by the City and accepted by the Underwriters, subject to the approving opinion of the Attorney General of the State of Texas and the opinion of Bracewell LLP, Houston, Texas and Edgardo E. Colon, P.C., Houston, Texas, Co-Bond Counsel for the City, as to the validity of the issuance of the Series 2018 Bonds under the Constitution and the laws of the State of Texas. Certain matters will be passed upon for the City by its Special Disclosure Co-Counsel, Norton Rose Fulbright US LLP, Houston, Texas and West & Associates, LLP, Houston, Texas. Certain other legal matters will be passed upon for the Underwriters by its counsel, Greenberg Traurig, LLP, Houston, Texas. The Series 2018 Bonds are expected to be available for delivery through the facilities of DTC on or about March 20, 2018 ("Date of Delivery").

BofA Merrill Lynch

Citigroup

Ramirez & Co., Inc.

Fidelity Capital Markets

Mesirow Financial, Inc.

Siebert Cisneros Shank & Co., L.L.C.

MATURITY AND PRICING SCHEDULE

\$130,550,000
CITY OF HOUSTON, TEXAS
AIRPORT SYSTEM
SUBORDINATE LIEN REVENUE AND REFUNDING BONDS, SERIES 2018A (AMT)

CUSIP PREFIX 442349⁽¹⁾

Serial Bonds

<u>Maturity (July 1)⁽²⁾</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Initial Yield</u>	<u>CUSIP Suffix⁽¹⁾</u>
2019	\$3,150,000	5.000%	1.690%	AA4
2020	3,310,000	5.000	1.850	AB2
2021	3,475,000	5.000	2.050	AC0
2022	3,645,000	5.000	2.260	AD8
2023	3,830,000	5.000	2.450	AE6
2024	4,020,000	5.000	2.610	AF3
2025	4,220,000	5.000	2.800	AG1
2026	4,435,000	5.000	2.940	AH9
2027	4,660,000	5.000	3.050	AJ5
2028	4,890,000	5.000	3.130	AK2
2029	5,130,000	5.000	3.210 ⁽⁴⁾	AL0
2030	5,390,000	5.000	3.280 ⁽⁴⁾	AM8
2031	5,655,000	5.000	3.320 ⁽⁴⁾	AN6
2032	5,940,000	5.000	3.360 ⁽⁴⁾	AP1
2033	6,240,000	5.000	3.430 ⁽⁴⁾	AQ9
2034	6,550,000	5.000	3.490 ⁽⁴⁾	AR7
2035	6,880,000	5.000	3.510 ⁽⁴⁾	AS5
2036	7,225,000	5.000	3.520 ⁽⁴⁾	AT3
2037	7,585,000	5.000	3.530 ⁽⁴⁾	AU0

Term Bonds

\$34,320,000 Term Bonds Due July 1, 2041⁽²⁾⁽³⁾, Interest Rate 5.000%, Yield 3.540%⁽⁴⁾, CUSIP No.⁽¹⁾ 442349 AV8

- (1) CUSIP is a registered trademark of the American Bankers Association. CUSIP data contained herein is provided by CUSIP Global Services, which is managed on behalf of the American Bankers Association by S&P Global Market Intelligence. This data is not intended to create a database and does not serve as a substitute for the CUSIP Services. CUSIP numbers are provided for convenience of reference only. None of the City, the Co-Financial Advisors, or the Underwriters are responsible for the selection or correctness of the CUSIP numbers set forth herein.
- (2) The Series 2018A Bonds maturing on or after July 1, 2029, are subject to optional redemption by the City, in whole or from time to time in part, on or after July 1, 2028, at a redemption price of par plus accrued interest from the most recent interest payment date to, but not including, the redemption date.
- (3) Subject to mandatory sinking fund redemption as described in "THE SERIES 2018 BONDS – Redemption – Mandatory Sinking Fund Redemption."
- (4) Priced to result in stated initial yield to the first optional redemption date of July 1, 2028.

MATURITY AND PRICING SCHEDULE

\$285,220,000
CITY OF HOUSTON, TEXAS
AIRPORT SYSTEM
SUBORDINATE LIEN REVENUE AND REFUNDING BONDS, SERIES 2018B (NON-AMT)

CUSIP PREFIX 442349⁽¹⁾

Serial Bonds

Maturity (July 1) ⁽²⁾	Principal Amount	Interest Rate	Initial Yield	CUSIP Suffix ⁽¹⁾
2019	\$9,000,000	5.000%	1.540%	AW6
2020	9,435,000	5.000	1.660	AX4
2021	4,045,000	5.000	1.850	AY2
2022	8,910,000	5.000	2.000	AZ9
2023	1,485,000	5.000	2.200	BA3
2024	1,560,000	5.000	2.340	BB1
2025	17,790,000	5.000	2.530	BC9
2026	18,680,000	5.000	2.680	BD7
2027	19,610,000	5.000	2.770	BE5
2028	20,595,000	5.000	2.860	BF2
2029	63,120,000	5.000	2.950 ⁽⁴⁾	BG0
2030	66,280,000	5.000	3.000 ⁽⁴⁾	BH8
2031	1,590,000	5.000	3.080 ⁽⁴⁾	BJ4
2032	1,670,000	5.000	3.110 ⁽⁴⁾	BK1
2033	1,755,000	5.000	3.160 ⁽⁴⁾	BL9
2034	1,840,000	5.000	3.220 ⁽⁴⁾	BM7
2035	1,930,000	5.000	3.280 ⁽⁴⁾	BN5
2036	2,030,000	5.000	3.300 ⁽⁴⁾	BP0
2037	2,130,000	5.000	3.330 ⁽⁴⁾	BQ8
2038	2,240,000	5.000	3.340 ⁽⁴⁾	BR6

Term Bonds

\$12,970,000 Term Bonds Due July 1, 2043⁽²⁾⁽³⁾, Interest Rate 5.000%, Yield 3.420%⁽⁴⁾, CUSIP No.⁽¹⁾ 442349 BS4

\$16,555,000 Term Bonds Due July 1, 2048⁽²⁾⁽³⁾, Interest Rate 5.000%, Yield 3.470%⁽⁴⁾, CUSIP No.⁽¹⁾ 442349 BT2

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- (2) The Series 2018B Bonds maturing on or after July 1, 2029, are subject to optional redemption by the City, in whole or from time to time in part, on or after July 1, 2028, at a redemption price of par plus accrued interest from the most recent interest payment date to, but not including, the redemption date.
- (3) Subject to mandatory sinking fund redemption as described in "THE SERIES 2018 BONDS – Redemption – Mandatory Sinking Fund Redemption."
- (4) Priced to result in stated initial yield to the first optional redemption date of July 1, 2028.

THE SERIES 2018 BONDS HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON EXEMPTIONS CONTAINED IN SUCH ACT. THE REGISTRATION OR QUALIFICATION OF THE SERIES 2018 BONDS IN ACCORDANCE WITH APPLICABLE PROVISIONS OF SECURITIES LAW OF THE STATES IN WHICH THE SERIES 2018 BONDS HAVE BEEN REGISTERED OR QUALIFIED AND THE EXEMPTION FROM REGISTRATION OR QUALIFICATION IN OTHER STATES CANNOT BE REGARDED AS A RECOMMENDATION THEREOF. THE SERIES 2018 BONDS HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY MAY BE A CRIMINAL OFFENSE.

This Official Statement includes descriptions and summaries of certain events, matters and documents. Such descriptions and summaries do not purport to be complete and all such descriptions, summaries and references thereto are qualified in their entirety by reference to this Official Statement in its entirety and to each such document, copies of which may be obtained from the City. Any statements made in this Official Statement or the appendices hereto involving matters of opinion or estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that any of such opinions or estimates will be realized.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, its respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

This Official Statement is delivered in connection with the sale of securities referred to herein and may not be reproduced or used, in whole or in part, for any other purposes. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy nor shall there be any sale of the Series 2018 Bonds in any jurisdiction in which it is unlawful to make such offer, solicitation, or sale. No dealer, salesperson, or other person has been authorized by the City to give any information or to make any representation other than those contained herein, and, if given or made, such other information or representation must not be relied upon as having been authorized by the City, the Underwriters, or any other person. 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, create any implication that there has been no change in the matters described herein since the date hereof.

The prices and other terms respecting the offering and sale of the Series 2018 Bonds may be changed from time to time by the Underwriters after such Series 2018 Bonds are released for sale, and the Series 2018 Bonds may be offered and sold at prices other than the initial offering prices, including to dealers who may sell the Series 2018 Bonds into investment accounts.

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

THIS OFFICIAL STATEMENT CONTAINS "FORWARD-LOOKING" STATEMENTS WITHIN THE MEANING OF SECTION 21E OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED. SUCH STATEMENTS MAY INVOLVE KNOWN AND UNKNOWN RISKS, UNCERTAINTIES AND OTHER FACTORS WHICH MAY CAUSE THE ACTUAL RESULTS, PERFORMANCE AND ACHIEVEMENTS TO BE DIFFERENT FROM THE FUTURE RESULTS, PERFORMANCE AND ACHIEVEMENTS EXPRESSED OR IMPLIED BY SUCH FORWARD-LOOKING STATEMENTS. INVESTORS ARE CAUTIONED THAT THE ACTUAL RESULTS COULD DIFFER MATERIALLY FROM THOSE SET FORTH IN THE FORWARD-LOOKING STATEMENTS.

City of Houston, Texas

ELECTED OFFICIALS

Sylvester Turner, Mayor

Chris B. Brown, City Controller

CITY COUNCIL

Council Member, District A.....	Brenda Stardig	Council Member, District I.....	Robert Gallegos
Council Member, District B.....	Jerry Davis	Council Member, District J.....	Mike Laster
Council Member, District C.....	Ellen Cohen	Council Member, District K.....	Larry Green*
Council Member, District D.....	Dwight Boykins	Council Member, At-Large Position 1.....	Mike Knox
Council Member, District E.....	Dave Martin	Council Member, At-Large Position 2.....	David Robinson
Council Member, District F.....	Steve Le	Council Member, At-Large Position 3.....	Michael Kubosh
Council Member, District G.....	Greg Travis	Council Member, At-Large Position 4.....	Amanda Edwards
Council Member, District H.....	Karla Cisneros	Council Member, At-Large Position 5.....	Jack Christie, D.C.

*The City expects to call an election to fill the vacancy for District K in May 2018. On March 6, 2018, reports of Councilmember Larry Green’s passing were published.

APPOINTED OFFICIALS

City Attorney	Ronald C. Lewis
Deputy City Controller	Charisse Page Mosely
Interim Director, Department of Finance	Tantri Emo
Director of Aviation, Houston Airport System.....	Mario C. Diaz
City Secretary	Anna Russell

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CONSULTANTS AND ADVISORS

Co-Financial Advisors Hilltop Securities Inc.
YaCari Consultants, LLC

Co-Bond Counsel Bracewell LLP
Edgardo E. Colon, P.C.

Special Disclosure Co-Counsel Norton Rose Fulbright US LLP
West & Associates, LLP

Airport Management Consultant LeighFisher

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Kenneth Gregg
Cathy Vander Plaats
Kedrick Winfield
Susan Taylor

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Joe Crawford
Rahat Huq

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Samiah Usmani

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Vivian Nguyen
Asia Speights
Alex Obregon

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OFFICIAL STATEMENT

\$415,770,000

CITY OF HOUSTON, TEXAS AIRPORT SYSTEM

\$130,550,000	\$285,220,000
SUBORDINATE LIEN	SUBORDINATE LIEN
REVENUE AND REFUNDING BONDS,	REVENUE AND REFUNDING BONDS,
SERIES 2018A	SERIES 2018B
(AMT)	(NON-AMT)

INTRODUCTION

This Official Statement, including the cover page, schedules and appendices hereto, is provided to furnish information in connection with the offer and sale by the City of Houston, Texas (the “City”) of its Airport System Subordinate Lien Revenue and Refunding Bonds, Series 2018A (AMT) (the “Series 2018A Bonds”) and Airport System Subordinate Lien Revenue and Refunding Bonds, Series 2018B (Non-AMT) (the “Series 2018B Bonds” and together with the Series 2018A Bonds, the “Series 2018 Bonds.”) The Series 2018 Bonds are being issued pursuant to Chapters 1201, 1207, 1371 and 1503, Texas Government Code, as amended, a master ordinance adopted by the City Council of the City on November 9, 2016 (the “Master Ordinance”), a supplemental ordinance adopted by the City Council of the City on November 15, 2017 (the “Supplemental Ordinance”), and a pricing certificate (the “Officers Pricing Certificate”) executed by the pricing officers pursuant to the Supplemental Ordinance; collectively, the Master Ordinance, the Supplemental Ordinance and the Officers Pricing Certificate are referred to herein as the “Ordinance.”

The Houston Airport System, an enterprise system of the City, is currently comprised of the following facilities, each of which the City manages, owns and operates: George Bush Intercontinental Airport/Houston (“Intercontinental”), William P. Hobby Airport (“Hobby”) and Ellington Airport (“Ellington”). United Airlines, Inc. (“United”) is the largest air carrier operating at Intercontinental. Southwest Airlines, Inc. (“Southwest”) is the largest air carrier operating at Hobby. For additional information about the Houston Airport System, see “THE HOUSTON AIRPORT SYSTEM.”

The City is the fourth most populous city in the nation, the most populous city in Texas and has a land area of approximately 675 square miles. According to the U.S. Census Bureau, the City’s population estimate was approximately 2.3 million in 2016, and the estimated population of the Houston – Sugar Land – The Woodlands Metropolitan Statistical Area was approximately 6.77 million in 2016, which is the fifth largest in the United States. Located on the coastal plain in Southeast Texas, approximately 50 miles from the Gulf of Mexico, the City is a major corporate and international financial center. Leading industries include energy, petrochemical, engineering and construction, real estate, aerospace, commerce, medicine and health care, transportation, biotechnology, and computer technology.

Descriptions and summaries of the Series 2018 Bonds, the Houston Airport System, and the Ordinance are included in this Official Statement. References herein to the Series 2018 Bonds and the Ordinance are qualified in their entirety, by reference to the Ordinance and the forms of Series 2018 Bonds contained in the Officers Pricing Certificate. An Airport Management Consultant’s Report prepared in connection with the issuance of the Series 2018 Bonds is included as APPENDIX A. Houston Airport System Fund financial statements for the Fiscal Year ended June 30, 2017 are included in APPENDIX B. Excerpts of the Ordinance and a glossary of defined terms is included as APPENDIX C-1, and, unless otherwise specifically defined, capitalized terms used herein have the meanings set out in APPENDIX C-1.

PURPOSE AND PLAN OF FINANCING

The Series 2018A Bonds

Proceeds of the sale of the Series 2018A Bonds will be used to (i) provide financing for Authorized System Purposes, (ii) refund certain of the Outstanding Airport System Senior Lien Notes, as more specifically described in

SCHEDULE I (the “2018A Refunded Notes”), (iii) fund the Subordinate Lien Bond Reserve Fund, and (iv) pay related costs of issuance of the Series 2018A Bonds.

The Series 2018B Bonds

Proceeds of the sale of the Series 2018B Bonds will be used to (i) refund certain of the Outstanding Airport System Senior Lien Notes, as more specifically described in SCHEDULE I (the “2018B Refunded Notes,” and together with the 2018A Refunded Notes, the “Refunded Notes”), (ii) refund certain of the City’s Outstanding Airport System Subordinate Lien Bonds, as more specifically described in SCHEDULE I (the “Refunded Bonds” and together with the Refunded Notes, the “Refunded Obligations”), (iii) fund the Subordinate Lien Bond Reserve Fund, and (iv) pay related costs of issuance of the Series 2018B Bonds.

The Refunded Notes

A portion of the proceeds of the Series 2018A Bonds and the Series 2018B Bonds, together with other legally available funds of the City, will be used to purchase a portfolio of obligations (the “Refunded Notes Escrowed Securities”) authorized under Texas law and the ordinance authorizing the Refunded Notes to be deposited, along with certain uninvested proceeds of the Series 2018 Bonds, in an escrow fund (the “Refunded Notes Escrow Fund”) with U.S. Bank National Association, the escrow agent for the Refunded Notes (the “Refunded Notes Escrow Agent”), pursuant to an escrow agreement between the City and the Refunded Notes Escrow Agent (the “Refunded Notes Escrow Agreement”). The maturing principal of and interest on the Refunded Notes Escrowed Securities will be sufficient, together with other funds deposited to the Refunded Notes Escrow Fund, to pay, when due, the principal of and interest on the Refunded Notes.

Grant Thornton LLP, a firm of independent certified public accountants, will verify the accuracy of the mathematical computations as to the adequacy of the maturing principal of and interest on the Refunded Notes Escrowed Securities, together with other available funds, to provide for the payment of the Refunded Notes when due. See “VERIFICATION OF MATHEMATICAL ACCURACY.”

In the opinion of Co-Bond Counsel, by making the escrow deposits required by the Ordinance and the Refunded Notes Escrow Agreement, the City will have made firm banking and financial arrangements for the discharge and final payment of the Refunded Notes pursuant to the provisions of Chapter 1207, Texas Government Code, as amended, and other authorizing law. Thereafter, the Refunded Notes will be deemed to be fully paid and no longer outstanding and the lien on and pledge of Net Revenues of the Houston Airport System securing such Refunded Notes will be deemed to have been defeased pursuant to the terms of the ordinance authorizing the issuance of the Refunded Notes, except for the purpose of being paid from the funds provided therefor pursuant to the Refunded Notes Escrow Agreement.

The Refunded Bonds

A portion of the proceeds of the Series 2018B Bonds, together with other available funds, will be used to purchase a portfolio of obligations (the “Refunded Bonds Escrowed Securities”) authorized under Texas law and the ordinance authorizing the Refunded Bonds to be deposited, along with certain uninvested proceeds of the Series 2018B Bonds, in one or more escrow funds or accounts (collectively the “Refunded Bonds Escrow Fund”) with The Bank of New York Mellon Trust Company, National Association, the escrow agent for the Refunded Bonds (the “Refunded Bonds Escrow Agent”) pursuant to an escrow agreement between the City and the Refunded Bonds Escrow Agent (the “Refunded Bonds Escrow Agreement”). The maturing principal of and interest on the Refunded Bonds Escrowed Securities will be sufficient, together with other funds deposited to the Refunded Bonds Escrow Fund, to pay, when due, the principal of and interest on the Refunded Bonds.

Simultaneously with the issuance of the Series 2018B Bonds, the City will provide irrevocable instructions to the paying agent for the Refunded Bonds to give notice of redemption to the owners of the Refunded Bonds in accordance with the ordinance authorizing the Refunded Bonds.

Grant Thornton LLP, a firm of independent certified public accountants, will verify the accuracy of the mathematical computations as to the adequacy of the maturing principal of and interest on the Refunded Bonds Escrowed

Securities, together with other available funds, to provide for the payment of the Refunded Bonds when due. See “VERIFICATION OF MATHEMATICAL ACCURACY.”

In the opinion of Co-Bond Counsel, by making the escrow deposits required by the Ordinance and the Refunded Bonds Escrow Agreement, the City will have made firm banking and financial arrangements for the discharge and final payment of the Refunded Bonds pursuant to the provisions of Chapter 1207, Texas Government Code, as amended, and other authorizing law. Thereafter, the Refunded Bonds will be deemed to be fully paid and no longer outstanding and the lien on and pledge of Net Revenues of the Houston Airport System securing the Refunded Bonds will be deemed to have been defeased pursuant to the terms of the ordinance authorizing the issuance of the Refunded Bonds except for the purpose of being paid from the funds provided therefor pursuant to the Refunded Bonds Escrow Agreement.

SOURCES AND USES OF FUNDS

The following table summarizes the estimated sources and uses of proceeds of the Series 2018A Bonds and the Series 2018B Bonds:

	Series 2018A Bonds	Series 2018B Bonds	Total
SOURCES:			
Par Amount	\$130,550,000.00	\$285,220,000.00	\$415,770,000.00
Net Original Issue Premium	16,913,267.60	45,905,950.80	62,819,218.40
Issuer Contribution	87,859.63	3,126,414.66	3,214,274.29
TOTAL SOURCES	\$147,551,127.23	\$334,252,365.46	\$481,803,492.69
USES:			
Deposit to Project Fund	\$115,881,553.48	-	\$115,881,553.48
Deposit to Subordinate Lien Bond Reserve Fund ⁽¹⁾	9,314,632.87	\$4,194,617.13	13,509,250.00
Deposit to Refunded Bonds Escrow Fund ⁽²⁾	-	264,938,043.75	264,938,043.75
Deposit to Refunded Notes Escrow Fund ⁽²⁾	21,199,859.63	62,674,746.05	83,874,605.68
Costs of Issuance ⁽³⁾	1,155,081.25	2,444,958.53	3,600,039.78
TOTAL USES	\$147,551,127.23	\$334,252,365.46	\$481,803,492.69

(1) Deposit to the Subordinate Lien Bond Reserve Fund Participant Account, which is the common reserve for all Outstanding Subordinate Lien Bonds. See “SECURITY FOR THE SERIES 2018 BONDS – Debt Service Reserves.”

(2) Includes proceeds of the Series 2018 Bonds and a portion of the Issuer Contribution.

(3) Includes underwriters’ discount, legal fees, rating agency fees, fees of the Airport Management Consultant, Paying Agent/Registrar, Refunded Notes Escrow Agent and Refunded Bonds Escrow Agent, and other costs of issuance. May also include rounding amounts.

THE SERIES 2018 BONDS

General

The Series 2018 Bonds are Subordinate Lien Bonds that, together with all other Subordinate Lien Bonds from time to time Outstanding, are payable from, and equally and ratably secured by, a lien on the Net Revenues of the Houston Airport System. The lien on Net Revenues securing Subordinate Lien Bonds is subordinate and junior to the superior lien on the Net Revenues securing the Senior Lien Obligations, of which \$420,420,000 of Senior Lien Bonds and \$95,000,000 of Senior Lien Notes were Outstanding as of December 31, 2017. Excluding the Refunded Notes, \$21,473,000 of Senior Lien Notes are Outstanding as of the date hereof. Additionally, the lien on Net Revenues securing Subordinate Lien Bonds is senior to the lien securing Inferior Lien Bonds, of which none are Outstanding. See “Schedule 8: Houston Airport System Outstanding Debt.”

The Series 2018 Bonds will mature in the principal amounts and on the dates indicated on pages ii and iii of this Official Statement. The Series 2018 Bonds will accrue interest from the Date of Delivery, as set forth on the cover page hereof. Interest on the Series 2018 Bonds is payable each July 1 and January 1, commencing July 1, 2018, until maturity or prior redemption. Interest on the Series 2018 Bonds will be calculated on the basis of a 360-day year composed of twelve 30-day months from the later of their issuance date or the most recent Interest Payment Date to which interest has been paid or provided for. The Bank of New York Mellon Trust Company, National Association, is the initial paying agent/registrars

(the “Paying Agent/Registrar”) for the Series 2018 Bonds. The Series 2018 Bonds will be issued in fully registered form in denominations of \$5,000 or any integral multiple thereof (“Authorized Denominations”).

Principal of the Series 2018 Bonds is payable when due upon presentation and surrender thereof at the principal office of the Paying Agent/Registrar, which is currently located in Houston, Texas. Interest on the Series 2018 Bonds will be payable to the Registered Owner whose name appears in the registration books for the Series 2018 Bonds (the “Register”) maintained by the Paying Agent/Registrar at the close of business on the 15th day of the calendar month immediately preceding the applicable interest payment date (the “Record Date”) and shall be payable by the Paying Agent/Registrar (i) by check or draft sent by United States mail, first class postage prepaid, or (ii) by such other method acceptable to the Paying Agent/Registrar requested by, and at the risk and expense of, the Registered Owner. Accrued interest payable at maturity of the Series 2018 Bonds will be paid upon presentation and surrender of such Series 2018 Bonds at the principal payment office of the Paying Agent/Registrar.

Redemption

Optional Redemption

The Series 2018 Bonds maturing on or after July 1, 2029, are subject to optional redemption by the City prior to maturity, in whole or from time to time in part, on or after July 1, 2028, at a price equal to 100% of the principal amount of the Series 2018 Bonds to be redeemed, plus accrued interest to (but not including) the redemption date.

Mandatory Sinking Fund Redemption

Mandatory Sinking Fund Redemption of the Series 2018A Bonds

The Series 2018A Bonds issued as term bonds maturing July 1, 2041 are subject to mandatory redemption prior to maturity in the following amounts (subject to reduction as hereinafter provided), on the following dates (all mandatory redemption dates for all applicable Series 2018 Bonds, “Mandatory Redemption Dates”), at a price equal to the principal amount of the Series 2018A Bonds to be redeemed plus accrued interest to (but not including) the applicable Mandatory Redemption Date, subject to the conditions set forth below:

\$34,320,000 TERM BONDS MATURING IN 2041

Mandatory Redemption Dates (July 1)	Principal Amount to be Redeemed
2038	\$7,960,000
2039	8,365,000
2040	8,780,000
2041 (Maturity)	9,215,000

Mandatory Sinking Fund Redemption of the Series 2018B Bonds

The Series 2018B Bonds issued as term bonds maturing on July 1 in the years 2043 and 2048 are subject to mandatory redemption prior to maturity in the following amounts (subject to reduction as hereinafter provided), on the following Mandatory Redemption Dates, at a price equal to the principal amount of the Series 2018B Bonds to be redeemed plus accrued interest to (but not including) the applicable Mandatory Redemption Date, subject to the conditions set forth below:

\$12,970,000 TERM BONDS MATURING IN 2043

Mandatory Redemption Dates (July 1)	Principal Amount to be Redeemed
2039	\$2,350,000
2040	2,465,000
2041	2,590,000
2042	2,715,000
2043 (Maturity)	2,850,000

\$16,555,000 TERM BONDS MATURING IN 2048

Mandatory Redemption Dates (July 1)	Principal Amount to be Redeemed
2044	\$3,000,000
2045	3,145,000
2046	3,305,000
2047	3,465,000
2048 (Maturity)	3,640,000

On or before 30 days prior to each Mandatory Redemption Date set forth above, the Paying Agent/Registrar shall (i) determine the principal amount of such term bonds that must be mandatorily redeemed on such Mandatory Redemption Date, after taking into account deliveries for cancellation and optional redemptions, (ii) select, by lot or other customary random method, the term bonds or portions of term bonds of such maturity to be mandatorily redeemed on such Mandatory Redemption Date, and (iii) give notice of such redemption as provided in the Ordinance. The principal amount of any term bonds to be mandatorily redeemed on a Mandatory Redemption Date shall be reduced by the principal amount of such term bonds which, by the 45th day prior to such Mandatory Redemption Date, either have been purchased in the open market and delivered or tendered for cancellation by or on behalf of the City to the Paying Agent/Registrar or optionally redeemed by the City and which, in either case, have not previously been made the basis for a reduction under this sentence.

Partial Redemption

The Series 2018 Bonds may be redeemed in part within a maturity only in integral multiples of \$5,000. If a Series 2018 Bond subject to redemption is in a denomination larger than \$5,000, a portion of such Series 2018 Bond may be redeemed, but only in integral multiples of \$5,000. Upon presentation and surrender of any Series 2018 Bond for redemption in part, the Paying Agent/Registrar, in accordance with the provisions of the Ordinance, shall authenticate and deliver in exchange therefor Series 2018 Bonds of like maturity and interest rate in an aggregate principal amount equal to the unredeemed portion of the Series 2018 Bonds so presented and surrendered.

Selection of Bonds to be Optionally Redeemed

In the case of any optional redemption in part of the Series 2018 Bonds, the stated maturity or mandatory redemption date of Series 2018 Bonds to be redeemed shall be selected by the City. If less than all the Series 2018 Bonds of a stated maturity shall be called for redemption, the particular Series 2018 Bonds to be redeemed shall be selected by the Paying Agent/Registrar, in such manner as the Paying Agent/Registrar deems fair and appropriate and consistent with the requirements provided in the Series 2018 Bonds.

Notice of Redemption

If the Series 2018 Bonds are called for optional redemption, the Paying Agent/Registrar shall give notice, in the name of the City, of the redemption of such Series 2018 Bonds, which notice shall (i) specify the Series 2018 Bonds to be redeemed, the redemption date, the redemption price and the place or places where amounts due upon such redemption will be payable (which shall be the principal corporate trust office of the Paying Agent/Registrar) and, if less than all of the Series 2018 Bonds are to be redeemed, the portions of the Series 2018 Bonds to be redeemed, (ii) state any condition to such redemption and (iii) state that on the redemption date, and upon the satisfaction of any such condition, the Series 2018 Bonds to be redeemed shall cease to bear interest. CUSIP number identification shall accompany all redemption notices. Such notice may set forth any additional information relating to such redemption. Such notice shall be given by mail, postage prepaid, at least 30 days but not more than 60 days prior to the date fixed for redemption to each Registered Owner of Series 2018 Bonds to be redeemed at its address shown on the registration books kept by the Paying Agent/Registrar; provided, however, that failure to give such notice to any Registered Owner or any defect in such notice shall not affect the validity of the proceedings for the redemption of any of the other Series 2018 Bonds.

Any notice given as provided herein shall be conclusively presumed to have been duly given, whether or not the Registered Owner or Beneficial Owner receives such notice. When the Series 2018 Bonds have been called for redemption in whole or in part and due provision has been made to redeem the same as provided in the Series 2018 Bonds and in the Ordinance, the Series 2018 Bonds or portions thereof to be so redeemed shall no longer be regarded as Outstanding except for the purpose of receiving payment solely from the funds so provided for redemption, and the rights of the Registered Owners to collect interest that would otherwise accrue after the redemption date on any Series 2018 Bond or portion thereof called for redemption shall terminate on the date fixed for redemption.

Ownership

The City, the Paying Agent/Registrar, and any other person may treat the person in whose name any Series 2018 Bond is registered as the absolute Owner of such Series 2018 Bond for the purpose of making and receiving payment of the principal thereof and premium, if any, thereon, and for the purpose of making and receiving payment of the interest thereon, and for all other purposes, whether or not such Series 2018 Bond is overdue, and neither the City nor the Paying Agent/Registrar shall be bound by any notice or knowledge to the contrary. All payments made to the person deemed to be the Owner of any Series 2018 Bond in accordance with the Ordinance shall be valid and effectual and shall discharge the liability of the City and the Paying Agent/Registrar upon such Series 2018 Bond to the extent of the sums paid.

Transfers and Exchanges

Beneficial ownership of the Series 2018 Bonds registered in the name of The Depository Trust Company, New York, New York ("DTC"), will initially be transferred as described under APPENDIX F – DEPOSITORY TRUST COMPANY.

So long as any Series 2018 Bonds remain Outstanding, the Paying Agent/Registrar shall keep the Register at its designated corporate trust office in which, subject to such reasonable regulations as it may prescribe, the Paying Agent/Registrar shall provide for the registration and transfer of the Series 2018 Bonds in accordance with the terms of the Ordinance. A copy of the Register shall be maintained at an office of the Paying Agent/Registrar in Texas.

Each Series 2018 Bond shall be transferable only upon the presentation and surrender thereof at the designated corporate trust office of the Paying Agent/Registrar, duly endorsed for transfer, or accompanied by an assignment duly executed by the Registered Owner or his authorized representative in form satisfactory to the Paying Agent/Registrar. Upon due presentation and surrender of any Series 2018 Bond for transfer, the Paying Agent/Registrar is required to authenticate and deliver in exchange therefor, within 72 hours after such presentation and surrender, a new Series 2018 Bond or Series 2018 Bonds, registered in the name of the transferee or transferees, in Authorized Denominations and of the same series, maturity and aggregate principal amount and bearing interest at the same rate as the Series 2018 Bond or Series 2018 Bonds so presented and surrendered.

If the Series 2018 Bonds are not in the DTC book-entry-only registration system, all Series 2018 Bonds shall be exchangeable upon the presentation and surrender thereof at the designated corporate trust office of the Paying Agent/Registrar for a Series 2018 Bond or Series 2018 Bonds of the same series, maturity and interest rate and in any

Authorized Denomination, in an aggregate principal amount equal to the unpaid principal amount of the Series 2018 Bond or Bonds presented for exchange.

Each Series 2018 Bond delivered in accordance with the Ordinance shall be entitled to the benefits and security of the Ordinance to the same extent as the Series 2018 Bond or Series 2018 Bonds in lieu of which such Series 2018 Bond is delivered.

The City or the Paying Agent/Registrar may require DTC or any subsequent Registered Owner of any Series 2018 Bond to pay a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with the transfer or exchange of such Series 2018 Bond. Any fee or charge of the Paying Agent/Registrar for such transfer or exchange shall be paid by the City.

The Paying Agent/Registrar shall not be required to transfer or exchange any Series 2018 Bond during the 45-day period prior to the date fixed for redemption; provided, however, that such restriction shall not apply to the transfer or exchange by the Registered Owner of the unredeemed portion of any Series 2018 Bond called for redemption in part.

SECURITY FOR THE SERIES 2018 BONDS

The Series 2018 Bonds are special obligations of the City that, together with the Outstanding Subordinate Lien Bonds and any Additional Subordinate Lien Bonds hereafter issued, are payable from and are equally and ratably secured by a lien on the Net Revenues of the Houston Airport System, the Subordinate Lien Bond Interest and Sinking Fund, and the Subordinate Lien Bond Reserve Fund, all as defined and provided in the Ordinance. See APPENDIX C-1. The lien on Net Revenues securing the Series 2018 Bonds and other Subordinate Lien Bonds is (i) junior and subordinate to the lien on Net Revenues securing the Senior Lien Obligations and any Additional Senior Lien Obligations hereafter issued and (ii) senior to the lien on Net Revenues securing Inferior Lien Bonds and any additional Inferior Lien Bonds hereafter issued.

The Series 2018 Bonds do not constitute a general obligation of the City. Owners of the Series 2018 Bonds shall never have the right to demand payment of principal of, interest on or any redemption premium on the Series 2018 Bonds from any funds raised or to be raised by taxation.

In addition to the definitions described below, see APPENDIX C-1 for excerpts of the Master Ordinance, which further details the security for the Series 2018 Bonds.

Net Revenues. Net Revenues means that portion of the Gross Revenues remaining after the deduction of the Operation and Maintenance Expenses of the Houston Airport System.

Gross Revenues. Subject to the exclusions noted below, Gross Revenues means all income and revenues derived directly or indirectly by the City from the operation and use of and otherwise pertaining to the Houston Airport System, or any part thereof, whether resulting from extensions, enlargements, repairs, betterments or other improvements to the Houston Airport System, or otherwise, and includes, except to the extent hereinafter expressly excluded, all revenues received by the City from the Houston Airport System, including, without limitation, all rentals, rates, fees and other charges for the use of the Houston Airport System, or for any service rendered by the City in the operation thereof, interest and other income realized from the investment or deposit of amounts credited to any fund, except as set forth below, required to be maintained pursuant to the Ordinance or any other ordinance authorizing the issuance of Senior Lien Obligations, Subordinate Lien Bonds, or Inferior Lien Bonds (collectively, the "Airport Obligations").

Gross Revenues expressly exclude: (1) proceeds of any Airport Obligations; (2) interest or other investment income derived from proceeds of Airport Obligations deposited to the credit of any construction fund, or applied to fund capitalized interest, or interest or investment income required to be retained in the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Reserve Fund, the Operation and Maintenance Reserve Fund or any escrow fund in order to accumulate therein any amount or balance required to be accumulated or maintained therein pursuant to any ordinance authorizing any series of Airport Obligations; (3) any moneys received as grants, appropriations, or gifts, the use of which is limited by the grantor or donor to the construction or acquisition of the Houston Airport System facilities, except to the extent any such moneys shall be received as payments for the use of the Houston Airport System facilities; (4) any revenues derived from any Special Facilities that are pledged to the payment of Special Facilities Bonds;

(5) insurance proceeds other than loss of use or business interruption insurance proceeds; (6) the proceeds of any passenger facility charge or other per-passenger charge as may be authorized under federal law including, but not limited to, those revenues defined as Passenger Facility Charge (“PFC”) Revenues; (7) sales and other taxes collected by the Houston Airport System on behalf of the State of Texas and any other taxing entities; (8) Federal Payments received by the Houston Airport System unless the City first receives an opinion from nationally recognized bond counsel to the effect that such payments, if included in Gross Revenues, would not cause the interest on the Airport Obligations to be includable within the gross income of the Owners thereof for federal income tax purposes; (9) the net proceeds received by the City from the disposition of any Houston Airport System property; (10) any Excluded Fee and Charge Revenues; and (11) any Taxable Bond Credit Revenues.

Operation and Maintenance Expenses. Subject to the exclusions noted below, Operation and Maintenance Expenses means all reasonable and necessary current expenses of the City, paid or accrued, of operating, maintaining and repairing the Houston Airport System including, without limitation, reasonably allocated City overhead expenses relating to the administration, operation and maintenance of the Houston Airport System; insurance and fidelity bond premiums; payments to pension and other funds and to any self-insurance fund not in excess of premiums that would otherwise be required for such insurance; any general and excise taxes or other governmental charges imposed by entities other than the City; costs of contractual and professional services, labor, materials and supplies for current operations, including the costs of such direct City services rendered to the Houston Airport System as are requested from the City by the Houston Airport System and as are reasonably necessary for the operation of the Houston Airport System; costs of issuance of Airport Obligations (except to the extent paid from the proceeds thereof); fiduciary costs; costs of collecting and refunding Gross Revenues; utility costs; any lawful refunds of any Gross Revenues; and all other administrative, general and commercial expenses. Operation and Maintenance Expenses include only those current expenses due or payable within the next 30 days.

The following expenses are specifically excluded from the definition of Operation and Maintenance Expenses: (1) any allowance for depreciation; (2) costs of capital improvements; (3) reserves for major capital improvements, Houston Airport System operations, maintenance or repair; (4) any allowance for redemption of, or payment of interest or premium on, Airport Obligations; (5) any liabilities incurred in acquiring or improving properties of the Houston Airport System; (6) expenses of lessees under Special Facilities Leases and operation and maintenance expenses pertaining to Special Facilities to the extent they are required to be paid by such lessees pursuant to the terms of the Special Facilities Leases; (7) any charges or obligations incurred in connection with any lawful Houston Airport System purpose, including the lease, acquisition, operation or maintenance of any facility or property benefiting the Houston Airport System, provided that the payment of such charges or obligations is expressly agreed by the payee to be payable solely from proceeds of the Airports Improvement Fund; (8) liabilities based upon the City’s negligence or other grounds not based on contract; and (9) so long as Federal Payments are excluded from Gross Revenues, an amount of expenses that would otherwise constitute Operation and Maintenance Expenses for such period equal to the Federal Payments for such period.

Perfection of Security Interest in Revenues. The Ordinance provides that pursuant to Chapter 1208, Texas Government Code, the lien on Net Revenues created under the Ordinance is valid, effective, and perfected.

Bondholders’ Remedies

The Ordinance provides that if the City defaults in the payment of principal of or interest on any Subordinate Lien Bonds, including the Series 2018 Bonds, or the performance of any duty or covenant provided by law or in the Ordinance, Owners of such Subordinate Lien Bonds, including the Series 2018 Bonds, may pursue all legal remedies afforded by the Constitution and the laws of the State of Texas to compel the City to remedy such default and to prevent further default or defaults.

The Ordinance neither appoints nor makes any provision for the appointment of a trustee to protect the rights of Owners of the Series 2018 Bonds. Furthermore, the Ordinance does not provide for acceleration of maturity of the Series 2018 Bonds or for foreclosure on Net Revenues or possession of Net Revenues by a trustee or agent for Owners of the Series 2018 Bonds or for operation of the Houston Airport System by an independent third party in the event of default.

No lien has been placed on any of the physical properties comprising the Houston Airport System to secure the payment of or interest on the Series 2018 Bonds. Moreover, in the event of default, the Owners of the Series 2018 Bonds have no right or claim under the laws of the State of Texas against the Houston Airport System or any property of the City

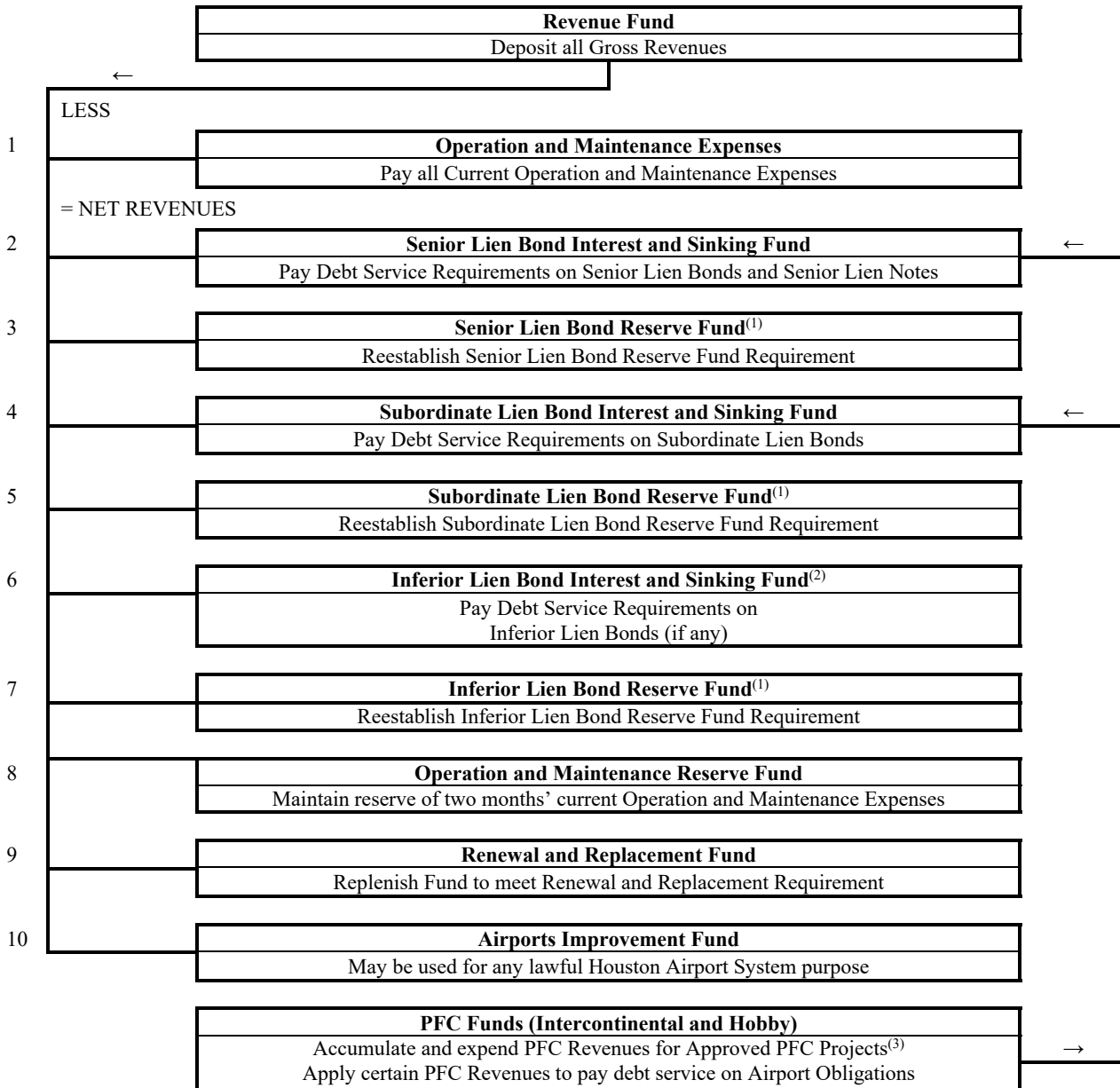
other than their right to receive payment from Net Revenues and certain Funds maintained pursuant to the Ordinance. Owners of the Series 2018 Bonds have no right to demand payment of principal of or interest or premium, if any, on the Series 2018 Bonds from any funds raised or to be raised by taxation or from any funds on deposit in any of the special Funds described in the Ordinance, except the Subordinate Lien Bond Interest and Sinking Fund, and the applicable account of the Subordinate Lien Bond Reserve Fund. Further, unless sovereign immunity is expressly waived by the Texas Legislature or it is determined that the provision of airport services is a proprietary rather than a governmental function of the City, local governmental immunity would be available as a defense against suits for money damages against the City or the Houston Airport System in connection with the Series 2018 Bonds. The City will not waive sovereign immunity against suit in connection with the issuance of the Series 2018 Bonds. Accordingly, the only practical remedy in the event of a default may be a mandamus proceeding to compel the City to increase rates and charges reasonably required for the use and service of the Houston Airport System or perform its other obligations under the Ordinance, including the deposit of the Gross Revenues into the special Funds provided in the Ordinance and the application of such Gross Revenues and such special Funds in the manner required in the Ordinance. Such remedy may need to be enforced on a periodic basis because maturity of the Series 2018 Bonds is not subject to acceleration. In addition, the City's ability to comply with the Rate Covenant will be limited by contractual and competitive supply and demand constraints. See "COVENANTS AND TERMS OF THE ORDINANCE – Rate Covenant."

The enforcement of a claim for payment of principal of or interest on the Series 2018 Bonds and the City's other obligations with respect to the Series 2018 Bonds are subject to the applicable provisions of the federal bankruptcy laws and to any other similar laws affecting the rights of creditors of political subdivisions generally. The City may seek relief from its creditors under Chapter 9 of the U.S. Bankruptcy Code ("Chapter 9"); however, Chapter 9 recognizes a security interest in a specifically pledged source of revenues, such as the Net Revenues. Chapter 9 also includes an automatic stay provision that would prohibit, without Bankruptcy Court approval, the prosecution of any other legal action by creditors or bondholders against an entity that seeks protection under Chapter 9. Therefore, should the City avail itself of Chapter 9 protection from creditors, the ability to enforce any other remedies available to the registered owners, other than for the pledge of Net Revenues securing the Series 2018 Bonds, would be subject to the approval of the Bankruptcy Court (which could require that the action be heard in Bankruptcy Court instead of other federal or state court); and the U.S. Bankruptcy Code provides for broad discretionary powers of a Bankruptcy Court in administering any proceeding brought before it.

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Flow of Funds

Below is a presentation of the application of revenues under the Master Ordinance. For more information about the Houston Airport System’s revenues, see “SECURITY FOR THE SERIES 2018 BONDS” and APPENDIX C-1.



(1) Interest income on funds on deposit in the Senior Lien Bond Reserve Fund, Subordinate Lien Bond Reserve Fund, and Inferior Lien Bond Reserve Fund may be transferred to the related Interest and Sinking Fund, or such other funds as may be permitted by federal tax law.

(2) On November 5, 2015 the City entered into a forward bond purchase agreement for the issuance of up to \$450 million of Airport System Inferior Lien Revenue Bonds with Royal Bank of Canada, which replaced the \$150 million Airport System Inferior Lien Commercial Paper Notes, Series C. No amounts have been issued pursuant to the forward bond purchase agreement, and as of the date hereof, no amounts are expected to be issued pursuant thereto.

(3) PFC Revenues are not pledged to pay debt service on any Outstanding Airport Obligations, including the Series 2018 Bonds, but may be pledged or otherwise obligated, consistent with FAA regulations. Periodically, the Houston Airport System irrevocably commits PFC Revenues to the Senior Lien and Subordinate Lien Bond Interest and Sinking Funds for the purpose of paying eligible debt service attributable to approved PFC projects.

Debt Service Reserves

The Master Ordinance establishes a Subordinate Lien Bond Reserve Fund for all Subordinate Lien Bonds and requires to be maintained therein a balance equal to the Reserve Fund Requirement.

Reserve Fund Requirement for Reserve Fund Participants. Within the Subordinate Lien Bond Reserve Fund, there is a Subordinate Lien Bond Reserve Fund Participant Account (i.e. the common reserve account), which constitutes trust funds and held in trust for Owners of the Subordinate Lien Bonds that are secured thereby (the “Reserve Fund Participants”). All Subordinate Lien Bonds Outstanding as of the date hereof have been declared and designated to be Reserve Fund Participants; the Series 2018 Bonds will be declared and designated to be Reserve Fund Participants in the Officers Pricing Certificate. With respect to those Subordinate Lien Bonds that are Reserve Fund Participants (i.e., all Outstanding Subordinate Lien Bonds), the Reserve Fund Requirement is equivalent to the maximum annual Debt Service Requirements on such bonds, which amount shall be computed and recomputed upon the issuance of each series of Subordinate Lien Bonds that are Reserve Fund Participants and on each date on which such bonds are paid at maturity or optionally or mandatorily redeemed.

Reserve Fund Non-Participants. The Master Ordinance also provides that any issue of Subordinate Lien Bonds may be secured by a lien on an account of the Subordinate Lien Bond Reserve Fund that is created and held for the sole benefit of such series of Subordinate Lien Bonds, referred to in the Master Ordinance as “Reserve Fund Non-Participants.” No Outstanding Subordinate Lien Bonds are Reserve Fund Non-Participants, so therefore no such account has been created within the Subordinate Lien Bond Reserve Fund. All of the Outstanding Subordinate Lien Bonds are secured by and the Series 2018 Bonds will be secured by a lien on the Subordinate Lien Bond Reserve Fund Participant Account.

Draws on the Subordinate Lien Bond Reserve Fund Participant Account. The Subordinate Lien Bond Reserve Fund Participant Account is required to be used to pay the principal of and interest on the Subordinate Lien Bonds that are Reserve Fund Participants at any time when there is not sufficient money available in the Subordinate Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Subordinate Lien Bond Reserve Fund Surety Policies allocable to the Subordinate Lien Bond Reserve Fund Participant Account) and to repay amounts drawn under any Subordinate Lien Bond Reserve Fund Surety Policy allocable to the Subordinate Lien Bond Reserve Fund Participant Account for such purpose, together with interest thereon, in accordance with the terms of the City’s reimbursement obligations incurred in connection with such Subordinate Lien Bond Reserve Fund Surety Policy. The Subordinate Lien Bond Reserve Fund Participant Account may also be used to make the final payments for the retirement or defeasance of all Subordinate Lien Bonds then Outstanding that are Reserve Fund Participants.

Funding the Reserve Fund Requirement. Each increase in the Reserve Fund Requirement resulting from the issuance of Additional Subordinate Lien Bonds is required to be funded at the time of issuance and delivery of such series of bonds. The Reserve Fund Requirement may be satisfied by depositing to the credit of the appropriate account of the Subordinate Lien Bond Reserve Fund either (1) proceeds of such Additional Subordinate Lien Bonds or other lawfully appropriated funds or (2) one or more Subordinate Lien Bond Reserve Fund Surety Policies.

Deficiencies in the Subordinate Lien Bond Reserve Fund. In any month in which any account of the Subordinate Lien Bond Reserve Fund contains less than the applicable Reserve Fund Requirement, the City shall transfer from the Revenue Fund, after making all required payments of Operation and Maintenance Expenses and after making all required transfers to the (i) Senior Lien Bond Interest and Sinking Fund, (ii) the Senior Lien Bond Reserve Fund, and (iii) the Subordinate Lien Bond Interest and Sinking Fund, on a pro rata basis into the Subordinate Lien Bond Reserve Fund Participant Account and other designated non-participant accounts, if any, such amounts as shall be required to permit the City to pay all reimbursement obligations under the Subordinate Lien Bond Reserve Fund Surety Policies allocable to the Subordinate Lien Bond Reserve Fund Participant Account or such other designated non-participant accounts, as applicable, within a twelve-month period, and such additional amounts as shall be sufficient to enable the City within a twelve-month period to reestablish the Reserve Fund Requirement in the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable.

See APPENDIX C-1 for further details regarding the Subordinate Lien Bond Reserve Fund. For a discussion regarding the surety policies the City previously acquired in order to satisfy its obligations with respect to the Reserve Fund

Requirement for the Outstanding Subordinate Lien Bonds and Outstanding Senior Lien Obligations, see “RESERVE FUNDS AND RESERVE FUND SURETY POLICIES.”

Additional Reserves and Other Funds

The Master Ordinance also provides for maintenance of an Operation and Maintenance Reserve Fund and a Renewal and Replacement Fund. The Operation and Maintenance Reserve Fund is required to be funded in an amount at least equal to two months’ current Operation and Maintenance Expenses (which amount shall annually be redetermined by the Director of Aviation for the Houston Airport System at the time such official submits the proposed annual Houston Airport System budget based upon either such official’s recommended budget for Operation and Maintenance Expenses or estimate of actual Operation and Maintenance Expenses for the then-current Fiscal Year). The amount required by the Master Ordinance to be maintained in the Renewal and Replacement Fund is \$10,000,000 (or any greater amount required by any supplemental ordinance authorizing any series of additional Airport Obligations). Unappropriated funds in the Operations and Maintenance Reserve Fund and the Renewal and Replacement Fund may be used to pay operations and maintenance expenses, if needed, among other purposes. See APPENDIX C-1 and “Schedule 8A: Cash and Liquidity.”

REPORT OF THE AIRPORT MANAGEMENT CONSULTANT

The City has engaged LeighFisher (the “Airport Management Consultant”) to evaluate the ability of the Houston Airport System to generate sufficient Net Revenues to meet the financial requirements established by the Ordinance during each year of the five-year forecast period Fiscal Years 2018 through 2022. See the Report of the Airport Management Consultant (the “Report”) included herein as APPENDIX A.

In the Report, the Airport Management Consultant identifies key factors upon which the future financial results of the Airport System depend. Such factors are presented for each airport and include the roles of United at Intercontinental and Southwest at Hobby. The Airport Management Consultant also identifies other factors that affect air traffic activity of the Houston Airport System, including local, national and international economic conditions, air fare trends, the price of jet fuel and other airline industry considerations. The Report presents forecasts of air traffic and financial results that are based in part on certain assumptions described therein. See the attachment to the Report, “Background, Assumptions, and Rationale for the Financial Forecasts” in APPENDIX A.

The Houston Airport System may issue one or more series of additional Airport Obligations over the next few years to complete the financing of the current Houston Airport System’s Capital Improvement Plan (“CIP”) and may issue additional Airport Obligations for other improvements not in the current CIP. See “COVENANTS AND TERMS OF THE ORDINANCE – Additional Airport Obligations” and APPENDIX C-1 for further details regarding the conditions to the issuance of additional Airport Obligations. For the purposes of the Report, pending the final determination of the project scope for certain CIP projects, only near-term projects in the current CIP are taken into account in the financial forecasts, including certain projects that may be funded, all or in part, with proceeds of any such additional Airport Obligations. See “THE HOUSTON AIRPORT SYSTEM — Capital Improvement Program.” Further, some of the projects the Report lists as expected to be financed with proceeds of the Series 2018 Bonds may instead be financed with proceeds of future additional Airport Obligations. Houston Airport System management estimates that almost all of the projects in the current CIP will be completed by the end of Fiscal Year 2022. Only those projects expected to be completed by the end of Fiscal Year 2021 are taken into account in the financial forecasts presented in the Report.

The financial forecasts presented in the Report are based on information and assumptions that have been reviewed with and approved by the Houston Airport System management. The Report should be read in its entirety for an understanding of the forecasts and the underlying assumptions contained therein. In the opinion of the Airport Management Consultant, the assumptions underlying the forecasts are reasonable given the information available and circumstances existing as of the date of the Report. However, any forecast is subject to uncertainties and, inevitably, some assumptions used to develop the forecasts will not be realized and unanticipated events and circumstances may occur. Therefore, the actual results achieved may vary from the forecasts, and the variations could be material.

RESERVE FUNDS AND RESERVE FUND SURETY POLICIES

Reserve Fund for the Subordinate Lien Bonds

Reserve Fund Requirement. As of December 31, 2017, the Reserve Fund Requirement for the Subordinate Lien Bonds that are Reserve Fund Participants was approximately \$149,653,613.00, which included all of the Outstanding Subordinate Lien Bonds. The Series 2018 Bonds will be issued as Reserve Fund Participants. Upon the issuance of the Series 2018 Bonds, the Reserve Fund Requirement for the Subordinate Lien Bonds that are Reserve Fund Participants will be \$159,714,527.

As of December 31, 2017, the Subordinate Lien Bond Reserve Fund Participant Account was funded with cash (and allowable investments) totaling \$22,354,759.61 and certain Subordinate Lien Bond Reserve Fund Surety Policies, as described in the table below, totaling \$150,627,476.50. Upon the issuance of the Series 2018 Bonds, \$13,509,250 from Series 2018 Bond proceeds will be deposited to the Subordinate Lien Bond Reserve Fund Participant Account. All amounts credited to the Subordinate Lien Bond Reserve Fund Participant Account are pledged and available to pay debt service on all Subordinate Lien Bonds that are Reserve Fund Participants (i.e. all of the Outstanding Subordinate Lien Bonds). To the extent that such amounts are needed to fund Debt Service Requirements, the City has covenanted to use all of the cash deposits before drawing on the Subordinate Lien Bond Reserve Fund Surety Policies, and any such draws would be on a pro rata basis among such Subordinate Lien Bond Reserve Fund Surety Policies.

The Houston Airport System has never utilized any amounts or drawn upon any surety policies in the Subordinate Lien Bond Reserve Fund to pay Debt Service Requirements. Based on a variety of factors, the City may supplement the current funding of the Subordinate Lien Bond Reserve Fund with available funds of the Houston Airport System or future proceeds of Subordinate Lien Bonds.

Subordinate Lien Bond Reserve Fund Surety Policies. As shown in the table below, the Reserve Fund Requirement for Subordinate Lien Bonds that are Reserve Fund Participants (i.e. all of the Outstanding Subordinate Lien Bonds) is partially funded by the following Subordinate Lien Bond Reserve Fund Surety Policies: (1) National Public Finance Guarantee Corporation (“National”), formerly Financial Guaranty Insurance Corporation (“FGIC”), (2) Assured Guaranty Municipal Corp. (“AGM”), as successor to Financial Security Assurance (“FSA”), and (3) a Syncora Guarantee (“Syncora”), as successor to XL Capital Assurance, Inc.

Outstanding Subordinate Lien Reserve Fund Surety Policies⁽¹⁾

<u>Reserve Fund Policy Issuer</u>	<u>Moody’s Credit Rating⁽²⁾</u>	<u>Termination Date</u>	<u>Maximum Amount</u>
National (formerly FGIC) ⁽³⁾	Baa2	July 1, 2022	24,477,885.00
		July 1, 2028	32,050,000.00
		July 1, 2030	43,269,100.00
		July 1, 2032	3,152,880.00
AGM (formerly FSA)	A2	Earlier of July 1, 2032, or the date that no Series 2002A and 2002B Bonds are Outstanding	31,921,383.50
Syncora (formerly XL Capital Assurance Inc.) ⁽⁴⁾	Rating Withdrawn	Earlier of July 1, 2032, or the date that no Series 2002C and 2002D Bonds are Outstanding	15,756,228.00
TOTAL COVERAGE OF ALL OUTSTANDING POLICIES:			\$150,627,476.50

(1) As of December 31, 2017, except for credit ratings, which are as of the date of this Official Statement.

(2) See general disclosure related to credit ratings under “RATINGS” herein.

(3) Effective August 19, 2013, FGIC transferred the Reserve Fund Policies listed above to National by novation. Pursuant to the novation, National was irrevocably designated the successor in interest to, and substituted in the place and stead of, FGIC, as if National were the original surety provider.

(4) In 2010, the New York State Insurance Department approved Syncora’s remediation plan and authorized Syncora’s payment of new claims. Notwithstanding that the Syncora policy is available for claims, the Houston Airport System intends to maintain a balance of cash (or allowable investments) at least equal to the value of the Syncora policy in the Subordinate Lien Bond Reserve Fund Participant Account.

Reserve Fund Accounts for the Senior Lien Obligations

Reserve Fund Account for the Senior Lien Bonds. The City maintains a separate reserve account within the Senior Lien Bond Reserve Fund for the Senior Lien Bonds. As of December 31, 2017, the Reserve Fund Requirement for the Outstanding Senior Lien Bonds was fully funded by cash (or allowable investments).

Reserve Fund Account for the Senior Lien Notes. The City also maintains a separate reserve account within the Senior Lien Bond Reserve Fund for the Senior Lien Notes. As of December 31, 2017, the Reserve Fund Requirement for the Senior Lien Notes was fully funded by three surety policies from National in an aggregate maximum amount of approximately \$12,374,996. Two of the surety policies securing the Senior Lien Notes, in an aggregate maximum amount of approximately \$6,374,996, terminate on October 25, 2023. The third surety policy, in the maximum amount of approximately \$6,000,000, terminates on July 1, 2030.

COVENANTS AND TERMS OF THE ORDINANCE

The following section describes certain covenants and other terms of the Ordinance. Capitalized terms used in this section but not otherwise defined have the meanings given to such terms in APPENDIX C-1.

Rate Covenant

The City has covenanted in the Ordinance that it will at all times fix, charge, impose and collect rentals, rates, fees and other charges for use of the Houston Airport System, and, to the extent it legally may do so, revise the same as may be necessary or appropriate, in order that in each Fiscal Year the Net Revenues will at all times be at least sufficient to equal the larger of either: (1) all amounts required to be deposited in such Fiscal Year to the credit of the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund and the Inferior Lien Bond Reserve Fund or (2) an amount not less than 125% of the Debt Service Requirements for the Outstanding Senior Lien Obligations for such Fiscal Year, plus 110% of the Debt Service Requirements for the Outstanding Subordinate Lien Bonds for such Fiscal Year, plus 100% of the Debt Service Requirements for the Outstanding Inferior Lien Bonds for such Fiscal Year. (Such covenant is referred to herein as the "Rate Covenant.")

Debt Service Requirements do not include any interest on Airport Obligations to the extent that provision for the payment of such interest has been made by (1) appropriating for such purpose amounts sufficient to provide for the full and timely payment of such interest either from the proceeds of Airport Obligations, from interest earned or to be earned thereon, from other Houston Airport System funds other than Net Revenues, or from any combination of such sources, (2) depositing such amounts (except interest to be earned, which will be deposited as received) into a fund or account for capitalized interest, the proceeds of which are required to be transferred as needed into the Senior Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Interest and Sinking Fund, or the Inferior Lien Bond Interest and Sinking Fund, as the case may be, or (3) by irrevocably committing funds other than Net Revenues including, but not limited to, PFC Revenues or Excluded Fee and Charge Revenues to be paid by the Houston Airport System.

If the Net Revenues in any Fiscal Year are less than the amounts specified above, the City, promptly upon receipt of the annual audit for such Fiscal Year, must request an Airport Management Consultant to make its recommendations, if any, as to a revision of the City's rentals, rates, fees and other charges, its Operation and Maintenance Expenses or the method of operation of the Houston Airport System in order to satisfy as quickly as practicable the foregoing requirements. Copies of such request and the recommendations of the Airport Management Consultant, if any, shall be filed with the City Secretary. So long as the City substantially complies in a timely fashion with the recommendations of the Airport Management Consultant, the City will not be deemed to have defaulted in the performance of its duties under the Ordinance even if the resulting Net Revenues are not sufficient to be in compliance with the Rate Covenant, so long as there is no other default under the Ordinance.

For further description of the Rate Covenant, see APPENDIX C-1.

Other Factors Affecting Rate Covenant. The City's ability to comply with the Rate Covenant may be limited in that, among other things, (1) a significant portion of the Gross Revenues of the Houston Airport System are derived

pursuant to contracts that cannot be adjusted unilaterally by the City, (2) the most important contracts, Use and Lease Agreements with the airlines, provide for recovery of certain operating and capital costs attributable to certain facilities and do not include a debt service coverage factor, (3) parking and other sources of Gross Revenues, which are not derived under contracts, are subject to competitive supply and demand constraints, and (4) certain city charter tax and revenue limitations, voter-approved propositions and ongoing litigation involving such limitations and propositions could have an impact on the operations of the Houston Airport System. See “THE CITY AND CITY FINANCIAL INFORMATION – City Charter Tax and Revenue Propositions.”

Additional Airport Obligations

The Master Ordinance permits the City to issue, for any lawful Houston Airport System purpose, Additional Subordinate Lien Bonds, Additional Senior Lien Obligations and Inferior Lien Bonds, if certain conditions are satisfied. For detailed information relating to the issuance of additional Airport Obligations, see APPENDIX C-1.

Amendments to Ordinance

The Ordinance provides that it may be amended either with or without the consent of Owners under certain circumstances.

Amendments of Ordinance without Consent. The City may, without the consent of or notice to the Owners of the Airport Obligations, amend the Ordinance for any one or more of the following purposes: (1) to cure any ambiguity, defect, omission or inconsistent provision in the Ordinance or in the Airport Obligations; or to comply with any applicable provision of state or federal law or regulation of federal agencies; provided, however, that such action shall not adversely affect the interests of the Owners of the Airport Obligations; (2) to change the terms or provisions of the Ordinance to the extent necessary to prevent the interest on the Airport Obligations from being includable within the gross income of the Owners thereof for federal income tax purposes; (3) to grant to or confer upon the Owners of the Airport Obligations any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Owners of the Airport Obligations; (4) to add to the covenants and agreements of the City contained in the Ordinance other covenants and agreements of, or conditions or restrictions upon, the City or to surrender or eliminate any right or power reserved to or conferred upon the City in the Ordinance; (5) to subject to the lien and pledge of the Ordinance additional Net Revenues that may include revenues, properties or other collateral, (6) to add requirements or incorporate modifications the compliance with which is required by a rating agency in connection with issuing or confirming a rating with respect to any series of Airport Obligations; (7) to authorize any series of Additional Senior Lien Bonds, Additional Senior Lien Notes, Additional Subordinate Lien Bonds or additional Inferior Lien Bonds, and, in connection therewith: (i) to specify and determine the terms, forms and details thereof and (ii) to create such additional funds and accounts and to effect such amendments of the Ordinance that may be necessary for such issuance, provided in each case that no such amendment or supplement shall be contrary to or inconsistent with the limitations set forth in the Ordinance; (8) to evidence any sale, transfer or encumbrance of the Houston Airport System in accordance with the Ordinance; (9) to make any other modification, amendment or supplement that shall not materially adversely affect the interests of the Owners of the Airport Obligations; (10) to cure or correct any technical defect in connection with the terms, conditions or procedures relating to the variable rate provisions contained in any Supplemental Ordinance; provided, however, that such action shall not adversely affect the interests of the owners of the Airport Obligations; and (11) prior to the conversion of any variable rate Airport Obligations to a different interest rate mode, to change the terms, conditions or procedures relating to the new interest rate mode.

Amendments of Ordinance with Consent. The City may at any time adopt one or more ordinances amending, modifying, adding to or eliminating any provisions of the Ordinance, but, if such amendment is not of the character described in the preceding paragraph, only with the consent given in accordance with the Ordinance of the Owner or Owners of not less than a majority in aggregate unpaid principal amount of the Airport Obligations then Outstanding and affected by such amendment, modification, addition or elimination; provided, however, no such amendment, modification, addition or elimination shall permit (1) an extension of the maturity of the principal of or interest on any Airport Obligations issued under the Ordinance, (2) a reduction in the principal amount of any Airport Obligations or the rate of interest on any Airport Obligation, (3) a privilege or priority of (a) any Senior Lien Obligation(s) over any other Senior Lien Obligation(s), (b) any Subordinate Lien Bond(s) over any other Subordinate Lien Bond(s), or (c) any Inferior Lien Bond(s) over any other Inferior Lien Bond(s), or (4) a reduction in the aggregate principal amount of the Airport

Obligations required for consent to such amendment, unless the Owner or Owners of 100% in aggregate principal amount of the Airport Obligations shall consent to any of such changes.

Proposed Amendments to the Master Ordinance

The City has determined to amend the Master Ordinance in the form set forth in APPENDIX C-2 (such amendments are collectively referred to as the “Proposed 2016 Amendments”). The following summarizes the changes made to the Master Ordinance by the Proposed 2016 Amendments.

Short-Term/Demand Obligations. The Master Ordinance provides that the aggregate principal amount of Short Term/Demand Obligations Outstanding at any time may not exceed the greater of \$150,000,000 or 30% of the aggregate principal amount of Senior Lien Obligations and Subordinate Lien Bonds Outstanding at the time of issuance of the last series of Short Term/Demand Obligations. The City has determined to amend the Master Ordinance to delete this limitation on the total aggregate principal amount of Short-Term/Demand Obligations that may be Outstanding at any time. Additionally, the City has determined to amend the definition of “Short-Term/Demand Obligations” to delete the requirement that an obligation must be secured by a credit or liquidity facility to qualify as a Short-Term/Demand Obligation.

Released Revenues. The City has determined to amend the Master Ordinance to allow the City to remove a specific, identifiable portion of the income and revenues from the definition of “Gross Revenues” once certain conditions are met, including meeting a debt service coverage test, the delivery of an opinion of bond counsel and ratings confirmations from each rating agency rating the Airport Obligations affected thereby. See APPENDIX C-2 for a full description of such conditions.

Reserve Fund Requirement for Reserve Fund Non-Participants. The Master Ordinance requires all Reserve Fund Non-Participants to maintain a Reserve Fund Requirement equal to maximum annual Debt Service Requirements for all Airport Obligations that are secured thereby. The City has determined to amend the definition of Reserve Fund Requirement for Reserve Fund Non-Participants to be any amount set forth in the supplemental ordinance that authorizes the issuance such Reserve Fund Non-Participants. There is no effect on the Reserve Fund Requirement for Reserve Fund Participants, including the Series 2018 Bonds.

Qualified Hedge Agreements. The City has determined to amend the Master Ordinance to allow a financial institution that has long-term credit ratings in one of the two highest rating categories by a single nationally recognized rating service to qualify as a qualified hedge counterparty. The Master Ordinance currently requires such an institution to have such long-term credit ratings from two nationally recognized rating services.

The Proposed 2016 Amendments were adopted as part of the Supplemental Ordinance and shall be binding upon all Owners of the Series 2018 Bonds. The City intends to include the Proposed 2016 Amendments in each future supplemental ordinance until the Proposed 2016 Amendments are incorporated into the Master Ordinance, and the City has authorized the amendment of each of its prior ordinances pursuant to which Airport Obligations are Outstanding, subject to satisfying the conditions required in order to amend such prior ordinances.

The Proposed 2016 Amendments (or any portion thereof) shall not become effective and amend the Master Ordinance until the date on which the Proposed 2016 Amendments (or portions thereof) have become incorporated or deemed incorporated into every ordinance pursuant to which Airport Obligations are then Outstanding (the “Amendment Effective Date”). Although the Proposed 2016 Amendments have been incorporated into the Series 2018 Bonds, the City may not exercise its rights under any portion of the Proposed 2016 Amendments until the Amendment Effective Date. The Master Ordinance will not be deemed to be amended by the Proposed 2016 Amendments until the Amendment Effective Date.

Prior Proposed Amendment relating to Ellington Airport. In ordinances adopted by the City in 2011 and 2012, the City proposed an amendment to the definition of “Airport System” that excluded Ellington Airport. In the Supplemental Ordinance, the City has determined that such proposed amendment is not effective in regards to the Master Ordinance, the Supplemental Ordinance, or any future ordinance relating to Airport Obligations.

THE HOUSTON AIRPORT SYSTEM

The Houston Airport System

The Houston Airport System is an enterprise fund of the City. The Houston Airport System is comprised of three airports -- Intercontinental, Hobby and Ellington. Intercontinental is the nation's 13th busiest airport (as measured by enplaned passengers in calendar year 2016) and is classified as a "large hub airport" by the Federal Aviation Administration ("FAA"). It serves as an international gateway airport and a primary connecting point in the national air transportation system and was the second busiest hub for United in calendar year 2016. Additionally, Intercontinental is the primary air cargo airport for the region. Hobby is the nation's 34th busiest airport (as measured by enplaned passengers in calendar year 2016) and is classified as a "medium hub airport" by the FAA. Hobby is a primary station for Southwest, which offers domestic service and international service to destinations in Mexico, Central America, and the Caribbean. Ellington is currently used for general aviation, military, Coast Guard, and NASA operations, but has no commercial passenger service. The Houston Airport System is moving forward with plans to repurpose Ellington. See "—Ellington Airport."

Hurricane Harvey

The City of Houston experienced a substantial natural disaster on August 23 – 27, 2017 resulting from Hurricane Harvey, when up to 50 inches of rain in the Houston area caused flooding in portions of the City. Intercontinental was closed to commercial traffic for two days and the airlines resumed normal operating capacity by September 5. Operations at Hobby were stopped for three days and airlines resumed normal operations by September 7, 2017. Enplanements for August and September were lower by approximately 616,000 or 3.1% when compared to the same period for the previous year.

The Houston Airport System sustained water damage to various buildings and components of the airfields at all three airports. The estimate of the total damage to facilities owned by the Houston Airport System is approximately \$4 million. The Houston Airport System also incurred disaster-related expenses for debris removal, protective measures, and the costs of emergency personnel overtime. Houston Airport System management anticipates most of these will be covered by insurance and grants from the Federal Emergency Management Agency ("FEMA") and the State of Texas.

Shortly after the storm, the Houston Airport System established a "Disaster Recovery O&M Fund" in its accounts to serve as an appropriation source for disaster related expenses, pending insurance and reimbursement by FEMA. The Houston Airport System has transferred \$5 million from the Airport Improvement Fund to the Disaster Recovery Operations and Maintenance Fund following the approval of City Council.

The Houston Airport System continues to evaluate the cost of damages from the storm and will submit additional requests for reimbursement to FEMA and its insurance carriers, if necessary.

A group of plaintiffs filed a lawsuit against the City and the Harris County Flood Control District (together, the "Defendants") alleging a constitutional taking under Art. 1, Section 17 of the Texas Constitution and a nuisance claim alleging the Defendants released water from reservoirs flooding nearby residential and commercial properties. Plaintiffs further allege that the City permitted unmitigated development around the reservoirs despite knowledge that homes and businesses would flood. Plaintiffs seek certification as a class and an unspecified amount of actual damages, pre-judgment and post-judgment interest and costs. The City denies the plaintiffs' claims.

Additionally, the City has received eight claims and one potential claim, none of which have become a lawsuit, alleging that the City released water from reservoirs flooding nearby residential and commercial properties and vehicles. The claims consist of both requests for compensation for loss from individual claimants and claims from insurance companies for their insured's losses. The claims allege either a constitutional taking under the Texas Constitution, a nuisance claim, or simply allege the City released the water causing harm to the claimants' property. The alleged damages are in excess of \$100,000,000. The City denies these claims and potential claims.

Houston Airport System Facilities

George Bush Intercontinental Airport/Houston

Intercontinental is situated on 10,200 acres of land approximately 22 miles north of downtown Houston. Opened in 1969, it is the Houston area's busiest commercial airport.

Intercontinental's passenger terminal facilities currently consist of five terminal buildings and related concourses – Terminals A, B, C, D and E – with a total of 131 aircraft gates and seven hardstand positions. The facilities provide public parking for approximately 24,000 automobiles in multi-story garages and surface lots, an automated underground inter-terminal train system (the "Subway") that connects (pre-security) the existing five terminals and the Marriott Hotel, and an above-ground level automated people mover system (the "Skyway") that connects (post-security) all five terminals and a central federal customs and immigration inspection services building (the "Central FIS Facility") accommodating international arrivals from Terminals D and E.

Terminal A contains 25 aircraft gates including six hardstand positions and is used by various airlines (including United Express affiliates) for domestic and precleared international aircraft operations. Foreign-flag airlines operate international operations out of Terminal D, which contains 12 aircraft gates. Additionally, Terminal D is used by United Express affiliates and Spirit Airlines for some international arrivals. Terminals B, C, and E are used exclusively by United and its United Express affiliates. Terminal B, containing 42 aircraft gates, is used by United Express for regional jet operations. United is in the process of redeveloping Terminal B. Opened in May 2013, Phase 1 of the redevelopment consisted of the construction of a new South Concourse building containing 30 ground-level loading positions for regional jet operations. Terminal C contains 29 aircraft gates and primarily accommodates United and United Express domestic operations. Terminal E, containing 23 gates, is used by United for mainline international arrivals and departures and some domestic arrivals and departures and by United Express for some international arrivals. The Central FIS Facility is located between Terminal D and Terminal E and has the capacity to process approximately 4,000 arriving international passengers per hour.

Intercontinental has five runways interconnected by a system of taxiways. The longest runway is 12,000 feet long; two are approximately 10,000 feet long; and the remaining two are at least 9,000 feet long. The runways are equipped with instrument landing systems, lighting systems, and other navigation aids and are configured to permit the simultaneous use of the three east-west runways for aircraft landings in most weather conditions.

Also located on Intercontinental property are multiple air cargo buildings providing nearly one million square feet of space and a fuel farm that currently provides approximately 13 million gallons of storage capacity for jet fuel. Two fixed base operators provide airline, corporate and general aviation aircraft operations support. The Marriott Hotel is located between Terminals B and C, has 573 rooms and underwent a substantial renovation completed in January 2016. United operates facilities for aircraft maintenance, catering, flight attendant training, and other support functions, and is constructing a new 270,000-square-foot technical operations center to accommodate a hangar for widebody aircraft maintenance and is improving and expanding other aircraft maintenance and support facilities. The new and expanded facilities are expected to be completed in 2019. ExpressJet operates a flight training center. A consolidated rental car facility opened in August 2003 and was financed by the proceeds of certain bonds issued in 2001 that are not obligations of the City or United and that are secured by and payable from a customer facility charge assessed on rental car customers at the airport.

Hobby Airport

Hobby is located on 1,500 acres approximately 11 miles southeast of downtown Houston. It has two terminal buildings with two concourses. The Central Concourse, completed in 2008, contains 25 gates and is used primarily for domestic arrivals and departures. The West Concourse opened in October 2015, contains five gates, all connected to the federal immigration and customs inspection services building, which can accommodate up to approximately 800 arriving passengers per hour. Southwest's ticketing facilities are located in the West Terminal, while ticketing facilities for other airlines are located in the Central Terminal. All domestic baggage claim facilities are located in the Central Terminal. The entire terminal complex includes over 935,000 square feet of space. Hobby has four runways in total: two runways are approximately 7,600 feet long, one runway is 6,000 feet long and one runway is approximately 5,150 feet long. The

runways are equipped with instrument landing systems, lighting systems, and other navigation aids to permit use in most weather conditions.

Additional facilities at Hobby include approximately 6,530 public parking spaces, rental car facilities, an underground fuel distribution system, a cargo building, several aircraft maintenance facilities and some corporate hangars. Five fixed-base operators support Hobby's significant corporate and general aviation operations. Southwest Airlines maintains a maintenance facility and hangar at Hobby, and is constructing a new 240,000 square foot hangar at Hobby.

Ellington Airport

Ellington is located approximately 15 miles southeast of downtown Houston on approximately 2,300 acres. The joint use agreement with the federal government under which it operates expired in September 2007, but is currently being held over on a month-to-month basis. It has no scheduled commercial flights and its non-governmental operations are for general aviation. The Texas Air National Guard, NASA, and the Coast Guard also currently use Ellington. Ellington has three runways: one is 9,000 feet long, another is approximately 8,000 feet long and the third is approximately 4,600 feet long.

Ellington has one fixed-based operator leasing two fixed-base operating facilities, approximately 90 T-hangars, and three corporate-base operators that allow it to relieve Hobby of general aviation traffic. Lone Star Flight Museum opened a new facility at Ellington in September 2017 to replace its prior facility in Galveston.

The Houston Airport System was granted a Launch Site License from the FAA in June 2015 that enables Ellington to establish itself as a launch site for Reusable Launch Vehicles ("RLV"), making it the 10th commercial spaceport in the United States. RLVs launch horizontally, not vertically, similar to commercial aircraft. The Houston Airport System is proceeding with plans to establish the required infrastructure and facilities to support spaceport operations. In October 2015, the Houston Airport System acquired a 53,000-square-foot aerospace engineering building and land adjacent to Ellington to establish a business incubator facility for commercial spaceflight and other high-technology companies. No spaceflight operations are currently scheduled.

Management

The management of the Houston Airport System is the responsibility of the Director of Aviation, who is appointed by the Mayor and confirmed by the City Council of the City (the "City Council"). The Director of Aviation has a staff of approximately 1,200 employees. The Houston Airport System is categorized as an enterprise fund of the City, under the administrative control of the Mayor. The City Controller, as the Chief Financial Officer of the City, maintains the books of account, prepares financial statements and with the Mayor co-signs all warrants, contracts and orders for payment of any public funds or money relating to the Houston Airport System.

Following is selected biographical information for certain principal administrative officers and airport staff of the Houston Airport System:

Mario C. Diaz was appointed Director of the City of Houston Department of Aviation in May 2010. He is responsible for the overall management of the Houston Airport System's three aviation facilities. Prior to his appointment as Director of Aviation, beginning in 1999, Mr. Diaz served as the deputy general manager for Hartsfield-Jackson Atlanta International Airport where he was responsible for the daily operational activities of the world's busiest airport, including operations, business, finance and capital development. He has been one of the industry's leading authorities in aviation technology as well as the study of future developments in commercial aviation. Prior to 1999, Diaz was the manager of business, properties and commercial development for New Jersey Airports, a post he held for four years. In this role, he managed the division responsible for all business and lease negotiations at Newark International Airport as well as the day-to-day oversight management of Teterboro Airport, one of the nation's premier general aviation airports and a major reliever airport for Newark International. Before that, Mr. Diaz served for 17 years with the Port Authority of New York and New Jersey. Beginning in 1981, Mr. Diaz held key management positions in leasing, finance, marketing, operations and properties. During this period, Diaz also served 18 months as the assistant director of the redevelopment program at John F. Kennedy Airport. A native of Barranquitas, Puerto Rico, and a licensed private pilot with instrument certification,

Diaz earned his Bachelor of Arts degree from Rutgers University in Newark, New Jersey. He also earned a Master of Business Administration in finance from Rutgers Graduate School of Business Administration in New Jersey.

Jesus H. Saenz Jr., IAP, Chief Operating Officer, oversees strategic and business plan development, business process re-engineering, implementing of technologically complex projects and airport operations. Previously, Mr. Saenz was the General Manager for Hobby and was responsible for leading Hobby to earning a Skytrax 4-star international rating in 2016. While at Hobby, he was also responsible for directing the day-to-day management of the airport, as well as for establishing policies, procedures, guidelines and project schedules for Hobby. In addition, he coordinates the preparation, implementation and monitoring of the budget and expenditures for Hobby, among other duties. Prior to his current position, Mr. Saenz served as Assistant Director – Activation Team / Operational Readiness and Airport Transfer Team. He has held a wide range of positions, including Assistant Director of Administration and Customer Service at Intercontinental, Assistant Director of Transportation at Intercontinental, Acting Assistant Director of Operations at Intercontinental, Senior Superintendent, Superintendent and Customer Service Manager. During his nearly 20-year aviation career he has become an accredited executive of the Global ACI-ICAO Airport Management Professional Accreditation Program (AMPAP-IAP). He is designated as an International Airport Professional. He is also an active member of the Airports Council International Facilitation Team and AAE member. Mr. Saenz obtained his Bachelor of Arts degree in Social Sciences from University of Houston-Downtown.

Robert Barker, Chief Development Officer of the Infrastructure Division, is responsible for overseeing the administration of design and construction contracts, managing long-term and short-term airport projects, analyzing operations and implementing best practice policies and procedures for the Houston Airport System. Mr. Barker is a retired U.S. Navy engineering officer and certified facility manager with over 20 years international airport development, infrastructure and asset management experience. Joining the Houston Airport System in 2012, Mr. Barker has also served as Deputy Director for Capital Programs, Executive Representative for the Intercontinental Terminal Redevelopment Program, and Assistant Director for Asset Management. Prior to joining the Houston Airport System, Mr. Barker's previous work assignments included asset management leadership positions at Dallas-Fort Worth International Airport and the Cincinnati/Northern Kentucky International Airport as well as a variety of consulting engagements at Los Angeles International Airport, Indianapolis International Airport, Hartsfield-Jackson Atlanta International Airport, Northwest Florida Regional Airport and Phoenix Sky Harbor International Airport.

Robert Merz, Chief Financial Officer, is responsible for the overall financial health of the Houston Airport System. He will play a leading role in driving the Houston Airport System's "Build Capacity for Future Success" strategic priority, as he helps the Houston Airport System grow revenue, maintain fiscal discipline and fund capital improvements. Prior to joining the Houston Airport System, Mr. Merz served in various finance, planning and revenue management positions. He began his career in aviation with American Airlines and later United Airlines, ultimately serving as the Vice President ("VP") Financial Planning & Analysis and Investor Relations for United. He also served as the Senior VP Finance and Strategic Planning at AIG Life Insurance in Houston. Most recently, he was an independent consultant for the Seabury Group, advising primarily airline clients in the United States and abroad. Mr. Merz received his Bachelor of Science degree in Industrial and Operations Engineering from the University of Michigan and a Master of Business Administration in Finance from the Wharton School at the University of Pennsylvania.

Ted Kitchens, General Manager for Intercontinental, is responsible for the daily operations of Houston's largest airport and the development and implementation of its policies and procedures. In addition, he also coordinates the preparation, implementation and monitoring of the budget and expenditures for Intercontinental. Previously Mr. Kitchens served as the Houston Airport System's Planning and Development Assistant Director and was responsible for cost-effective, long-range planning of the Houston Airport System's airfield, terminal and landside facilities to meet the region's air passenger, spaceport and cargo needs. In addition, he developed and maintained forecasts of aviation demand, lead master planning and defined and prioritized capital projects as input to the CIP. He is a 17-year veteran of the aviation industry with a background in both airport management and aviation consulting services. Mr. Kitchens joined the Houston Airport System from the Newport News/Williamsburg International Airport in Virginia where he served as an Assistant Airport Director for 5 years. Prior to Newport News/Williamsburg International Airport, Mr. Kitchens held various leadership roles within the Bureau of Planning and Development at Hartsfield-Jackson Atlanta International Airport. With project experience, ranging from facility planning and programming for multi-billion dollar capital developments such as the Maynard H. Jackson Jr. International Terminal to leading the creation of the first Sustainable Airport Master Plan under an FAA Pilot Program to leading various efforts to maximize generating non-aeronautical revenue. He earned a Bachelor's degree from the University of Central Florida and a Master's Degree in Urban and Regional Planning from the University

of Florida. In 2010, he received his Accredited Airport Executive designation from the American Association of Airport Executives.

Liliana Rambo, CAPP is General Manager for Hobby. Ms. Rambo is responsible for directing the day-to-day management of Hobby, as well as for establishing policies, procedures, guidelines and project schedules for Hobby. She is also responsible for developing the collaborative relationships with our air carriers, tenants and team members to excel at providing a customer-friendly, safe, secure and efficient operation at Hobby to the travelling public. In addition, she coordinates the preparation, implementation and monitoring of the budget and expenditures for Hobby, among other duties. Ms. Rambo holds a Master's of Science in Management from St. Thomas University and a Bachelor of Business Administration in Marketing and International Business from Florida International University. She has held key leadership roles within the parking community, most recently as the Chair of the Board of Directors for the International Parking Institute. Liliana has also served on the Board of Directors of the Florida Parking Association and the Board of Directors of the Texas Parking Association, which recognized her with its Distinguished Service Award.

Arturo Machuca, General Manager of Ellington, is responsible for the daily operations and the development and implementation of policies and procedures at Ellington. He is also the lead on the Houston Spaceport project. Mr. Machuca joined the Houston Airport System in 2009 with over 30 years of sales and marketing experience in the aviation industry. His prior responsibilities included economic development, industry affairs and business relations for all three airports, and three years ago he was tasked with the responsibility to develop a plan to bring a commercial spaceport to Ellington. He worked with various federal and local agencies, as well as key players in the aerospace industry, to create preliminary plans and conceptual drawings to pursue a license to bring commercial spaceflights to Ellington Airport and is now leading commercial development efforts for Ellington Airport and Houston Spaceport. Mr. Machuca holds a Bachelor of Arts degree in Hotels and Tourism Administration from Universidad Regiomontana (Monterrey, Mexico).

Ian N. Wadsworth is Chief Commercial Officer of the Houston Airport System and Deputy Director of Commercial Development. He oversees the commercial activities at the Houston Airport System's three airports, including air service development, airline affairs, concessions, parking, real estate and business development. He joined the Houston Airport System in November 2008 as Deputy Director, Finance and Administration. In that position, Mr. Wadsworth was responsible for the finance, properties, human resources, and procurement functions. Prior to joining the Houston Airport System, Mr. Wadsworth served in various finance, planning, and marketing roles over a span of 15 years at American Airlines, Capital One Financial, and Global Aero Logistics, the parent company of ATA Airlines, World Airways, and North American Airlines. Mr. Wadsworth received a Bachelor's degree in International Affairs from George Washington University and an MBA degree in Finance from the University of Michigan Business School.

Tanya Acevedo is the Chief Information Officer for the Houston Airport System. In this capacity, Ms. Acevedo is responsible for ensuring the successful execution of the Houston Airport System's mission through innovative and enabling technology with a focus on technologies that deliver way-finding, passenger flow/tracking, and a stronger cyber security posture. Ms. Acevedo has almost three decades of experience and has a proven track record of successfully implementing innovative solutions that increase efficiency and automate processes resulting in revenue generation and cost savings. Ms. Acevedo holds a Master's of Business Administration from Central Michigan University and a Bachelor of Arts in Political Science from Michigan State University. She is a certified Project Management Professional and has received many accolades including the 2016 Public Sector Chief Information Officer of the Year from Public CIO Magazine and the 2017 Government Technology Top 25 Doers, Dreamers and Drivers Award.

Saba Abashawl, Chief External Affairs Officer, is responsible for inter-governmental relations, industry and community affairs, international business development, communications, public and media relations, and special projects. Ms. Abashawl has been an executive for the City for more than 10 years. Prior to her current position, she was the Managing Director of Development, responsible for global commercial relations and development programs that ranged from air service expansion to aviation real estate marketing and promoting the City for corporate expansion and/or relocation. Ms. Abashawl is the City's lead liaison to the Department of Homeland Security, U.S. Customs and Border Protection, the U.S. Department of State, and the U.S. Department of Commerce. Under her leadership, Houston became a Model Port of Entry and was the location for testing new procedures. From 1999 to 2004, Ms. Abashawl also served as Executive Officer for the Mayor of Houston and was responsible for international business development. She directed the City's international business development strategy along with 26 institutions, establishing Houston as the permanent Secretariat of the World Energy Cities Partnership. She previously held key positions at Houston's University of

St. Thomas and Rice University. She received a Bachelor’s degree in Marketing and a Master’s degree in International Finance and Business, both from the University of St. Thomas.

Harleen Hines Smith is the Chief Human Resource Officer for the Houston Airport System. She is responsible for developing a culture that enables employees to perform in accordance with Houston Airport System strategic and tactical human capital objectives. She also directs the development and implementation of organizational development programs, employee orientation and training programs, talent management programs, learning management systems, benefits plans, policies, and guidelines, equal opportunity employment programs and employee records and documentation policies. Ms. Hines Smith has over 20 years of human resources management experience in the private sector. She holds a Bachelor of Science degree in Business Administration from Franklin University and is an experienced manager focused on strategic management and goals.

Kenneth Gregg is the Assistant Director of Financial Planning and Analysis for the Houston Airport System. Mr. Gregg oversees the annual development of airline rates and charges and the reconciliation of prior year’s rates and charges, conducts financial planning, performs airline statistical analysis and forecasting as well as ad hoc financial analysis. He also manages the debt and treasury programs at the Houston Airport System. Prior to joining the Houston Airport System in March 2011, Mr. Gregg served in various operational, financial and corporate real estate roles with Continental Airlines (“Continental” now United) for over 22 years. Mr. Gregg received a Bachelor of Science degree in Finance from the University of Houston – Clear Lake and a Master of Science degree in Finance from the Mays Business School at Texas A&M University.

Airport Service Region

The primary service region for the Houston Airport System is the nine-county Metropolitan Statistical Area of Houston-The Woodlands-Sugar Land (formerly called the Houston-Sugar Land-Baytown Metropolitan Statistical Area) (“MSA”) and the 12-county Combined Statistical Area (“CSA”) of Houston-Baytown-Huntsville. The 2016 U.S. Census population estimate for the MSA was approximately 6.77 million. The MSA and CSA contain the City of Houston, which is the nation’s fourth most populous city. Harris County (the county in which the City is primarily located) accounted for 69.3% of the MSA’s population. The extended air service region includes smaller markets with limited or no air service within driving distance of system airports, including Beaumont/Port Arthur, Bryan/College Station, Lufkin/Nacogdoches, and Victoria, Texas, and Lake Charles, Louisiana.

The MSA’s population has grown consistently between 2012 and 2016:

**Historical Houston-The Woodlands - Sugar Land MSA
Population Estimates**

Year (July 1)	Population	Annual Percentage Change
2012	6,185,988	
2013	6,332,710	2.4%
2014	6,497,864	2.7%
2015	6,656,947	2.6%
2016	6,772,470	1.7%

Source: U.S. Census Bureau

The development and strength of the economic base of the Houston Airport System’s service region is important to airline traffic growth at the airports. This dependency is particularly true for an economy with large trade volumes such as that of the region, in which industries rely on airports for the connections provided by passenger and cargo airline service. Houston’s location approximately 50 miles from the Gulf of Mexico makes it an ideal gateway to Latin America. Intercontinental is currently the third busiest U.S. international gateway to Latin America, behind only Miami International and New York’s John F. Kennedy airports. The region also is a center for the energy, financial, medical, transportation, retail and manufacturing industries. The region has 26 Fortune 500 companies headquartered in its metropolitan area, third behind only the New York City and Chicago regions in its number of Fortune 500 companies. The 10 largest private employers in the Houston area are shown in the table below:

Top 10 Greater Houston Private Employers

Company	Employment	Type of business
Walmart	37,000	Retail
Memorial Hermann Health System	24,108	Healthcare
HEB	23,732	Retail grocer
University of Texas MD Anderson Cancer Center	21,086	Healthcare
McDonald's Corporation	20,918	Retail fast food
Houston Methodist	20,000	Healthcare
Kroger Company	16,000	Retail grocer
United Airlines	14,941	Airline
Schlumberger Limited	12,069	Oil and gas
Shell Oil Company	11,507	Oil and gas

Source: Greater Houston Partnership, 2017 Houston Facts.

The City is an important center for convention and special events, including the NCAA Men's Division I Basketball Final Four in 2011 and 2016 and the NFL's Super Bowl in 2017. It is estimated that during Fiscal Year 2016, City facilities, including the George R. Brown Convention Center with its 1.2 million square feet of meeting space, hosted approximately 209 events resulting in a local economic impact of approximately \$161 million.

Capital Improvement Program

General Discussion. The City updates and adopts annually a rolling five-year comprehensive plan that determines and prioritizes its capital and infrastructure needs, including the Houston Airport System. In connection with updates to its master plans for its airports, the Houston Airport System publishes CIPs extending past the City's five-year requirement, which is described below. The Houston Airport System continuously monitors and adjusts its CIP based upon financial capacity, air travel demand, and airline industry developments. From 2000 to 2010, the Houston Airport System undertook a major renovation, modernization and expansion project of all three airports totaling approximately \$2.8 billion. At Intercontinental, the City built, among other projects, two new air carrier runways and related airfield expansions and improvements; a new international arrivals facility; an extended automated people mover system; and expansions and renovations to existing terminal, garage, and support facilities. At Hobby, the City constructed a new central concourse, substantially expanded the main terminal building, and completed various runway and taxiway improvements. At Ellington, the City made various airfield improvements. See also "INVESTMENT CONSIDERATIONS."

Master Plans. The Houston Airport System has completed updates to the Intercontinental, Hobby, and Ellington Master Plans. These long-term development plans are generally demand-driven (with respect to activity levels), time-driven (with respect to facility condition), and consistent with strategic goals. Projects are identified as needed when a pre-defined demand level is reached, but are revalidated before implementation in the then-current operating environment.

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CIP Projects. The current CIP, which covers Fiscal Year 2018 through Fiscal Year 2022 (“Fiscal Year 2018-2022 CIP”) calls for approximately \$2.1 billion in projects. The major projects in the Fiscal Year 2018-2022 CIP include the following:

**Major Projects as Shown in Fiscal Year 2018-2022 CIP⁽¹⁾
(dollars in millions)**

<u>Airport</u>	<u>Description</u>	<u>Amount</u>
Intercontinental	Intercontinental Terminal Redevelopment Program	\$ 1,310
	Runway, Taxiway and Airfield Projects	208
	Terminal Improvements	83
	Parking, Ground Transportation and Other Improvements	131
Hobby	Terminal Improvements	145
	Runway, Taxiway and Airfield Projects	23
	Rental Car Center and Other Improvements	10
Ellington	Improvements and Spaceport	85
Administration	System Support	60
Total		\$ 2,055

(1) The CIP reflected in the report of the Airport Management Consultant covers projects to be implemented through Fiscal Year 2021. See “REPORT OF THE AIRPORT MANAGEMENT CONSULTANT” herein.

Intercontinental Capital Improvement Program. The Intercontinental Airport Terminal Redevelopment Program (“ITRP”) includes the construction of a new Mickey Leland International Terminal (“MLIT”) to provide needed additional wide-body aircraft-capable gates and terminal facilities. Terminal D opened in 1990, and it has been determined that the facility should be redeveloped with a new international facility to be constructed in phases on the same site as Terminal D, the original C-North concourse, and adjacent aircraft parking aprons. The new facility is anticipated to offer up to 16 wide-body gates versus the six that are available today. MLIT will provide approximately 560,000 square feet of space and up to 16 gates capable of accommodating wide-body aircraft, up to two of them A380-capable (with restrictions on the use of adjacent gate(s)). All gates will be connected to the Central FIS Facility and be capable of accommodating both domestic and international flights. MLIT will include improved concessions, club rooms, and other passenger amenities compared with Terminal D.

Intercontinental’s Central FIS Facility will be renovated and enlarged to improve arriving international passenger flows through primary and secondary processing functions and to facilitate the use of automated passport control technology. Passenger security screening checkpoints for United’s international departing and connecting passengers will be consolidated. A new baggage handling system will be installed and a new baggage claim annex will be constructed to provide four additional baggage claim units. After removal of one existing baggage claim unit during reconfiguration, 14 units will be provided, four with the capacity for A380 aircraft. A separate baggage claim area with four claim units will be provided for domestic and precleared passengers at Terminals D and E.

At Intercontinental, a new C-North concourse for United, which was opened in May 2017, was constructed to the west of the original C-North concourse to replace domestic gates that will be redeveloped as part of the MLIT development. The new concourse provides 280,000 square feet of space on two levels (including a renovated portion of the existing C-North concourse), an increase of 40,000 square feet over the original concourse. The new C-North concourse provides 14 domestic gates, compared with 13 gates at the original concourse. The project included reconstruction of the apron and utilities and installation of equipment to allow bags to be transferred from the new concourse to the baggage sortation complex at Terminal C. The original C-North concourse is not now in use.

Improvements to utility supply and distribution systems are required for the entire Intercontinental terminal complex as well as to enable implementation of MLIT and other ITRP elements. Roadway and signage improvements and other landslide projects will also be implemented as part of ITRP.

The Houston Airport System is investigating options for building a new electrical power generating plant and distribution system to serve the Intercontinental terminal complex through a design, build, operate, and maintain contract, with financing to be provided from private sources. Additional CIP project elements are described in “Airport Facilities and Capital Improvement Program” in APPENDIX A.

Hobby Capital Improvement Program. The Houston Airport System completed an update to the Master Plan for Hobby in 2015. Key airfield projects in the Hobby Master Plan include the relocation, widening, and extension of Runway 12L-30R from a general aviation runway to a full air-carrier-capable runway 8,000 feet long and 150 feet wide with a full-length parallel taxiway. Land is to be acquired at the southeast end of the extended runway for the runway protection zone and air navigation aids are to be relocated. Following the construction of Runway 12L-30R, Runway 17-35 will be decommissioned. Construction of the extended runway is not planned until after 2023, but planning and environmental studies are included in the CIP. Other airfield projects in the CIP are the reconstruction of Runway 12R-30L and the rehabilitation of taxiway and apron pavement.

The Hobby Master Plan provides for expansion of the international concourse and apron to add up to seven gates (for a total of 12 international gates). Construction is not planned to begin until after 2023. Terminal projects included in the CIP are construction of a canopy over the curbside roadways and various rehabilitation projects.

Construction of a consolidated rental car center is not currently included in the CIP. Subject to agreement with the rental car companies on scope and funding, the center would include a customer service building, a parking structure for ready and return spaces, and a quick turnaround area. Houston Airport System management anticipates that the project would be funded with special facility debt and would not be an obligation against Net Revenues.

Ellington Capital Improvement Program. The Houston Airport System completed an update to the Master Plan for Ellington in 2015. Projects in the Ellington Master Plan (not expected to be implemented until after 2023) include the extension of Runway 17R-35L to 10,000 feet, land acquisition for a runway protection zone for the extended runway, construction of a full-length taxiway parallel to Runway 4-22, reconfiguration of other airfield facilities, construction of additional general aviation hangars, and development of infrastructure to enable future spaceport and other commercial development. Near-term projects include new control tower construction, roadway improvements, and airfield pavement rehabilitation.

Available land at Ellington would allow eventual development of facilities for research, engineering, manufacturing, and related aerospace activities at a 400-acre campus. As part of the first phase of campus development, in 2015, the City acquired a light manufacturing and office building from the Boeing Company. The Houston Airport System renamed the building the Houston Aerospace Support Center and is modifying it to provide 53,000 square feet of space for offices, laboratories, and fabrication facilities.

CIP Project Funding. The Houston Airport System anticipates funding the Fiscal Year 2018-2022 CIP from multiple sources, including available cash in the Airports Improvement Fund (“AIF”) and Renewal and Replacement Fund, entitlement and discretionary grants and awards from the FAA and the Transportation Security Administration, PFC revenues, and bond proceeds. The Houston Airport System also anticipates using senior lien commercial paper draws to fund projects on an interim basis. While the current CIP anticipates the issuance of additional general revenue bonds to finance certain capital expenditures, the timing and structure of any new bond issue is uncertain and depends upon, among other things, market considerations, the amount of cash generated internally by the Houston Airport System, and the timing and scope of projects in the capital improvement plan, in particular those relating to the ITRP. As of December 31, 2017, the Houston Airport System also had approximately \$95 million outstanding in Senior Lien Notes. The Senior Lien Notes are supported by a letter of credit issued by Sumitomo Mitsui Banking Corp, which expires in December 2021, but may be terminated at the City’s option at any time.

On November 5, 2015, the City executed a forward bond purchase agreement for the issuance of up to \$450 million of Airport System Inferior Lien Revenue Bonds with Royal Bank of Canada, which replaced the \$150 million

Airport System Inferior Lien Commercial Paper Notes, Series C. The City has not issued nor currently expects to issue amounts pursuant to the forward bond purchase agreement.

Passenger Facility Charge (PFC) Revenues. The City is authorized to impose and use PFCs for certain Houston Airport System improvements. Additionally, the City expects to submit future PFC applications to the Federal Aviation Administration for authority to impose and use PFCs for future improvements, including for the ITRP and other projects in the capital improvement plan. **PFC revenues are not legally pledged or committed to pay debt service on any Senior Lien Bonds, or Subordinate Lien Bonds, including the Series 2018 Bonds, or the Inferior Lien Bonds. Further, PFC revenues are not considered Gross Revenues under the Ordinance.** See “Sources of Revenues –Passenger Facility Charge Revenues” in APPENDIX A and the definition of Gross Revenues in APPENDIX C-1.

The City’s authority to impose and use PFCs at both Hobby and Intercontinental is subject to certain terms and conditions in the federal PFC authorizing legislation, the PFC regulations adopted by the FAA and specific FAA approvals applicable to the Intercontinental and Hobby PFC programs. If the City fails to comply with any of these requirements, the failure could reduce or terminate the City’s authority to impose PFCs at one or both airports and use such PFCs to finance a portion of the CIP.

As of March 2015, the City had implemented a PFC of \$4.50 per enplaned passenger at both Hobby and Intercontinental. The City has authority to impose and use \$736,300,640 of PFCs collected at Hobby through September 1, 2038 and the authority to impose and use \$1,372,445,143 of PFCs collected at Intercontinental through January 1, 2028. The City is authorized to use PFC revenues to (a) pay debt service on outstanding bonds issued for certain completed Intercontinental projects; (b) reimburse the Houston Airport System for the unamortized cost of certain other Intercontinental projects that were originally funded from the Houston Airport System’s resources, such as the AIF; (c) provide pay-as-you-go funding of the local share of the costs of certain planned future projects; and (d) pay debt service on commercial paper and future bonds to finance certain projects.

As of June 30, 2017, the aggregate account balances for PFC collections were approximately \$117 million at Intercontinental and \$23 million at Hobby. These funds are scheduled to be used to either pay future debt service for projects already approved by the FAA or pay the local share of capital projects approved by the FAA on a pay-as-you go basis. Historical PFC collections for the Houston Airport System are shown below.

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Schedule A: PFC Collections

**Houston Airport System PFC Collections
(dollars in thousands)**

	FY 2013	FY 2014	FY 2015⁽¹⁾	FY 2016	FY 2017
Intercontinental	\$47,465	\$48,181	\$66,491	\$80,574	\$77,351
Hobby	13,731	14,422	18,901	23,656	24,188
Total	\$61,196	\$62,603	\$85,392	\$104,230	\$101,539
Year-over-Year Change	-3.71%	2.30%	36.40%	22.06%	-2.58%⁽²⁾

(1) As of March 2015, the City implemented a PFC of \$4.50 per enplaned passenger at Hobby and Intercontinental.

(2) See “HOUSTON AIRPORT OPERATING STATISTICS” for a description of the reasons causing the decrease.

Source: Houston Airport System audited financial statements.

For a discussion of the treatment of PFC Revenues under the Ordinance, see APPENDIX C-1. See “Schedule 5: Selected Financial Information” for the total amount of PFC Revenues available to pay debt service and debt service coverage ratios.

Grants under the FAA Airport Improvement Program and Other Programs. The City has been awarded, on behalf of the Houston Airport System, numerous grants under the FAA Airport Improvement Program, including Voluntary Airport Low Emissions grant funding, and awards from the Transportation Security Administration. Eligible projects include runway and taxiway rehabilitation, noise mitigation, environmental impact studies and security projects. The Houston Airport System has recognized capital contributions from these programs totaling over \$118 million over the prior five fiscal years ending Fiscal Year 2017. Grant funds are not available for payment of debt service.

HOUSTON AIRPORT SYSTEM OPERATING STATISTICS

According to the U.S. Department of Transportation, Intercontinental and Hobby ranked 13th and 34th among U.S. airports, respectively, based on total enplaned passengers in Calendar Year 2016.

Total enplaned passengers for the Houston Airport System decreased by 1.6% to 27.4 million during Fiscal Year 2017. During this same period, total enplaned passengers at Hobby increased 4.34% to 6.7 million. Total enplaned passengers decreased by 3.4% at Intercontinental, with international passenger enplanement down 2.5%. The reduction in the number of enplaned passengers at Intercontinental between Fiscal Year 2016 and Fiscal Year 2017 is attributable primarily to reduced numbers of connecting passengers as United reduced connecting service through Intercontinental. Notwithstanding the oil-price-related slowdown in the economy of the Houston MSA, the number of originating passengers increased 1.7%. However, that increase was more than offset by a 7.9% reduction in the number of connecting passengers.

Each airport has an airline with an enplaned passenger market share of above 75%: United at Intercontinental and Southwest at Hobby. United and its regional partners, collectively, accounted for approximately 77.6% of total passengers at Intercontinental in Fiscal Year 2017. Southwest accounted for 93.0% of all passengers at Hobby in Fiscal Year 2017. See “Schedule 1: Passenger Statistics” and “Schedule 2: Airline Market Shares.”

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Airlines Utilizing the Houston Airport System

The table below shows the passenger airlines that provided scheduled service as of December 2017 from either Intercontinental or Hobby. As of December 2017, the scheduled passenger airlines that serve Houston averaged 5,302 weekly aircraft departures (including seasonal and non-daily scheduled service), which served more than 111 domestic destination airports, including all major U.S. cities. The airlines also provided service to 66 international destinations, and currently serve or expect to serve cities in Mexico, Central America, South America, Canada, Europe, Asia, Middle East, Australia and Africa. All of the mainline carriers shown below have signatory airline status under various use and lease agreements, except for Alaska Airlines at Intercontinental and Branson Air and JetBlue at Hobby.

Intercontinental			Hobby	
Mainline Carriers	Regional Carriers	Cargo Carriers	Mainline Carriers	Regional Carriers
Aeromexico	Aerolitoral	ABX Air	American Airlines	Envoy Air Inc
Air Canada	Compass Airlines	Air France Cargo	Branson Air Express	ExpressJet Airlines
Air China	Elite Airways	Air Bridge Cargo	Delta Air Lines	Mesa Airlines
Air France	Endeavor Air	Cargologicair	JetBlue Airways	Southern Airways
Air New Zealand	Envoy Air Inc.	Cargolux	Southwest Airlines	Via Airlines, Inc.
	ExpressJet Airlines	Cathay Pacific Cargo		
Alaska Airlines	GoJet Airlines	China Airlines		
All Nippon Airways	Jazz Air	DHL		
American Airlines	LACSA	Emirates SkyCargo		
Atlas Air (Angola)	Mesa Airlines	Federal Express		
AVIANCA	Republic Airlines	Lufthansa Cargo		
British Airways		Martinaire Aviation		
Delta Air Lines	Shuttle America	Qatar Cargo		
Emirates	SkyWest Airlines	UPS		
EVA Air	Trans International Airlines			
Frontier Airlines	Trans States Airlines			
InterJet				
KLM Royal Dutch Airlines				
Korean Air Lines				
Lufthansa				
Qatar Airways				
Singapore Airlines				
Spirit Airlines				
Turkish Airlines				
United Airlines				
VivaAerobus				
Volaris				
WestJet				

Source: Houston Airport System

United Airlines. United is the busiest airline at Intercontinental with combined average daily departures of 477 for calendar year 2017, including regional affiliates. United and its regional affiliates enplaned 77.5% of total enplaned passengers in Fiscal Year 2017, 77.6% of total enplaned passengers in Fiscal Year 2016 and 80.0% of total enplaned passengers in Fiscal Year 2015 at Intercontinental. See “Schedule 2: Airline Market Shares.” For a discussion of the sources of operating revenues for the Houston Airport System, and the term of United’s use and lease agreement at Intercontinental, respectively, see “HOUSTON AIRPORT SYSTEM FINANCIAL INFORMATION – Sources of Revenues” and “HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS – Airport Use and Lease Agreements and Second Amended and Restated Special Facilities Lease Agreement” and “– Intercontinental Terminal E Lease and Special Facilities Lease Agreement.”

Intercontinental is the 2nd busiest of United's principal domestic airport hubs as measured by enplaned passengers, accounting for approximately 20.4% of United's system-wide enplanements for the twelve months ending December 31, 2017. During this period at Intercontinental, United enplaned approximately 10.7 million passengers while its regional affiliates enplaned 4.3 million passengers, approximately 60% of whom were connecting from flights operated by United or its regional carriers. The airline with the next highest market share at Intercontinental in 2017 was American Airlines, with an enplaned passenger market share of 5.4%.

Based on United's anticipated schedule for the next 12 months as of January 1, 2018, (a) United expects to operate 223 average daily departures (excluding regional jets) from Intercontinental to 101 non-stop destinations, including 45 international destinations, and (b) United's regional carriers expect to operate an additional 254 average daily departures from Intercontinental to 90 domestic destinations and 22 international destinations.

Southwest Airlines. Southwest is the busiest airline at Hobby with 152 average daily departures in calendar year 2017. Southwest carried 93.0% of the total Hobby passengers in Fiscal Year 2017, and 92.6% in Fiscal Year 2016. The airline with the next highest market share at Hobby in 2017 was Delta Air Lines, with an enplaned passenger market share of 3.4%. See "Schedule 2: Airline Market Shares." For a discussion of the sources of operating revenues for the Houston Airport System, and the term of Southwest's use and lease agreement at Hobby, respectively, see "HOUSTON AIRPORT SYSTEM FINANCIAL INFORMATION – Sources of Revenues" and "HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS – Hobby Use and Lease Agreements."

On October 15, 2015, Southwest began operating flights to six international destinations in Mexico, Central America, and the Caribbean from a new international terminal at Hobby. This new facility was constructed by Southwest with its own funds and the City is, as contemplated by the use and lease agreement with Southwest refinancing the unamortized investment with a portion of the proceeds of the Series 2018 Bonds. As of December 2017, Southwest operates 48 domestic non-stop destinations and nine international non-stop destinations from Hobby.

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The following schedules set forth certain statistical information regarding the Houston Airport System as provided by the City.

Schedule 1: Passenger Statistics

Schedule 1 shows total passengers at Intercontinental and Hobby over the most recent five fiscal years and the six-month periods ending December 31, 2016 and 2017. Intercontinental has seen significant growth in international passengers, but a decrease in the number of domestic passengers during this period. Hobby has seen growth over the period shown.

**Houston Airport System
Total Passengers
(in thousands)**

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Six-Months Ended 12/31/16	Six-Months Ended 12/31/17
Intercontinental Domestic Passengers							
Enplaned and Deplaned	30,830	30,836	31,968	31,959	30,809	15,532	15,106
Year-over-Year Change	-3.0%	0.0%	3.7%	0.0%	-3.6%		-2.82%
Intercontinental International Passengers							
Enplaned and Deplaned	8,795	9,470	10,019	10,901	10,606	5,416	4,992
Year-over-Year Change	1.3%	7.7%	5.8%	8.8%	-2.7%		-8.49%
Total Intercontinental Passengers*							
Enplaned and Deplaned	39,625	40,306	41,987	42,860	41,415	20,948	20,098
Year-over-Year Change	-2.1%	1.7%	4.2%	2.1%	-3.4%		-4.23%
Hobby Domestic Passengers							
Enplaned and Deplaned	10,690	11,606	11,837	12,208	12,423	6,179	6,304
Year-over-Year Change	4.9%	8.6%	2.0%	3.1%	1.8%		1.98%
Hobby International Passengers⁽¹⁾							
Enplaned and Deplaned	-	-	4	519	860	425	448
Year-over-Year Change	-	-	N/A	12,875%	65.7%		5.13%
Total Hobby Passengers							
Enplaned and Deplaned	10,690	11,606	11,840	12,728	13,284	6,604	6,752
Year-over-Year Change	4.9%	8.6%	2.0%	7.5%	4.4%		2.19%
Total Airport System Passengers*							
Enplaned and Deplaned	50,315	51,915	53,823	55,587	54,698	27,552	26,850
Year-over-Year Change	-0.7%	3.2%	3.7%	3.3%	-1.6%		-2.61%

Source: Houston Airport System

*Numbers may not total exactly due to rounding.

(1) Limited international arrivals began at Hobby on March 7, 2015. Southwest began roundtrip service to select international destinations on October 15, 2015.

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Schedule 1A: Total Enplaned Passengers for the Houston Airport System

Schedule 1A shows originating and connecting enplaned passengers for Intercontinental and Hobby over the most recent five fiscal years and the six-month periods ending December 31, 2016 and 2017. The enplaned originating percentage has generally stayed within a relatively narrow range for both airports.

**Houston Airport System
Total Originating and Connecting Enplaned Passengers¹
(in thousands)**

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Six-Months Ended 12/31/16	Six- Months Ended 12/31/17
Intercontinental							
Originating Enplaned	9,235	9,657	10,454	11,129	11,105	5,544	5,576
Connecting Enplaned	10,521	10,452	10,505	10,301	9,599	4,887	4,460
Total Enplaned passengers	19,756	20,109	20,959	21,430	20,704	10,431	10,036
Enplaned Originating Percentage	46.7%	48.0%	49.9%	51.9%	53.6%	53.15%	55.56%
Hobby							
Originating Enplaned	3,960	4,135	4,270	4,696	4,853	2,445	2,374
Connecting Enplaned	1,417	1,701	1,674	1,687	1,807	858	1,008
Total Enplaned passengers	5,377	5,836	5,944	6,383	6,660	3,303	3,382
Enplaned Originating Percentage	73.6%	70.8%	71.8%	73.6%	72.9%	74.02%	70.20%
Houston Airport System							
Originating Enplaned	13,195	13,791	14,725	15,824	15,958	7,989	7,950
Connecting Enplaned	11,938	12,153	12,179	11,988	11,406	5,475	5,468
Total Enplaned passengers	25,133	25,944	26,903	27,813	27,364	13,734	13,418
Enplaned Originating Percentage	52.5%	53.2%	54.7%	56.9%	58.3%	58.17%	59.25%

Source: Houston Airport System

*Numbers may not total exactly due to rounding.

(1) Estimates of originating and connecting passengers (and originating percentages) presented above are as reported by the airlines to the Houston Airport System and differ from those presented in APPENDIX A – REPORT OF THE AIRPORT MANAGEMENT CONSULTANT, which are derived from data reported by the airlines to the U.S. Department of Transportation. The reason for the difference is, in part, because of inconsistencies in the way some airlines have historically reported to the Houston Airport System the number of passengers connecting “off-line” (i.e., to or from the flights of a different airline). In some cases, these off-line connecting passengers have been reported as originating passengers. For additional information see “Airline Traffic Analysis” in APPENDIX A.

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Schedule 2: Airline Market Shares

Schedule 2 shows airline market shares for the Houston Airport System over the most recent five fiscal years. United and Southwest have maintained leading market shares at Intercontinental and Hobby, respectively, over the period.

Houston Airport System Market Share Data (in thousands)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Total Passengers-Intercontinental					
Domestic					
United and affiliates	26,414	25,804	26,205	25,561	24,698
Delta and affiliates	1,298	1,363	1,450	1,460	1,475
American and affiliates*	2,551	2,629	2,728	2,618	2,245
All Other Airlines	569	1,036	1,585	2,319	2,390
Subtotal Domestic Passengers*	30,830	30,832	31,968	31,959	30,809
International					
United and affiliates	6,862	7,160	7,398	7,690	7,433
Air Canada/Jazz	239	252	278	290	303
British Airways	271	281	265	243	241
Emirates	186	200	221	253	203
Lufthansa	306	301	281	278	292
AeroMexico	168	219	271	255	256
Air France	148	152	146	144	153
Qatar	165	164	153	160	155
KLM	174	178	180	156	165
Singapore	113	105	84	79	83
All Others	165	458	740	1,350	1,324
Subtotal Int'l Passengers*	8,795	9,470	10,015	10,900	10,606
Total (Domestic and International)*	39,625	40,302	41,983	42,860	41,415
Market Share-Intercontinental					
Domestic					
United and affiliates	66.7%	64.0%	62.4%	59.6%	59.6%
Delta and affiliates	3.3%	3.4%	3.5%	3.4%	3.6%
American and affiliates*	6.4%	6.5%	6.5%	6.1%	5.4%
All Other Airlines	1.4%	2.6%	3.7%	5.4%	5.8%
Subtotal Domestic	77.8%	76.5%	76.1%	74.5%	74.4%
International					
United and affiliates	17.3%	17.8%	17.6%	18.0%	17.9%
Air Canada/Jazz	0.6%	0.6%	0.7%	0.7%	0.7%
British Airways	0.6%	0.6%	0.4%	0.6%	0.6%
Emirates	0.6%	0.6%	0.7%	0.6%	0.5%
Lufthansa	0.8%	0.7%	0.7%	0.6%	0.7%
AeroMexico	0.4%	0.5%	0.6%	0.5%	0.6%
Air France	0.4%	0.4%	0.3%	0.3%	0.4%
Qatar	0.4%	0.4%	0.4%	0.4%	0.4%
KLM	0.4%	0.4%	0.4%	0.4%	0.4%
Singapore	0.3%	0.3%	0.2%	0.2%	0.2%
All Others	0.4%	1.2%	1.9%	3.2%	3.2%
Subtotal International	22.2%	23.5%	23.9%	25.5%	25.6%
Total	100%	100%	100%	100%	100%

**Houston Airport System
Market Share Data
(in thousands)
(cont'd)**

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Total Passengers-Hobby					
Domestic					
Southwest	9,481	10,373	10,883	11,272	11,485
Delta and affiliates	403	409	448	429	447
American and affiliates	234	269	329	333	296
JetBlue	135	203	166	166	190
Frontier	3	-	-	-	-
All Others	-	-	6	8	5
Subtotal Domestic Passengers ⁽¹⁾	10,690	11,609	11,837	12,208	12,423
International					
Southwest			4	519	860
All Others			-		1
Subtotal Int'l Passengers ⁽¹⁾			4	519	860
Total (Domestic and International) ⁽¹⁾			11,841	12,727	13,284
Market Share-Hobby					
Domestic					
Southwest	92.7%	92.3%	91.9%	88.5%	86.5%
Delta and affiliates	3.8%	3.5%	3.8%	3.4%	3.4%
American and affiliates	2.2%	2.3%	2.8%	2.6%	2.2%
JetBlue	1.3%	1.8%	1.4%	1.3%	1.4%
Frontier	0.0%	0.0%	0.0%	0.0%	0.0%
All Others	0.0%	0.1%	0.8%	0.0%	0.0%
Subtotal Domestic	100%	100%	100%	95.9%	93.5%
International ⁽²⁾					
Southwest			0.0%	4.1%	6.5%
Delta and affiliates			0.0%	%	0.0%
Subtotal International			0.0%	4.1%	6.5%
Total	100%	100%	100%	100%	100%

Source: Houston Airport System

*Numbers may not total exactly due to rounding.

(1) US Airways and affiliates completed its merger with American and affiliates in 2015.

(2) Limited international arrivals began at Hobby on March 7, 2015. Southwest began roundtrip service to select international destinations on October 15, 2015.

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Schedule 3: Total Aircraft Operations and Aircraft Landed Weight

Schedule 3 shows the aircraft operations (take-offs and landings) and aircraft landed weight for the Houston Airport System for the most recent five fiscal years.

	Aircraft Operations (in thousands)				
	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Aircraft Operations	799	811	816	787	760
Year-over-Year Change	-4.62%	1.44%	0.74%	-3.55%	-3.43%

	Aircraft Landed Weight (in million pounds)				
	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Aircraft Landed Weight	33,041	33,878	31,894	35,517	34,644
Year-over-Year Change	0.60%	2.53%	-5.86%	11.36%	-2.46%

Source: Houston Airport System

Schedule 4: Total System Cargo Activity

Schedule 4 shows cargo activity for the Houston Airport System for the most recent five fiscal years.

	Total System Cargo Activity (in metric tons)				
	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Domestic Freight	201,464	193,054	192,169	195,644	210,730
International Freight	218,311	226,123	253,039	205,381	220,172
Mail	27,142	27,333	30,026	25,693	24,903
Total Cargo	446,917	446,510	475,234	426,718	455,805
Year-over-Year Change	-1.4%	-0.1%	6.4%	-10.2%	6.8%

Source: Houston Airport System

*Numbers may not total exactly due to rounding.

HOUSTON AIRPORT SYSTEM FINANCIAL INFORMATION

Sources of Revenues

The Houston Airport System generates Operating and Non-Operating Revenues from various sources:

Landing Fees. Landing fees for airlines that provide scheduled service at Intercontinental and Hobby are computed annually under residual cost-recovery formulas derived from various use and lease agreements and license

agreements (see “HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS – Airport Use and Lease Agreements and Second Amended and Restated Special Facilities Lease Agreement”). Landing fees are also applied by ordinance to nonscheduled, commercial aircraft and non-signatory scheduled aircraft landings at both airports based upon maximum FAA-approved gross landed weights. The City also receives revenues from aviation fuel flowage fees (currently six cents per gallon) assessed on the delivery of fuel to certain aircraft in lieu of landing fees, however, at Intercontinental and Hobby, this revenue is netted against the airfield costs used to set the landing fees.

Building and Ground Area Revenues. Terminal space rentals paid by signatory airlines under use and lease agreements are computed annually under compensatory cost-recovery formulas derived from various use and lease agreements and license agreements. Ground rentals are charged by the City under long-term ground leases of land at Intercontinental, Hobby, and Ellington, typically at market rates escalating periodically. The City leases various parcels of land to airlines, fixed base operators and various corporations for hangars, aircraft maintenance facilities, flight kitchens and cargo buildings, auto rental companies for their service facilities and storage lots, and to a variety of other entities for buildings and other permanent improvements.

Parking, Concessions, and Other Revenues. Other than revenues from airline landing fees and terminal rentals, parking revenues from City-owned facilities are the largest single source of revenues of the Houston Airport System. Parking operations are managed and operated on behalf of the Houston Airport System by New South Parking. See “HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS – Other Significant Airport Agreements.” Parking rates are approved by the City Council; however, under a City ordinance, the Houston Airport System has the authority to increase parking rates, without further approval from City Council, up to specified amounts. Whereas the airline agreements generally allow for the Houston Airport System to set rates only to recover costs allocable to airline facilities, the Houston Airport System is generally able to set parking rates and concession and other business terms on a commercial basis. Therefore, the Houston Airport System must generate these nonairline revenues in order to (1) cover that portion of system operating and capital costs not paid by the airlines; (2) produce an annual surplus for deposit to the Airports Improvement Fund to meet current or anticipated needs of the Houston Airport System; and (3) comply with the Rate Covenant.

PFCs. The Houston Airport System derives a significant amount of non-operating revenues from PFC collections which are authorized for both Intercontinental and Hobby and are both being collected at the \$4.50 rate (\$4.39 net of \$0.11 airline collections fee permitted by federal regulation) per eligible enplaned passenger. In Fiscal Year 2017, PFC revenues received by the Houston Airport System implied that approximately 81% of enplaned passengers were subject to the PFC. While the Ordinance does not define Gross Revenues to include PFCs, they are recognized as non-operating revenues in the Houston Airport System’s comprehensive annual financial statements.

Selected Financial Information

Schedule 5 sets forth, for the Fiscal Years indicated, (1) the Gross Revenues, Operation and Maintenance Expenses and Net Revenues (each computed as defined in the Ordinance) of the Houston Airport System, (2) the total Debt Service Requirement (computed as defined in the Ordinance) on then Outstanding Airport Obligations, which include all obligations payable from revenues of the Houston Airport System and (3) the coverage of Debt Service Requirement by Net Revenues. All amounts in “Schedule 5: Selected Financial Information” for Fiscal Years 2013 through 2017 are derived from the audited financial statements of the Houston Airport System Fund, or from the supplementary information and the statistical section included in the City Controller’s Comprehensive Annual Financial Report of the City of Houston, Texas, for each respective Fiscal Year. The schedule should be read in conjunction with the complete audited financial statements of the City of Houston, Texas Airport System Fund Comprehensive Annual Financial Report and the notes thereto included as APPENDIX B.

Schedule 5: Selected Financial Information

(dollars in thousands)

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Operating Revenues					
Landing fees:					
Landing fees	\$86,911	\$84,098	\$89,426	\$82,703	\$84,036
Aviation fuel	1,444	1,529	1,521	1,527	1,350
Aircraft parking	2,704	2,715	2,628	2,640	2,660
Subtotal	91,059	88,342	93,575	86,870	88,046
Building and ground area revenues:					
Terminal space	158,237	163,297	173,392	191,321	196,162
Cargo building	2,397	2,432	2,506	2,484	2,448
Other rentals	5,848	6,174	6,252	6,808	6,453
Hangar rental	6,675	6,605	6,355	6,576	6,813
Ground rental	8,544	7,997	8,534	8,828	9,305
Subtotal	181,701	186,505	197,039	216,018	221,181
Parking, concession and other revenues:					
Retail concessions	41,604	41,444	41,855	35,216	39,999
Auto parking	77,596	90,173	97,515	101,650	99,752
Auto rental	29,522	32,783	31,991	30,737	28,735
Ground transportation	6,639	8,301	9,323	10,083	10,402
Other operating revenue	4,873	4,559	4,984	8,324	5,926
Subtotal	160,234	177,260	185,668	186,009	184,814
Total operating revenue	\$432,994	\$452,107	\$476,282	\$488,897	\$494,041
Nonoperating revenues ⁽¹⁾					
Interest on investments ⁽¹⁾	7,029	5,499	6,014	6,986	9,306
Other revenues - revenue fund	1,222	3,162	7,526	-52	7,177
Subtotal	8,251	8,661	13,540	6,934	16,483
Total gross revenues	\$441,245	\$460,768	\$489,822	\$495,831	\$510,524
Operation and maintenance expenses ⁽²⁾					
Personnel and other current expenses	\$ 252,638	\$268,638	\$ 283,451	\$ 309,455	\$249,382
Retiree health and life insurance liability ⁽²⁾	-	-	-	-	-
Interest on pension bonds and note ⁽³⁾	107	107	107	107	107
Other interest	-	-	-	5,153	5,018
Total operation and maintenance expenses	\$ 252,745	\$ 268,745	\$ 283,557	\$ 314,715	\$254,506
Net revenue	\$188,500	\$ 192,023	\$ 206,264	\$ 181,117	\$256,018
Total debt service requirements	\$ 153,938	\$ 156,424	\$ 163,319	\$ 163,904	\$175,023
PFC revenue available for debt service	34,390	35,614	38,054	42,320	54,673
Grant revenue available for debt service	-	22,942	16,399	13,888	-
Net debt service requirement ⁽⁴⁾	\$119,548	\$97,868	\$ 108,866	\$ 107,696	\$120,350
Coverage of debt service ⁽⁵⁾	1.58	1.96	1.89	1.68	2.13

* Totals may not add up due to rounding.

(1) The figures shown have been adjusted for miscellaneous revenues not defined as Gross Revenues or Net Revenues in the Ordinance. Excludes interest revenue earned in restricted bond funds and PFCs.

(2) Does not include depreciation expenses.

(3) Represents a portion of the pension debt issued in 2005 allocable to the Houston Airport System. No revenues of the Houston Airport System are pledged to such debt.

(4) Does not include debt service for which interest was capitalized from bond proceeds. Interest earned in reserve funds and used for debt service reduces the debt service requirement. See definitions of "Debt Service Requirements" in APPENDIX C-1.

(5) Operating and maintenance expense for debt service coverage calculations decreased by \$60.2 million between Fiscal Year 2016 and Fiscal Year 2017, primarily due to a \$67.4 million decrease in pension expense associated with pension reform enacted in 2017. Without the effects of pension reform, it is estimated that debt service coverage would have been 1.63 in Fiscal Year 2017.

Source: Houston Airport System

Schedule 6: Summary of Certain Fees and Charges

Schedule 6 shows the rates and charges for Fiscal Year 2017 and Fiscal Year 2018 for both Intercontinental and Hobby. These rates and charges are established according to the terms of the use and lease agreements for each airport and are subject to annual fiscal year-end adjustments once actual airport-related expenses are finalized.

	Intercontinental		Hobby	
	FY 2017	FY 2018	FY 2017	FY 2018
Landing Fee Rates ⁽¹⁾	\$ 2.642	\$ 2.757	\$ 1.982	\$ 2.013
Terminal Space Rentals ⁽²⁾	22.70-74.97	23.59-73.44	64.59-67.29	65.65-68.15
Apron ⁽²⁾	2.289-2.832	2.420-2.769	1.652-1.853	1.791-1.848
Aircraft Parking (per day)	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00
Cargo (per day)	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00
Parking Rates (maximum per day)				
Economy (Ecopark)				
Covered	8.00	7.39	n/a	n/a
Uncovered	6.00	5.54	10.00	9.24
Structured	22.00	22.00	22.00	22.00
Sure Park	24.00	24.00	n/a	n/a
Valet	26.00	26.00	26.00	26.00

Source: Houston Airport System

(1) Per 1,000 pounds of landed weight.

(2) Range per square foot.

Shown below are average airline payments per enplaned passenger for the most recent five fiscal years for each of Intercontinental and Hobby. This average does not include payments by United for special facility bond debt service or terminal operations and maintenance in net-leased terminals, nor is it reflective of concession revenues retained by United in these terminals.

**Houston Airport System
Total Cost Per Enplanement
(\$ per enplanement)**

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Intercontinental	10.52	10.61	10.56	10.62	11.10
Hobby	6.64	6.19	6.43	7.15	6.15

Source: Houston Airport System

DEBT SERVICE REQUIREMENTS OF HOUSTON AIRPORT SYSTEM OBLIGATIONS

Schedule 7: Houston Airport System Debt Service Requirements Schedule

Schedule 7 sets forth the Debt Service Requirements, computed as defined in APPENDIX C-1, on all Outstanding Airport Obligations, assuming scheduled mandatory redemption of any term bonds. This schedule includes the Series 2018 Bonds and excludes the Refunded Bonds and commercial paper notes.

	Subordinate Lien Bonds					
	Senior Lien Bonds Debt Service	Existing Subordinate Lien Bonds Debt Service ⁽¹⁾	The Series 2018 Bonds Debt Service	Adjusted Subordinate Lien Bonds Debt Service	Inferior Lien Obligations Debt Service ⁽²⁾	
7/1/2018	\$33,091,994	\$144,369,349	\$ 5,832,329	\$ 150,201,678	-	\$ 183,293,672
7/1/2019	33,095,244	124,990,225	32,938,500	157,928,725	-	191,023,969
7/1/2020	33,091,494	125,001,267	32,926,000	157,927,267	-	191,018,760
7/1/2021	33,094,744	131,116,083	27,063,750	158,179,833	-	191,274,576
7/1/2022	33,093,244	126,879,156	31,722,750	158,601,906	-	191,695,150
7/1/2023	33,095,744	133,900,188	23,855,000	157,755,188	-	190,850,932
7/1/2024	33,095,494	133,912,628	23,854,250	157,766,878	-	190,862,371
7/1/2025	33,095,994	117,239,514	40,005,250	157,244,764	-	190,340,758
7/1/2026	33,095,494	119,559,363	40,009,750	159,569,113	-	192,664,607
7/1/2027	33,092,244	117,143,468	40,009,000	157,152,468	-	190,244,712
7/1/2028	33,093,675	116,823,631	40,010,500	156,834,131	-	189,927,806
7/1/2029	33,091,288	77,137,485	81,501,250	158,638,735	-	191,730,022
7/1/2030	33,095,025	77,060,177	81,508,750	158,568,927	-	191,663,952
7/1/2031	33,094,400	142,482,942	13,500,250	155,983,192	-	189,077,592
7/1/2032	33,095,200	146,211,527	13,503,000	159,714,527	-	192,809,727
7/1/2033	33,094,125	-	13,507,500	13,507,500	-	46,601,625
7/1/2034	33,092,875	-	13,502,750	13,502,750	-	46,595,625
7/1/2035	33,092,875	-	13,503,250	13,503,250	-	46,596,125
7/1/2036	33,095,275	-	13,507,750	13,507,750	-	46,603,025
7/1/2037	33,095,950	-	13,505,000	13,505,000	-	46,600,950
7/1/2038	33,095,775	-	13,504,250	13,504,250	-	46,600,025
7/1/2039	33,095,350	-	13,509,250	13,509,250	-	46,604,600
7/1/2040	-	-	13,503,500	13,503,500	-	13,503,500
7/1/2041	-	-	13,501,250	13,501,250	-	13,501,250
7/1/2042	-	-	3,821,000	3,821,000	-	3,821,000
7/1/2043	-	-	3,820,250	3,820,250	-	3,820,250
7/1/2044	-	-	3,827,750	3,827,750	-	3,827,750
7/1/2045	-	-	3,822,750	3,822,750	-	3,822,750
7/1/2046	-	-	3,825,500	3,825,500	-	3,825,500
7/1/2047	-	-	3,820,250	3,820,250	-	3,820,250
7/1/2048	-	-	3,822,000	3,822,000	-	3,822,000
	\$728,073,503	\$1,833,827,001	\$676,544,329	\$2,510,371,330	-	\$3,238,444,830

(1) Excludes the Refunded Bonds. Variable and auction rate bonds reflected at original certified rates. Actual rates will vary. See footnote (2) to “Schedule 8: Houston Airport System Outstanding Debt.”

(2) See footnote (3) to “Schedule 8: Houston Airport System Outstanding Debt.”

Schedule 8: Houston Airport System Outstanding Debt

Schedule 8 summarizes Houston Airport System debt outstanding as of December 31, 2017, including commercial paper notes, but adjusted to include the Series 2018 Bonds and exclude the Refunded Bonds and Refunded Notes. The schedule was also adjusted to include the issuance of the Houston Airport System's Special Facilities Revenue Bonds on February 20, 2018.

	Outstanding Principal Amount (dollars in thousands)
Senior Lien Revenue Bonds, fixed rate	\$ 420,420
Senior Lien Notes ⁽¹⁾	21,473
Subordinate Lien Revenue Bonds, fixed rate ⁽²⁾	1,331,795
Subordinate Lien Revenue Bonds, auction rate ⁽³⁾	254,475
Subordinate Lien Revenue Bonds, variable rate	92,505
Inferior Lien Obligations ⁽⁴⁾	-
Pension Obligation Bonds ⁽⁵⁾	<u>29,616</u>
Total Outstanding Principal	<u>\$2,150,284</u>
Special Facilities Revenue Bonds ⁽⁶⁾	940,455

(1) Adjusted to exclude the Refunded Notes and include the issuance of an additional \$10 million in Senior Lien Notes since December 31, 2017. The City has authorized issuance of up to \$150 million of Airport System Senior Lien Notes, Series A and B, as commercial paper, a portion of which is being refunded by the Series 2018 Bonds.

(2) Adjusted to include the Series 2018 Bonds and exclude the Refunded Bonds.

(3) Reflects the outstanding principal amounts of the Series 2000P-1, 2000P-2, 2002C, 2002D-1, and 2002D-2 auction rate bonds. The auction rate bonds are not short term/demand obligations as defined in the bond ordinances authorizing the issuance of the Airport Obligations.

(4) On November 5, 2015 the City executed a forward bond purchase agreement for the issuance of up to \$450 million of Airport System Inferior Lien Revenue Bonds with Royal Bank of Canada, which replaced the \$150 million Airport System Inferior Lien Commercial Paper Notes, Series C. No amounts have been issued pursuant to the forward bond purchase agreement and as of the date hereof, the City does not expect to issue such debt.

(5) Represents the Houston Airport System's allocation of the City's pension obligation bonds issued in 2005 and 2017, although not direct obligations of the Houston Airport System. In December 2017, the City issued \$1.005 billion of pension obligation bonds. The Houston Airport System is obligated to transfer to the City \$27.61 million for its pro-rata share of the principal payable on March 1, 2019. The Houston Airport System is also responsible for the share of interest attributed to this principal, totaling \$724,829.22. Upon payment, the Houston Airport System will have no obligation on such 2017 bonds.

(6) Adjusted to include the issuance of the Houston Airport System's Special Facilities Revenue Bonds on February 20, 2018 in the aggregate principal amount of \$137,075,000. Represents the dollar amount of special facility revenue bonds that the City issued on behalf of third parties, the repayment of which is solely the obligation of such third party. THESE BONDS ARE SECURED SOLELY BY LEASE PAYMENTS OF THIRD PARTIES, AND NO REVENUES OF THE HOUSTON AIRPORT SYSTEM ARE PLEDGED TO PAY SPECIAL FACILITY BONDS. Approximately \$91.6 million of the bonds outstanding were issued to support a consolidated rental car facility and the remaining bonds were issued to support certain Continental (now United) airport projects. See "HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS – Other United Lease Agreements at Intercontinental" for a more detailed description of these bonds.

Source: Houston Airport System

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Schedule 8A: Cash and Liquidity

Schedule 8A shows the cash position of the Houston Airport System and a calculation of days of cash on hand for the most recent five fiscal years. A portion of the Houston Airport System cash is restricted to certain uses and some of the cash is unrestricted. The Ordinance requires the Houston Airport System to set aside two months of operation and maintenance reserves in the Operation and Maintenance Reserve Fund. The Houston Airport System’s policy has been to reserve greater than the minimum two month requirement to accommodate fluctuations in revenues and enplanements.

Houston Airport System Cash and Investments (dollars in thousands)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>
Unrestricted Airport System Cash and Investments	\$518,853	\$549,429	\$457,396	\$511,384	\$480,251
Days of Unrestricted Cash on Hand	749	746	589 ⁽¹⁾	595	689 ⁽²⁾

Source: Houston Airport System

(1) In Fiscal Year 2015, the Houston Airport System made appropriations for new multi-year contracts related to the IAH Terminal Redevelopment Program, resulting in the reduction of unrestricted cash on hand.

(2) If not for the decrease in pension expense in Fiscal Year 2017 associated with pension reform, Houston Airport System management estimates that Days of Unrestricted Cash on Hand would have been 557.

HOUSTON AIRPORT SYSTEM SIGNIFICANT CONTRACTUAL AGREEMENTS

Airport Use and Lease Agreements and Second Amended and Restated Special Facilities Lease Agreement

General. At both Intercontinental and Hobby, the vast majority of landing fees and terminal rentals are paid by the airlines pursuant to use and lease agreements and/or special facilities leases. Those agreements generally require the airlines to pay landing fees, terminal building rentals and certain other charges to enable the Houston Airport System to recover costs allocable to facilities occupied by the airlines. These costs include, among others, operation and maintenance expenses, amortization charges associated with the Houston Airport System’s investment in airport capital improvements and interest on the Houston Airport System’s investment in land. Airlines that do not operate under use and lease agreements either operate under agreements on a month-to-month basis or under City ordinance.

While the Houston Airport System maintains different use agreements for Intercontinental, each terminal at Intercontinental, and Hobby, airline rentals and use fees are generally calculated using the same “compensatory” cost allocation and rate-making principles. Under these principles, the Houston Airport System creates cost centers for each terminal or major facility (e.g., Terminals A, B, C, D, E, the Central Federal Inspections Services (“FIS”) Facility; the Skyway; and the Airfield at Intercontinental; and the Central Terminal, West Terminal, and Airfield at Hobby) and calculates a rate base requirement as the total of all allocable direct, indirect, and system (e.g., the Subway and the central utility plant) operating and capital costs of the facility. Capital costs are calculated as the level annual amortization charge allocable to each investment. Terminal costs are further allocated between airline, nonairline, and apron areas, with terminal building and apron rental rates set to recover the rate base requirement, and the Houston Airport System bears risk for costs allocable to vacant space. Costs associated with nonairline (e.g., public and concession) areas of the terminals are the responsibility of the Houston Airport System and are recovered through concession revenues (including parking, rental car and ground transportation revenues) and other eligible non-airline revenues. Landing fee rates are calculated on a cost-center residual basis to recover in full the costs of the airfield area, net of certain nonairline cost center revenues (principally general aviation fuel flowage fees).

At Intercontinental, United leases certain terminals under long-term “net lease” agreement provisions by which United leases in full airline and nonairline premises such that there is no risk to the Houston Airport System for vacant space, and capital investment is generally the responsibility for United. In consideration of this mitigated risk, the Houston Airport System confers upon United the right to control, and retain revenues generated by, terminal concessions.

The following sections summarize the major provisions of the Houston Airport System's use and lease agreements, special facilities leases and license agreements.

Intercontinental Terminal A Airlines Use and Lease Agreement. The Terminal A Use and Lease Agreement expired on June 30, 2005, and is currently being held over on a month-to-month basis. In addition to allowing for the lease of preferential terminal building space, the agreement provides for the use of certain premises such as holdroom and apron on a common-use basis, with equivalent per-use charges in lieu of rentals.

Intercontinental Terminal B Improvement Projects and Special Facilities Lease. In November 2011, the Houston Airport System and Continental (now United) entered into a Second Amended and Restated Special Facilities Lease with a term of thirty years to provide for the redevelopment of Terminal B in three phases, subject to certain early termination and extension provisions. Pursuant to the agreement, United leases all airline premises in Terminal B, and, as facilities are redeveloped, all airline and nonairline premises in the terminal under "net lease" provisions. Also pursuant to the agreement, the Houston Airport System leases to United certain special facilities located in Terminal C that were financed with proceeds of previously issued special facilities bonds.

The Terminal B Improvement Projects are expected to be accomplished in phases. In the first phase, United built and opened in 2013 a new Terminal B South Concourse for regional jet aircraft. In the second phase, completed in May 2017, United built a new mainline concourse between the original north concourses of Terminals B and C. Under the third and final deferred phase, United may construct two new international-capable Terminal B North Concourses for both mainline and regional jet aircraft along with a Terminal B FIS facility and the renovation and reconstruction of the existing Terminal B central lobby and baggage claim areas. The redevelopment, with the exception of certain projects to be funded by the Houston Airport System as detailed later, is to be undertaken by United at its sole expense, with the Houston Airport System agreeing to issue on behalf of United additional special facilities bonds.

To support the Terminal B Improvement Projects, the Houston Airport System has agreed to undertake certain capital projects to be completed concurrently with United's capital projects at Terminal B. The Houston Airport System's capital projects include ramp and apron replacement and roadway, signage, inter-terminal train, utility, environmental and fuel system relocation or improvements. The first phase of the Houston Airport System's capital program for Terminal B cost approximately \$53 million. The second phase will cost approximately \$105 million. It is anticipated that the Houston Airport System's capital program for Terminal B will be financed largely with AIF cash balances, PFCs, grants, and airport revenue bond proceeds.

As security for the Airport System Special Facilities Revenue Bonds (Continental Airlines, Inc. Terminal Improvement Projects), Series 2011, the Second Amended and Restated Special Facilities Lease obligates United to pay rent, directly to the trustee, equal to the debt service on the special facility bonds. In addition, following substantial completion of each phase or segment of the Terminal B Improvement Projects, United will pay the Houston Airport System rentals calculated under "net lease" provisions.

Intercontinental Terminal C Use and Lease Agreements. United's Airport Use and Lease Agreement, as it relates to Terminal C, was amended in 2015 and now expires on December 31, 2037, as does the term of the Terminal C Special Facilities Lease Agreement. The Terminal C Use and Lease Agreement gives United the preferential right to use all of the apron area and exclusive right to use of all of the holdrooms and other airline space in Terminal C for the duration of the lease term. The Second Amended and Restated Special Facilities Lease also covers certain improvements made by United in Terminal B, Terminal C and Terminal D at Intercontinental. These improvements were financed by the Airport System Special Facilities Revenue Bonds, Series 1997B and Series 1998B, originally issued in the principal amounts of \$71,200,000 and \$20,630,000, respectively, and refunded in 2015. These special facilities revenue bonds are not obligations of the Houston Airport System. United has a continuing obligation to pay debt service on such bonds which may become due and payable after expiration of the special facilities lease.

The amended Airport Use and Lease Agreement converted Terminal C to a net lease, similar to Terminal E, where United is responsible for all maintenance, janitorial and all around upkeep. In consideration of the net lease, United will retain all revenues from inside concessions, such as food and beverage, gifts, and news, for the Terminal C South Concourse.

In calculating airline fees, rentals and any other charges at Intercontinental, the total costs of all support facilities such as the inter-terminal train system and the chilled and hot water plant are allocated among the various areas that benefit from such facilities, including airline areas of the terminal buildings. In addition, the Houston Airport System charges apron fees that are calculated to recover costs allocable to the aprons. Finally, landing fees are calculated according to a formula through which the airlines are required to pay their pro-rata share of all costs allocable to the airfield cost center after first deducting airfield revenues derived from general aviation (principally fuel flowage fees, if any).

Intercontinental Terminal D International Facilities Agreement. Foreign-flag airlines, United, and other airlines providing international service at Terminal D, which shares the Central FIS Facility with Terminal E, operate under the terms of the International Facilities Agreement which expires June 30, 2020, but is cancellable by either the Houston Airport System or the airline with 30 days' notice. Use fee rates are calculated for Terminal D sub-cost centers by function (e.g., arrivals, departure, and ticketing and baggage make-up), with costs allocated using compensatory rate-making principles.

Intercontinental Terminal E Lease and Special Facilities Lease Agreement. The term of the Terminal E Lease and Special Facilities Lease Agreement relating to the central ticketing facility, Terminal E baggage system improvements, Terminal C-East garage, ATO facility, Terminal E apron area and fuel systems and ancillary facilities, commenced August 29, 2001 and is scheduled to terminate on January 25, 2030. United may extend the term for an additional 5-year period, subject to certain conditions. United net leased the facilities on an exclusive basis, with the exception of the Terminal E Apron area and fuel systems, which are leased on a preferential basis.

As security for the Airport System Special Facilities Revenues Bonds (Continental Airlines, Inc. Terminal E Project), Series 2001, the Terminal E Special Facilities Lease obligates United to pay rent, directly to the trustee, equal to debt service on such bonds. In addition, United must pay the Houston Airport System ground rentals for the special facility areas and "city charges" for the portions of the facilities financed by the Houston Airport System as well as certain allocated costs relating to capital project amortization, maintenance, and operations costs, replenishment of the renewal and extension fund for systems costs, and airport and departmental administrative costs. In consideration of United's net leasing of the entire Terminal E and central ticketing facility (including the public areas), United is entitled to the revenues from all "inside concessions" at Terminal E, such as revenues from concession agreements for food and beverage, gift/news, telephone and advertising.

Other United Lease Agreements at Intercontinental

In March 1997, Continental (now United) entered into a Special Facilities Lease Agreement for the Skyway connecting Terminals B and C at Intercontinental. The project was financed with the Houston Airport System's Special Facilities Revenue Bonds, Series 1997A, issued in the principal amount of \$74,200,000. The Special Facilities Lease Agreement (Automated People Mover) obligates United to pay rent to the Houston Airport System equal to debt service on the bonds. The Houston Airport System subleased the link between Terminals B and C from United effective January 25, 2005, when the link between Terminals C and D was placed into service. The Houston Airport System assumed the debt obligations for the link when it entered the sublease and they are paid from Houston Airport System net revenues on the same priority as Inferior Lien Bonds. The Special Facilities Revenue Bonds, Series 1997A fully matured on July 15, 2017.

In September 2016, the City and United executed a Memorandum of Agreement ("MOA") for United to build a new technical operations center and provide certain improvements to related facilities at Intercontinental ("UTOC"). United issued the Houston Airport System's Special Facilities Revenue Bonds to finance the UTOC project (the "2018 UTOC Bonds") on February 20, 2018, and, in connection with the 2018 UTOC Bonds, the City and United entered into a special facilities lease, whereby United has agreed, among other things, to pay debt service on the 2018 UTOC Bonds. The term of the lease expires in 2053.

The construction and improvement of certain of the United facilities at Intercontinental were partially financed by the Airport System Special Facilities Revenue Bonds, Series 1997C and Series 1998C (together, the "1998 Bonds"), which were originally issued in the amounts of \$44,600,000 and \$25,675,000, respectively, and subsequently refunded by the Airport System Special Facilities Revenue Bonds, Series 2015C (the "2015C Bonds"). Simultaneously with the issuance of the 2018 UTOC Bonds on February 20, 2018, United issued the Houston Airport System's Special Facilities Revenue Bonds to finance the improvement, renovation, expansion and repair of certain special facilities of United at Intercontinental, including improvements to an existing aircraft maintenance hangar facility, construction of an aircraft

shops facility, and renovation of a maintenance and parts storage facility (the “2018C Bonds”). In connection with the issuance of the 2018C Bonds, the City and United entered into an amendment to a Special Facilities Lease that was originally entered into by the parties in connection with the issuance of the 1998 Bonds related to non-terminal facilities used by United at Intercontinental. The 2018C Bonds are secured on a parity with the 2015C Bonds, neither of which are secured by revenues of the Houston Airport System. United has a continuing obligation to pay debt service on such bonds which may become due and payable after expiration of the special facilities lease term, which extends until the end of 2027.

United leases approximately 4,300 parking spaces principally near the ecopark economy parking lot at Intercontinental. The spaces are primarily for employee use. This lease agreement was scheduled to expire on July 31, 2016, but the first of two one-year extension options was exercised. Subsequently, in conjunction with the MOA related to the UTOC project mentioned above, the lease has been extended until August 31, 2027.

Hobby Use and Lease Agreements. The airport use and lease agreement for the airlines operating at Hobby are similar in form and substance to the agreements at Intercontinental, but with certain differences in rate-making methodology in that there is no division of cost centers into “airline” and “nonairline” as is the practice at Intercontinental, but, like at Intercontinental, the airlines have financial responsibility only for the premises they lease. Under the Hobby use and lease agreements, landing fees are calculated using the same formula as is used at Intercontinental. The Hobby agreement also includes a cost containment provision with respect to the Terminal Building, the Central Concourse and associated Apron and the Airfield cost centers. This provision uses the Fiscal Year 2012 airline cost per enplanement as a base and allows it to increase based on the Consumer Price Index for the Houston area both annually and cumulatively with no implications if the actual cost per enplanement for ensuing fiscal years does not exceed the adjusted rate. If the adjusted rate were calculated to exceed the calculated containment cost per enplanement, the Houston Airport System must reduce the allocation of costs to airline cost centers so as not to exceed the adjusted rate. The lease also provides for an Inside Concession Revenue sharing program for those airlines signing a 25-year lease term. Currently, only Southwest has done so. The revenue-sharing program calls for inside concession revenue (food and beverage, retail) to be shared at the average net inside concession revenue rate per enplaned passenger for each fiscal year in which there is incremental enplanement growth over the base of Fiscal Year 2012 up to a maximum of \$4 million dollars annually.

In February 2013, the Houston Airport System entered into a new agreement with Southwest, which expires on June 30, 2040. Delta and American both entered into five-year agreements in 2015 that expire June 30, 2020. In October 2015, international operations began at Hobby.

In December 2016, the City and Southwest entered into an MOA regarding a maintenance hangar development project. The City has agreed to lease nearly 44 acres exclusively to Southwest for the project. The project will include both Southwest project components and City project components. Southwest will expend, at its own cost, a minimum of \$60 million dollars to design and construct the project. The City’s enabling projects are estimated to cost approximately \$14 million dollars.

Other Significant Airport Agreements

Rental Car Facilities

The consolidated rental car facility at Intercontinental was financed in March 2001 with proceeds of the Airport System Special Facilities Taxable Revenue Bonds, Series 2001 (Consolidated Rental Car Facility Project), issued in the principal amount of \$130,250,000. A portion of these special facility bonds were refinanced with the issuance of Airport System Special Facilities Taxable Revenue Refunding Bonds (Consolidated Rental Car Facility Project), Series 2014. These special facility bonds are secured by and payable from a separate customer facility charge (“CFC”) assessed on rental car customers at Intercontinental, which, as of December 31, 2017, is \$4 per transaction day. Under the terms of the Master Special Facilities Lease, the rental car companies are responsible for all operation and maintenance costs associated with the facility and the associated busing operation. Such lease is scheduled to expire on December 31, 2027.

The Houston Airport System has rental car agreements with nine rental car operators at Hobby. Four of the operators lease facilities from the Airport System on a month-to-month basis. All nine of the operators have concession agreements that expire in 2020.

Concessions, Cargo and Service Agreements

Shown below is a summary of other significant non-airline agreements for the Houston Airport System.

Houston Airport System Significant Non-Airline Agreements

<u>Vendor</u>	<u>Expiration Date</u>	<u>Extension or Termination Options</u>	<u>Service Provided</u>	<u>Airport</u>
JC Decaux	February 28, 2021; July 31, 2021	N/A	Advertising	Intercontinental; Hobby
ATU Americas	December 31, 2025		Duty Free	Intercontinental
Paradies	December 31, 2025	N/A	News, gift and specialty	Hobby
WDFG	December 31, 2025	N/A	News, gift and specialty	Hobby
HMS Host	December 31, 2025	N/A	Food	Intercontinental
WDFG	December 31, 2025	N/A	News, gift and specialty	Intercontinental
Paradies	December 31, 2025	N/A	News, gift and specialty	Intercontinental
JDDA SSP	December 31, 2018	N/A	Food	Intercontinental
SSP America	December 31, 2025	N/A	Food	Intercontinental
Latrell's Galley, L.P.	December 31, 2025	N/A	Food	Intercontinental
Host International, Inc.	December 31, 2025	N/A	Food	Intercontinental
Houston Airport Hotel Owner's, L.P.	October 31, 2053	N/A	Marriott	Intercontinental
4 Families of Houston	May 22, 2020	N/A	Food	Hobby
Federal Express	May 31, 2022	1 five year extension option	Freight, Mail	Intercontinental
UPS	December 31, 2022	2 ten-year optional extensions	Freight, Mail	Intercontinental
Aero Houston Central	December 31, 2024	N/A	Central Cargo	Intercontinental
Aero Houston East, LLC	February 25, 2043	Option to terminate after 30 years	East Cargo	Intercontinental
Aero Houston East II, L.P.	February 28, 2043	Option to terminate after 30 years	East Cargo	Intercontinental
Trammel Crow Company IAH International Air Cargo II, L.P.	August 31, 2049	Option to terminate after 30 years	Perishables Cargo	Intercontinental
Prologis	February 28, 2043	Option to terminate after 30 years	East Cargo, Warehouse	Intercontinental
New South Parking –Texas	January 28, 2017 (extended to March 31, 2018)	2 one-year optional extensions	Parking management	Intercontinental; Hobby

Source: Houston Airport System

THE AIRLINE INDUSTRY FINANCIAL INFORMATION

Certain of the certificated major domestic airlines (or their respective parent corporations) are subject to the information reporting requirements of the Securities Exchange Act of 1934, as amended, and thus must file reports and other information with the U.S. Securities and Exchange Commission (the "Commission"). Certain information, including financial information, as of particular dates, concerning the certificated major domestic airlines (or their respective parent corporations) is disclosed in such 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 at 450 Fifth Street, N.W., Washington, D.C. 20549, and at the Commission's regional offices, including the Northwestern Atrium Center, 500 West Madison Street, Suite 1400, Chicago, IL 60661-2511 and 5670 Wilshire Boulevard, 11th Floor, Los Angeles, California 90036. Copies of such reports and statements can be obtained from the Public Reference Section of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549, at prescribed rates. The Commission also maintains a web site at <http://www.sec.gov> containing reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. The Commission undertakes no responsibility for and makes no representations (and the City, the City's Financial Advisors and the Underwriters disclaim any responsibility) as to the accuracy or completeness of the content of such material contained on the world wide web as described in the preceding sentence, including but not limited to, updates of such information or links to other world wide web sites accessed through the aforementioned web site. In addition, all major and certain other airlines are required to file periodic reports of financial and operating statistics with the United States Department of Transportation. Such reports can be inspected in the Office of Airline Statistics, Research and Special Programs Administration, United States Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590, and copies of such reports can be obtained from the U.S. Department of Transportation at prescribed rates.

Airlines owned by foreign governments or foreign corporations operating airlines (other than foreign airlines that have American Depositary Receipts registered on a national exchange) are not required to file information with the Commission. Airlines owned by foreign governments, or foreign corporations operating airlines, file limited information only with the U.S. Department of Transportation.

INVESTMENT CONSIDERATIONS

Economic and Political Conditions

Historically, airline passenger traffic nationwide has correlated closely with the state of the U.S. economy and levels of real disposable income. Recessions in the U.S. economy in 2001 and 2008-2009 and associated high unemployment reduced discretionary income and coincided with reduced airline travel in those years. With the globalization of business and the increased importance of international trade and tourism, the U.S. economy has become more closely tied to worldwide economic, political, and social conditions. As a result, international economics, trade balances, currency exchange rates, political relationships, and hostilities all influence passenger traffic at major U.S. airports. Sustained future increases in passenger traffic at the Houston Airport System airports will depend on stable international conditions as well as national and global economic growth.

Financial Condition of the Airlines

The ability of the Houston Airport System to generate revenues depends, in part, upon the financial health of the aviation industry in general. The economic condition of the aviation industry is volatile, and the industry has undergone significant changes, including mergers, acquisitions, bankruptcies and closures in recent years. Further, the aviation industry is sensitive to a variety of factors, including (i) the cost and availability of financing, labor, fuel, aircraft and insurance, (ii) national and international economic conditions, (iii) international trade, (iv) currency values, (v) competitive considerations, including the effects of airline ticket pricing, (vi) traffic and airport capacity constraints of the Houston Airport System and competing airports, (vii) governmental regulation, including security regulations and taxes imposed on airlines and passengers, and maintenance and environmental requirements, (viii) passenger demand for air travel and (ix) disruption caused by airline accidents, criminal incidents and acts of war or terrorism, such as the events of September 11, 2001. The aviation industry is also vulnerable to strikes and other union activities. The number of passengers at the Houston Airport System airports will depend partly on the profitability of the U.S. airline industry and the associated ability of the industry and individual airlines, particularly United and Southwest, to make the necessary investments to provide service.

Recent History. 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 agreement with their employees, lessors, vendors, and creditors to cut costs, either under Chapter 11 bankruptcy protection or the possibility of such. Between 2002 and 2005, Delta, Northwest, United, and US Airways all filed for bankruptcy protection 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, as oil and aviation fuel prices increased to unprecedented levels, the industry experienced a profitability crisis. 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%.

In 2010 through 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 \$27 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 and 2017. 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 is expected by airline industry analysts to contribute to industry profitability. However, any resumption of financial losses could cause 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, present business opportunities for the remaining airlines, and change airline travel patterns nationwide.

Airline Service and Routes. Intercontinental and Hobby accommodate travel demand to and from the Houston region and serve as connecting hubs. The number of origin and destination passengers at the two airports depends 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. The number of connecting passengers, on the other hand, depends entirely on the airline fares and service provided at the airports.

The large airlines have developed hub-and-spoke systems that allow them to offer high-frequency service in many city-pair markets. Because most connecting passengers have a choice of airlines and intermediate airports, connecting traffic at an airport depends 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).

Intercontinental serves as a primary connecting hub and international gateway for United, while Hobby serves as a connecting airport and Latin American gateway for Southwest. As a result, much of the connecting passenger traffic at the two airports results from the route networks and flight schedules of United and, to a lesser extent, Southwest, rather than

the economy of the Houston region. If United were to reduce connecting service at Intercontinental (or Southwest were to reduce connecting service at Hobby), such service would not necessarily be replaced by other airlines.

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 the Houston Airport System airports, 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 16.7 cents per passenger-mile in 2016. Beginning in 2006, charges were introduced by most airlines for 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. Fuel prices are particularly sensitive to worldwide political instability and economic uncertainty. 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 as demand increased. Between early 2011 and mid-2014, aviation fuel prices were relatively stable, partly as a result of increased oil supply from U.S. domestic production. As of mid-2014, average fuel prices were approximately three times those prevailing at the end of 2003. 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 a continued surplus in the worldwide supply (and the potential for further surpluses from Iran as trade sanctions are lifted) resulted in further reductions in fuel prices through 2016. Fuel prices have since increased, but the average price of aviation fuel at mid-2017 was still approximately 60% 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 low for some time. However, 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 global climate change.

Structural Changes in the Travel Market. Many factors have combined to alter consumer travel patterns. There remain threats of terrorism against aviation. As a result, the federal government has mandated various security measures that have resulted in new security taxes and fees and longer passenger processing and wait times at airports. Both add to the costs of air travel and make air travel less attractive to consumers relative to ground transportation, especially to short-haul destinations. Additionally, consumers have become more price-sensitive. Efforts of airlines to stimulate traffic by heavily discounting fares have changed consumer expectations regarding airfares. In addition, the availability of fully transparent price information on the Internet now allows quick and easy comparison shopping, which has changed consumer purchasing habits. Consumers have shifted from purchasing paper tickets from travel agencies or airline ticketing offices to purchasing electronic tickets over the Internet. This has made pricing and marketing even more competitive in the U.S.

airline industry. Finally, smaller corporate travel budgets, combined with the higher time costs of travel, have made business customers more amenable to communications substitutes such as tele- and video-conferencing.

Airline Capital Markets Access. Historically, airlines have required access to third-party capital to finance significant portions of their aircraft and non-aircraft capital needs. If the capital markets were to become inaccessible by either U.S. airlines or international airlines, it could significantly impact their ability to provide scheduled service to and from the Houston Airport System's airports or undertake contractual capital commitments.

Airline Concentration; Effect of Airline Industry Consolidation

On October 1, 2010, Continental became a wholly-owned subsidiary of United Continental Holdings, Inc. ("UCH") as a result of the merger of a subsidiary of UCH with and into Continental. (United also operated as a wholly-owned subsidiary of UCH.) UCH assumed all of Continental's obligations. The combined airline received a single operating certificate from the FAA on November 30, 2011. In early March 2015, the two airlines achieved full integration and began operating under the name "United Airlines."

On May 2, 2011, Southwest announced that it had closed its purchase of all of the outstanding common stock of AirTran Holdings, Inc., the former parent company of AirTran Airways ("AirTran"). Southwest and AirTran received approval for a single operating certificate from the FAA on March 1, 2015. Southwest has been the largest passenger airline at Hobby over the last several years. Other recent mergers include Delta Air Lines and Northwest Airlines in 2008, American Airlines and US Airways in 2013, and Alaska Airlines and Virgin America in 2016.

Further airline consolidation remains possible. While the Houston Airport System believes that recent merger activity has had little impact on the respective combined airlines' market shares at Intercontinental or Hobby, future mergers or alliances among airlines operating at the Houston Airport System's facilities may result in fewer flights or decreases in gate utilization as airlines reduce duplicative capacity. Such decreases could result in reduced Net Revenues, reduced PFC collections and increased costs for the other airlines using the Houston Airport System.

Historically, when airlines have reduced or ceased operations at the Houston Airport System, other airlines have absorbed the traffic with no significant adverse impact on the Houston Airport System revenues.

United and Southwest account for a significant portion of the Houston Airport System's operating revenues. For more information, see Note 10 of the Notes to the Financial Statements as set forth in APPENDIX B. If either airline were to significantly reduce service it may have a material impact on revenues, including concession revenues and PFC collections, and on the resulting cost per enplanement charged at each airport.

FAA Reauthorization

Congressional authorization for the FAA's operating authority, including various aviation programs and excise taxes, expired in 2007 and has been subsequently extended by Congress for only short time periods. On July 15, 2016, the President signed into law the FAA Extension, Safety, and Security Act of 2016, which established federal funding for the FAA for fiscal years 2012-2017. The current authorization to fund the FAA expires on March 31, 2018. Failure of Congress to reauthorize the FAA's operating authority beyond that date, or adverse changes in the conditions placed on such authority, may have an adverse impact on Houston Airport System operations over the long-run because grants awarded under the FAA's Airport Improvement Program have been a significant source of financing for the Houston Airport System.

Availability of PFCs

The Houston Airport System currently uses PFC collections to pay a portion of its debt service and to fund certain pay-as-you-go projects. For Fiscal Year 2018, the Houston Airport System has budgeted \$48.8 million of PFCs to pay senior lien and subordinate lien debt service. The collection of PFCs is subject to several risks. First, the amount of PFCs received by the Houston Airport System depends on the actual number of PFC-eligible passenger enplanements at Intercontinental and Hobby. If enplanements decline, PFC collections will also decline. Further, the PFC authorizations for Intercontinental and Hobby expire in January 2028 and September 2038, respectively. Finally, the Houston Airport

System's authority to impose PFCs could be terminated if it violates Department of Transportation regulations regarding their use. A shortfall in PFC collections would require the Houston Airport System to pay these debt service costs from existing cash balances or from increased Net Revenues unless it successfully increases the rate at which PFCs are collected. The PFC rate is currently \$4.50 per enplaned passenger at both Intercontinental and Hobby.

Airport Security

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 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 sky marshals, federalization of airport security functions under the Transportation Security Administration (the "TSA"), more effective dissemination of information about threats, more intensive screening of passengers and baggage, and deployment of new screening technologies. The TSA also has introduced "pre-check" service to expedite the screening of passengers who have submitted to background checks. Concerns about the safety of air travel were heightened in 2016 by gun and bomb attacks at Brussels Airport and at Istanbul Ataturk Airport.

Historically, airline travel demand has recovered after temporary decreases stemming from terrorist attacks or threats, hijackings, aircraft crashes, public health and safety concerns, and international hostilities. Provided that 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, it can be expected that future demand for airline travel at the Houston Airport System airports will depend primarily on economic, not safety or security, factors.

Capacity of National Air Traffic Control and Airport Systems.

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 have decreased as a result of reduced numbers of aircraft operations (down approximately 20% between 2007 and 2016), but, as airline travel increases in the future, flight delays and restrictions can be expected.

Hurricane Activity

Downtown Houston is located approximately 50 miles north of the Gulf of Mexico. The Gulf region is prone to seasonal hurricane activity; major hurricanes or related storms may develop. A hurricane of great severity could significantly damage Houston Airport System properties. The Houston Airport System maintains hurricane insurance jointly and severally with the City and its other enterprise departments, but the policy covers only part of the total property value of the Houston Airport System. Deductibles, any costs in excess of insured amounts or reimbursements received from FEMA would be borne by the City or the airlines. See "THE HOUSTON AIRPORT SYSTEM – Hurricane Harvey."

General Factors Affecting Air Traffic at the Houston Airport System

There are numerous factors that affect air traffic generally and, more specifically, air traffic at the Houston Airport System. Demand for air travel is influenced by factors such as population, levels of disposable income, the nature, level and concentration of industrial and commercial activity in the service area and the price of air travel. The price of air travel is, in turn, affected by the number of airlines serving a particular airport and a particular destination, the financial condition, cost structure and hubbing strategies of the airlines serving an airport, the willingness of competing airlines to enter into an

airport market, the cost of operating at an airport, the price of fuel and any operating constraints (due to capacity, environmental concerns or other related factors) limiting the frequency or timing of airport traffic within the national system or at a particular airport.

Cost and Completion Schedule of Houston Airport System Capital Improvement Program

The costs and completion timeframe of capital projects included in the Houston Airport System's CIP are subject to a number of uncertainties. The ability of the Houston Airport System to complete the CIP may be adversely affected by various factors including: (i) estimating errors, (ii) design and engineering errors, (iii) changes to the scope of the projects, (iv) delays in contract awards, (v) material, and/or labor shortages, (vi) unforeseen site conditions, (vii) adverse weather conditions, (viii) contractor defaults, (ix) labor disputes, (x) unanticipated levels of inflation, (xi) environmental issues, including environmental approvals that the Houston Airport System has not obtained at this time, (xii) additional security improvements and associated costs mandated by the federal government, and (xiii) lack of adequate funding, including inability to access the capital markets or loss of grants or PFCs.

A delay in the completion of certain projects under the CIP could delay the collection of revenues for such projects, increase project costs, or cause the rescheduling of other projects. There can be no assurance that the cost of construction of the 2018-2022 CIP projects will not exceed the currently estimated dollar amount or that the completion of the projects will not be delayed beyond the currently projected completion dates. Any schedule delays or cost increases could result in the need to issue additional Airport Obligations and may result in increased costs per enplaned passenger to the airlines, which could place the Houston Airport System at a competitive disadvantage with other airports. Further, changes in the mix of the projects which comprise the Houston Airport System's CIP could negatively impact the long-term revenue base of the Houston Airport System. This could occur if there were a substantial shift to the capital projects that the Houston Airport System is required to fund out of non-airline revenues versus those that become part of the airline rate base and for which the Houston Airport System receives airline revenues through landing fees and terminal rentals. In such case, the Houston Airport System would seek to alter its rate-making methodology or find additional revenue sources. See "THE HOUSTON AIRPORT SYSTEM – Houston Airport System Capital Improvement Program."

Airport Capital Markets Access

Airport operators such as the Houston Airport System have also historically required access to third-party capital, primarily through the municipal bond market, to finance significant portions of their capital needs and to effectively manage their cost per enplanement or debt coverage ratios. If the capital markets were to become inaccessible by the Houston Airport System or interest rates were to rise, it could significantly impact the Houston Airport System's ability to meet its prospective coverage ratios or to meet its future spending needs or to achieve a competitive cost per enplanement.

Parking and Concession Revenues

City-owned parking facilities are the Houston Airport System's largest single source of non-airline revenues. City's parking facilities compete with several off-site private parking operators that provide free shuttle service to their customers at both Intercontinental and Hobby. Accordingly, competitive supply and demand constraints have affected the City's ability to significantly increase parking revenues, and may continue to affect revenues, at its on-site economy parking facilities. Additionally, the range of approved parking rates must be established by City Council, which may limit the Houston Airport System's ability to increase rates for either its structured parking or economy parking facilities.

Concessions are the second largest source of non-airline revenues for the Houston Airport System. Under amendments to the leases governing United's use and occupancy of Terminals B and C at Intercontinental, concession revenues earned from operations in the new B-South and C-North concourses will accrue largely for the benefit of United. In the past, the City earned a percentage of revenues from the concession operators in those concourses. While the Houston Airport System expects to reduce operations and maintenance costs to fully offset the loss of these concession revenues there can be no assurance that it will be able to do so.

Effect of Airline Bankruptcies

Prior bankruptcies by airlines using the Houston Airport System have resulted in reductions of service levels by particular airlines, even in cases where such airlines continued to operate in bankruptcy. Additional bankruptcies, liquidations or major restructurings of other airlines could occur. The bankruptcy of an airline with significant operations at the Houston Airport System, such as United or Southwest, could have a material adverse effect on operations at the Houston Airport System, revenues, and the cost to the other airlines operating at the Houston Airport System.

Airline Lease Agreements. In the event of bankruptcy proceedings involving one or more of the airlines operating at the Houston Airport System, the debtor or its bankruptcy trustee must determine within a time period determined by the court whether to assume or reject the applicable airline's use and lease agreement or other lease agreements. If assumed, the debtor would be required to cure any prior defaults and to provide adequate assurance of future performance under the relevant agreements. Rejection of a lease or executory contract by an airline would give the City an unsecured claim for damages, the amount of which in the case of a lease is limited by the Bankruptcy Code.

Passenger Facility Charges. Pursuant to 49 U.S.C. §40117 and the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (the "PFC Act"), the FAA has approved the City's application to require the airlines to collect and remit to the City a \$4.50 PFC on each enplaning revenue passenger at Hobby and Intercontinental as further discussed in "THE HOUSTON AIRPORT SYSTEM – Houston Airport System Capital Improvement Program – Passenger Facility Charges (PFCs)."

The PFC Act provides that PFCs collected by the airlines constitute a trust fund held for the beneficial interest of the eligible agency (i.e., the City) 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. However, the airlines are permitted to commingle PFC collections with other revenues and are also entitled to retain interest earned on PFC collections until such PFC collections are remitted. In the event of a bankruptcy, the PFC Act, as amended in December 2003, provides that (1) PFCs are and remain trust funds, (2) the airline in bankruptcy may not grant to any third party any security or other interest in PFC Revenues, and (3) the airline in bankruptcy must segregate in a separate account PFC Revenues equal to its average monthly PFC liability as well as post-petition actual PFCs. Despite these enhanced statutory protections, it is unclear whether the City would be able to recover the full amount of PFC trust funds collected or accrued by an airline in the event of a liquidation or cessation of business. The City also cannot predict whether an airline operating at Hobby or Intercontinental that files for bankruptcy would have properly accounted for PFCs owed to the City or whether the bankruptcy estate would have sufficient moneys to pay the City in full for PFCs owed by such airline. While the City expects to pay a portion of the Series 2018 Bond debt service from PFC proceeds, the PFCs are not legally pledged to the payment of the Series 2018 Bonds. For a discussion of the treatment of PFC Revenues under the Ordinance, see APPENDIX C-1.

Recent Bankruptcies and Non-Judicial Restructurings

Pinnacle Airlines and Colgan Air, both subsidiaries of Pinnacle Airlines Corporation, formerly served the Houston Airport System as regional partners for Delta Air Lines and United Airlines, respectively. In 2012, Pinnacle Airlines Corporation and its subsidiaries filed for Chapter 11 bankruptcy protection. Colgan Air ceased operations in 2012 and Pinnacle Airlines emerged from bankruptcy as a wholly owned subsidiary of Delta, operating as Endeavor Air, in 2013. Endeavor Air continues to operate at Intercontinental as a Delta affiliate.

There may be other possible effects of a bankruptcy of an airline that could result in delays or reductions in revenues received by the Houston Airport System and potentially in delays or reductions in payments on the Series 2018 Bonds. Regardless of any specific adverse determinations in an airline bankruptcy proceeding, the fact of an airline bankruptcy proceeding could have an adverse effect on the liquidity and value of the Series 2018 Bonds.

THE CITY AND CITY FINANCIAL INFORMATION

Governmental Structure

The City has a mayor-council form of government in which the Mayor and the sixteen-member City Council serve as the legislative body. Eleven council members are elected by district and five council members are elected at-large. The present term of office for all elected officials expires in January 2020. On November 3, 2015, voters approved an amendment to the City Charter (“Term Limits Amendment”) that changed the number of terms of elective office to no more than two terms in the same office and limits the length for all terms of elective office to four years, beginning in January 2016. This Term Limits Amendment (codified in Article V, Sec. 6a of the City Charter) also provided for a transition whereby City elected officials elected to their first terms in office in the November 2013 election are able to serve two more four-year terms (for a potential total of 10 years in office), and those elected to their second terms in the November 2013 election are able to serve a final term of four years (for a potential total of eight years in office).

On November 19, 2015, a lawsuit was filed in State district court against the City claiming that the ballot language for the Term Limits Amendment was misleading and seeking to have the amendment declared illegal and invalid. The City filed a Plea to the Jurisdiction with the district court asserting that the plaintiffs failed to properly serve the City and the other defendants. The trial court denied the City’s plea. The City appealed and the Court of Appeals affirmed that denial, after a motion for rehearing, on May 2, 2017. The City intends to continue defending itself vigorously. In addition, on June 5, 2017, one of the plaintiffs initiated an original mandamus action in the Texas Supreme Court seeking to invalidate the Term Limits Amendment and requesting a new ballot measure in November 2017. The Supreme Court denied the mandamus relief requested. The case will likely proceed to trial or summary disposition in 2018, although a trial date has not yet been set. The City intends to continue defending itself vigorously.

The Mayor is the City’s chief executive officer. The Mayor exercises administrative control over the City’s government; presides over City Council meetings; establishes the City Council agenda; and appoints the heads of the various departments of the City, subject to confirmation by the City Council. The Mayor also is responsible for preparing and submitting the City’s annual budget proposals to the City Council for adoption.

The City Controller is the City’s chief financial officer. The Office of the City Controller superintends, supervises, manages and conducts the fiscal affairs of the City; maintains the books of accounts; prepares financial statements; conducts the sales of City obligations; certifies the availability of funds before the City incurs any financial obligation; and, along with the Mayor, countersigns all warrants, contracts or orders for payment of any money by the City.

Home-Rule Charter

Although the City is a home-rule city under the Texas Constitution, it may not adopt ordinances or charter provisions inconsistent with Texas law. The Texas Legislature may enact legislation that (i) materially increases the costs and expenditures of the City or (ii) reduces the ability of the City to collect ad valorem taxes or other revenues described herein. Under the Texas and United States Constitutions, the Texas Legislature may not, however, enact legislation that impairs the City’s ability to pay principal of and interest on its indebtedness. Under the Texas Constitution, the City Charter may be amended not more than once every two years at an election held for that purpose, which may be called by the City Council or upon petition of 20,000 of the City’s registered voters. The last City Charter amendment was adopted on November 3, 2015. See “– City Charter Tax and Revenue Propositions.” In addition, the City Charter allows the City’s voters to exercise the powers of initiative and referendum. To enact an initiative ordinance, a petition signed by voters equal in number to at least 15% of the greater total vote cast for Mayor in any general election in the preceding three years must be submitted to the City. Thereafter, the City Council may enact the ordinance or call an election on the question of its adoption. In order to exercise the referendum power, a petition signed by voters equal in number to at least 10% of the greater total vote cast for Mayor in any general election in the preceding three years must be submitted to the City. City Council may repeal the ordinance that is the subject of the referendum petition or submit the issue to the electorate. See “– City Charter Tax and Revenue Propositions.”

City Interest Rate Swap Policy

There are no outstanding Swaps (as defined below) in respect to any Outstanding Airport Obligations.

The City follows a master swap policy, as amended from time to time (the “Swap Policy”), to provide guidance for the City in its use of swaps, caps, floors, collars, options and other derivative financial products (collectively, “Swaps”) in conjunction with the City’s management of its assets and liabilities. The Swap Policy describes the circumstances and methods by which Swaps will be used, the guidelines to be employed when Swaps are used, and who is responsible for carrying out these policies. The City may enter into Swaps as authorized by the City Council and approved by the Attorney General of the State of Texas in connection with the issuance or payment of certain debt obligations, before, concurrently with, or after the actual issuance of the debt.

As a general rule, the City will enter into transactions only with counterparties whose obligations are rated in the double-A category or better from at least one nationally recognized rating agency. In addition, if a counterparty’s credit rating is downgraded below the double-A rating category, the City may require that its exposure to the counterparty be collateralized or may exercise its right to terminate the transaction prior to its scheduled termination date. In order to limit the City’s counterparty risk, the City will seek to avoid excessive concentration of exposure to a single counterparty or guarantor.

The Swap Policy provides that the City may choose counterparties for Swap contracts on either a negotiated or competitive basis. To provide safeguards on negotiated transactions, the Swap Policy provides that the City should generally secure outside professional advice to assist in the process of structuring, documenting and pricing the transaction, and to verify that a fair price was obtained. In any negotiated transactions, the counterparty will be required to disclose all payments to third parties (including lobbyists, consultants and attorneys) who had any involvement in assisting the counterparty in doing business with the City.

The City will track and regularly report on the financial implications of its Swaps. A quarterly report will be prepared for the City Council including: (i) a summary of key terms of the agreements, including notional amounts, interest rates, maturity and method of procurement, including any changes to Swap agreements since the last reporting period; (ii) the mark-to-market value (termination value) of its Swaps, as measured by the economic cost or benefit of terminating outstanding contracts at specified intervals; (iii) the amount of exposure that the City has to each specific counterparty, as measured by aggregate mark-to-market value, netted for offsetting transactions; (iv) the credit ratings of each counterparty (or guarantor, if applicable) and any changes in the credit rating since the last reporting period; and (v) any collateral posting as a result of Swap agreement requirements. In addition, the City will perform monitoring and reporting as is required by the rating agencies or for compliance with GASB requirements.

Financial Policies

On December 3, 2014, the City Council adopted financial policies (the “Financial Policies”) for the City that amended and restated the financial policies adopted by the City in 2003, and such policies were subsequently amended to include provisions regarding pay-as-you-go funding in June 2015. The Mayor or the Mayor’s designee is required to review the Financial Policies at least once every two years. The Financial Policies are currently under review.

Under the heading of Operating Budget Policies, the Financial Policies state that current revenues will be sufficient to support current expenditures. All retirement and employee benefit systems will be financed in a manner to systematically fund liabilities. The City will assure that sufficient funds are provided to pay for current expenditures. Each enterprise fund of the City, which include the Combined Utility System Fund, the Houston Airport System Fund and the Convention and Entertainment Facilities Fund (collectively, the “Enterprise Funds”), will maintain revenues that support the full (direct and indirect) cost of the service provided. A review of all fees and charges will be conducted at least every five years, except for impact fees, which shall be reviewed at least every ten years, to determine the extent to which the full cost of associated services is being recovered by revenues. Fees may be adjusted in the interim period by ordinance, however, based on analysis whenever there have been significant changes in the method, level or cost of service delivery. The General Fund unassigned fund balance shall be maintained at a level sufficient to provide for temporary financing of unforeseen needs of an emergency nature and to permit orderly adjustment to changes resulting from termination of revenue sources. The Financial Policies also provide that the level of the General Fund balance will be a minimum of 7.5% of total expenses less debt service. To the extent that the General Fund assigned and unassigned fund balance exceeds 7.5% of total expenses less debt service, the excess funds are available upon appropriation for non-recurring expenses.

Under the heading of Debt Management Policies, the Financial Policies provide that any capital project financed through the issuance of bonds or other obligations shall be financed for a period not to exceed the average expected life of the project. Average (weighted) general obligation bond (or other obligations) maturities shall be kept at or below 12 years.

The Financial Policies also provide that annual contributions to the Debt Service Fund from the General Fund shall not exceed 20% of the total General Fund revenues, excluding state and federal grants until Fiscal Year 2019. Beginning in Fiscal Year 2019, and in each subsequent fiscal year, the maximum contribution to the Debt Service Fund from the General Fund is to be reduced by 0.5% annually until it reaches 10% of General Fund revenues (excluding state and federal grants), at which point the maximum is to be held constant at 10%.

The City's Financial Policies require that an annual audit be performed by an independent public accounting firm in accordance with generally accepted accounting principles. The June 30, 2017 City Controller's audited Comprehensive Annual Financial Report of the City and additional financial information are available for public inspection, or copies may be obtained by written request, to the extent permitted by law, addressed to the Office of the City Controller.

Additionally, the Financial Policies require the Finance Department to prepare a "structurally balanced" budget that models the level of expenditure reductions and increased pension contributions required to address the funding of the Pension Systems. The Financial Policies require that such budget be prepared but City Council is not required to adopt it. If such a structurally balanced budget were adopted by the City Council, it is anticipated that the level of expenditure reductions would be materially and significantly higher than currently anticipated.

Investment of Moneys

The City maintains an investment strategy that emphasizes, in order of priority, safety, liquidity and return on investment, as embodied in its investment policy (the "Policy"). The City does not invest in inverse floaters, or interest-only or principal-only mortgage-backed securities. The Policy provides, among other things, that (1) the Investment Manager (as defined in the Policy) shall submit quarterly investment reports to City Council and (2) the Policy shall be reviewed annually by City Council. On December 6, 2017, the City Council approved and readopted the Investment Policy with two amendments.

Fitch Ratings, Inc. has assigned a "AAA" credit quality rating to the City's General Investment Portfolio. The ratings reflect the view of Fitch Ratings, Inc., from whom an explanation of the significance of such ratings may be obtained.

The Ordinance provides that all interest and income derived from the deposit and investment of amounts held in all Funds will be transferred or credited monthly to the Revenue Fund and shall constitute Gross Revenues of the Houston Airport System (unless specifically excluded from the definition of Gross Revenues), except as follows: (1) all interest and income derived from deposits and investments credited to the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Reserve Fund and the Operation and Maintenance Reserve Fund will remain in such funds to the extent necessary to accumulate the Reserve Fund Requirements or other required balance therein; and (2) all interest and income derived from deposits and investments held in any construction fund, including amounts held therein as capitalized interest, created by any ordinance authorizing the issuance of Airport Obligations will remain in such construction fund for disposition in the manner provided in the applicable ordinance. Notwithstanding anything to the contrary contained in the Ordinance, any interest and income derived from deposits and investments of any amounts credited to any fund or account may be paid to the federal government if in the opinion of nationally recognized bond counsel such payment is required in order to prevent interest on any Airport Obligations from being includable within the gross income of the owners thereof for federal income tax purposes.

Health Care Benefits for Retired Employees

The City provides certain health care benefits for its retired employees, their spouses and survivors. Employees on long-term disability and their spouses can also qualify for retiree health care benefits. Currently, substantially all of the City's employees who qualify for pension benefits while working for the City will become eligible for such benefits.

The City provides five Medicare plans with five different vendors and has made these plans mandatory for all retirees over age 65 who are eligible for Medicare. The medical plans are supported by contributions from the City and subscribers. In addition to the medical plan and in an effort to mitigate costs and maximize benefits to the City and Medicare eligible retirees, the City offers Medicare Advantage plans from several insurance providers. Effective January 1, 2015, the City awarded a three year contract with two one year renewal options to Texan Plus, HealthSpring, Aetna Steerage (PPO Plan), Kelsey (HMO Plan) and United Health Care. These Medicare Advantage Plans provide retirees with alternative managed healthcare plans. The Medicare Advantage Plans continue to be fully insured products and offer

retirees several plans to choose from. Effective January 1, 2012, the City has required all Medicare eligible retirees to enroll in the Medicare Advantage Plans.

Bargaining with Other Municipal Employees. Chapter 146 of the Texas Local Government Code (“Chapter 146”), extends to municipal employees of the City, other than department heads, firefighters and police officers, the right to appoint bargaining agents to “meet and confer” with representatives of the City or any agency, board, commission or political subdivision that is required to establish wages, salaries, rates of pay, hours, working conditions or other terms and conditions of employment regarding such issues. Chapter 146 prohibits municipal employees from engaging in strikes and specifically prohibits the bargaining agent and the City from entering into agreements regarding pension-related matters governed by Article 6243g, Vernon’s Texas Civil Statutes, or a successor statute (now Article 6243h, Vernon’s Texas Civil Statutes). See “—Employee Pension Funds” and “—Health Care Benefits for Retired Employees.”

Pursuant to the provisions of Chapter 146, the City recognized the Houston Organization of Public Employees (“HOPE”) as the exclusive bargaining agent for all covered employees, which generally consist of municipal employees, but not elected officials, employees of elected officials, directors or classified employees. The City and HOPE’s current “meet and confer” agreement was executed on August 27, 2015 and expires on June 30, 2018 (the “2015 HOPE Agreement”). The 2015 HOPE Agreement provides for a minimum hourly wage increase from \$10.00 to \$12.00 and in lieu of “across-the-board” pay increases, a range of targeted base rate increases by pay grade to occur in January 2016, July 2016, and July 2017. The 2015 HOPE Agreement remains in effect through June 30, 2018. After this time, contractual obligations to pay increases will affect the City’s pension contributions. In 2011, the City reached an agreement with the Houston Municipal Employees Pension Board specifically related to pension benefits and contributions. See also the section captioned “—Employee Pension Funds” for a discussion of the “meet and confer” process for the Houston Municipal Employees Pension Board. Portions of the 2011 agreement were codified as a part of the comprehensive pension reform plan. See “—Employee Pension Funds – Pension Reform Legislation”, below. However, the 2011 agreement was largely superseded by the pension reform enacted by the 85th Texas Legislature, Senate Bill 2190 (the “Pension Reform Legislation”) which codifies portions of the meet and confer agreement between the City and HMEPS. To the extent that the City and the Pension System reach separate meet and confer agreements in the future, such agreements must conform in all respects to the Pension Reform Legislation.

Employee Pension Funds

Prospective investors are advised that any projections or forecasts in the section below, including projections of the amount of the Unfunded Actuarially Accrued Liability (“UAAL”) and other calculations of unfunded pension liability and the amounts of actuarially calculated contributions by the City, constitute forward-looking information that reflects the judgment of the City, the boards of the Pension Systems (as defined below) and their respective actuaries as to the funding required to pay future benefits to retirees. Such forward-looking information is based upon a variety of assumptions concerning future events and circumstances. Future actuarial studies may differ significantly from current estimates due to factors such as: retirements, terminations, deaths, disabilities, salary growth and investment returns, changes in contributions or investment portfolios, changes in actuarial or accounting standards, and changes in plan provisions, the Pension Statutes (as defined below) or applicable laws. See “—Pension Reform Legislation” below. The assumptions underlying the projections are material to the development of the projections, and changes in one or more of the assumptions may produce substantially different results. In addition to these projections, the City’s financial statements as set forth at <http://www.houstontx.gov/controller/cafr.html> also report Net Pension Liability as required by GASB 68. The Net Pension Liability, as reported in the financial statements, is materially higher than the UAAL reported in the various actuarial reports of the Pension Systems and materially changed the City’s financial statements relating to the Pension Systems beginning in Fiscal Year 2015. Such differences reflect, in part, the different methods of valuation employed by accountants and actuaries. Prospective investors are encouraged to review Note 10 to the financial statements at <http://www.houstontx.gov/controller/cafr.html> for additional information.

Texas statutes provide three separate pension systems (collectively, the “Pension Systems”) for full-time firefighters (“HFRRF” or the “Firefighter Fund”), police (“HPOPS” or the “Police System”), and municipal employees (“HMEPS” or the “Municipal System”). The Houston Airport System contributes principally to HMEPS, with nonmaterial contributions to HPOPS and HFRRF, though the financial well-being of the City may ultimately be affected by any of the pension systems. Detailed information regarding the funding of each Pension System is discussed under “—Municipal System,” “—Police System,” and “—Firefighter System” below. Each Pension System is a defined benefits plan, which guarantees retiree benefits based on years of service and salary. The City bears the primary financial risk of such plans. As

such, the City must fund the Pension Systems to pay a retiree's defined benefit regardless of why the Pension System is underfunded.

The Texas Legislature adopted the Pension Reform Legislation, which was signed by the governor on May 31, 2017, to enact reforms and substantive changes to the funding and benefit structure of the Pension Systems. The Pension Reform Legislation was effective July 1, 2017 (the "Reform Effective Date"), the first day of Fiscal Year 2018. See "--Pension Reform Legislation." The Pension Reform Legislation is the culmination of an effort to reform the Pension Systems to control costs, reduce the unfunded liability and better manage future pension costs and liabilities. The risk-sharing corridor implemented in the Pension Reform Legislation provides the City with more budget certainty by establishing minimum and maximum City contribution rates, and mandates management of unfunded liabilities by the City and the Pension Systems. Under the Pension Reform Legislation, the City will pay off the unfunded liability (the "Legacy Liability") over a fixed maximum 30-year amortization period ending in 2047. The Legacy Liability is calculated using a standard actuarial cost methodology, based on the market value of each pension system's assets as of July 1, 2016, after giving effect to the Pension Reform legislation and delivery of the 2017 POB Bond proceeds by December 31, 2017 (for HMEPS and HPOPS), with earnings at the 7% per annum discount rates and allocable City contributions from July 1, 2016 through the Reform Effective Date. Any future actuarial loss liabilities will have an amortization period of 30 years from the date the loss is recognized, with a corresponding final payoff year and credits for any future gains.

Houston Airport System Obligations. Virtually all of the Houston Airport System's employees are members of the Municipal System. The Houston Airport System is directly responsible only for the costs of funding the portion of the City's Municipal System contributions associated with employees of the Houston Airport System. See "-- Houston Airport System's Contributions to the Municipal System," below. Due to the small number of classified police and firefighters employed by the Houston Airport System, any changes in City contributions to the Police System and Firefighter Fund in future fiscal years should not have a substantial financial impact on the Houston Airport System.

Below is a description of Pension System governance, the funding of the Pension Systems prior to pension reform, the Pension Reform Legislation, and status of funding requirements.

Statutory Authority and Governance and Management

Statutory Authority and Contracts Between the Pension Boards and the City.

The statutes governing the Pension Systems are as follows:

- (i) HMEPS: Article 6243h, Vernon's Texas Civil Statutes, as amended (the "HMEPS Statute");
- (ii) HPOPS: Article 6243g-4, Vernon's Texas Civil Statutes, as amended (the "HPOPS Statute"); and
- (iii) HFRRF: Article 6243e.2(1), Vernon's Texas Civil Statutes, as amended (the "HFRRF Statute" and, collectively with the HMEPS Statute and the HPOPS Statute, the "Pension Statutes").

Governance. Each Pension System is separately governed by a board of trustees that acts independently of the City. The Mayor appoints a designee to serve on the board of each Pension System, and the Director of Finance of the City appoints a member to the HFRRF Board and the HPOPS Board, while the City Controller appoints a member to the HMEPS Board. However, a majority of the trustees serving on each Pension System board are either full-time employees or retirees elected by participants in the respective Pension System and are themselves participants. These trustees have a personal interest in the plan administered by the board of the Pension System on which they serve. All trustees of a Pension System board take an oath to "diligently and honestly administer" such Pension System, and each trustee is counseled and trained on their fiduciary responsibilities. Trustees appointed by the City are counseled that their fiduciary duties to the Pension System take precedence over the interests of the City and the official that appointed them. No legal challenges have arisen as a result of potential conflicts of interest. See "--Pending Pension Systems Litigation."

The Pension Systems' boards are generally imbued with broad powers to interpret, construe and supplement omissions in their governing statutes and to determine questions related to eligibility for membership, services and benefits, though their ability to act unilaterally with respect to pension reform enacted as part of the Pension Reform Legislation is limited. The grant of such powers to the Pension System boards may adversely affect the City's ability to manage its

pension obligations through mechanisms such as reducing the number of City full-time employees by outsourcing certain City functions.

In 2004, City voters opted out of an amendment to the Texas Constitution that otherwise would have prohibited a reduction in or impairment of the accrued retirement benefits or death benefits provided by a public employee retirement.

Pension System Funding Prior to Pension Reform Legislation

The information under this sub-caption describes the funding of the Pension Systems prior to the adoption of the Pension Reform Legislation.

Background. The Pension Systems are funded from City contributions, employee contributions, and investment earnings, and the amount of funding required is related to the benefits projected to be paid to retirees. Each of the Pension Systems is currently underfunded.

Historically, the Pension Systems calculated unfunded liability as required by each Pension Statute pursuant to actuarial valuation reports prepared by firms retained by each respective Pension System. Prior to the enactment of the Pension Reform Legislation (as described below), the City and the governing boards of HMEPS and HPOPS agreed to changes in benefits, management, and funding of HMEPS and HPOPS through “meet and confer” agreements as allowed under their respective statutes. Accordingly, funding plans negotiated through the “meet and confer” process were not necessarily consistent with actuarially-determined contribution levels and component UAALs (determined by a standard actuarial cost method for the respective System) or Net Pension Liability, as determined by GASB 68. The current “meet and confer” agreement between HMEPS and the City is effective until July 1 of the year following the date that the City’s annual contribution rate meets or exceeds the actuarial required contribution, and the current “meet and confer” agreement between HPOPS and the City is effective until 2023. From the Reform Effective Date, the Pension Reform Legislation governs most aspects of Pension System funding and City contributions. Prior to the Reform Elective Date, the HFRRF Statute did not allow “meet and confer” negotiations or agreements to change or augment benefits, management or funding, and the authority to enter into such agreements after the Reform Effective Date is limited.

The Pension Reform Legislation augments the principle provisions of the existing agreements between HMEPS and HPOPS and the City, and authorizes future agreements between HMEPS, HPOPS, and HFRRF under limited circumstances. Moreover, to the extent there is any conflict between the Pension Reform Legislation and any separate “meet and confer” agreements between HPOPS and the City, or HMEPS and the City, the Pension Reform Legislation governs future agreements between the Pension Systems and the City, and such agreements may not affect the calculation, payment of City obligations or benefit structure unless they conform to limitations and scope set forth in the Pension Reform Legislation. In respect to the enforcement of meet and confer agreements, the Texas Supreme Court has held that agreements under the Pension Statutes are contracts and do not amend the statutes. A suit for breach of such an agreement by either the City or a Pension System could be subject to governmental immunity. See “—Pending Pension Systems Litigation.”

Prior to enactment of the Pension Reform Legislation, the most recent actuarial valuation reports available for each Pension System, further described below, reflected that each Pension System was underfunded. In 2016, the Municipal System board received and approved an actuarial valuation report, as of July 1, 2015 (the “2015 Municipal System Report”) reporting a UAAL of approximately \$2.183 billion, with a funded ratio of 54.2%. In 2016, the Police System board received and approved an actuarial valuation report, as of July 1, 2016 (the “2016 Police System Report”) reporting a UAAL of approximately \$1.351 billion with a funded ratio of 77.5%. In 2017, the Firefighter System board received and approved an actuarial valuation report as of July 1, 2016 (the “2016 Firefighter Fund Report”) reporting a UAAL of approximately \$984 million with a funded ratio of 80.6%. The 2016 Firefighter Fund Report reduced the discount rate from 8.5% to 7.25%, resulting in a significant increase in the UAAL compared to the Firefighter System’s actuarial valuation report dated as of July 1, 2015 (the “2015 Firefighter Fund Report”), which reported a UAAL of \$467 million.

The HMEPS and HPOPS unfunded liabilities are in part a result of actuarial assumptions and investment losses, and in part the result of “meet and confer” agreements that reduced City contributions. The HFRRF unfunded liability is the result of investment and other actuarial losses. In connection with the Pension Reform Legislation, the City commissioned pension reform cost analyses for each of the Pension Systems. In order to provide a more fiscally responsible measurement of the unfunded liability of each Pension System, such cost analyses included a recalculation of the Net Pension Liability of

each Pension System utilizing a long-term discount rate assumption of 7.00%, which is lower than the discount rate assumptions used by the Pension Systems in the prior actuarial reports. For a comparison of actuarial liabilities of each Pension System before and after the Pension Reform Legislation, see “—Status of Funding Each Pension System.”

Pension Reform Legislation

General. Enacted by the 85th Texas Legislature, the Pension Reform Legislation (<https://legiscan.com/TX/text/SB2190/2017>) amends the HMEPS Statute, the HPOPS Statute, and the HFRRF Statute and enacted portions of the meet and confer agreements between the City and HMEPS and HPOPS. The Pension Reform Legislation includes recognition of unrealized losses in the Pension Systems and reductions in both anticipated earnings and the discount rate used to calculate the City’s future payments to 7.00%, reduction of planned benefits, amortization of the Legacy Liability (see “—Legacy Liability”) over a fixed maximum 30-year period, and a limit on the maximum future City payments as a percentage of active employee payroll. Additionally, to the extent that the City and the Pension Systems reach separate meet and confer agreements in the future, such agreements must conform in all respects to the Pension Reform Legislation, and, among other limitations, may not have the effect or result of increasing the unfunded liability of any Pension System.

The principal changes to the Pension Statutes in the Pension Reform Legislation are as follows:

- **Benefits and Contributions.** The Pension Reform Legislation reduces future benefits and increases current employee contributions. No current payments to existing retirees are reduced by the proposed amendments, but cost of living adjustments (“COLA”) for current retirees are suspended for up to three years.
- **Unfunded Liability.** The existing unfunded pension obligation as reduced by the benefit changes (See “—Legacy Liability” below) is amortized and required to be paid by the City over a fixed maximum 30-year period.
- **Future Costs.** The Pension Reform Legislation requires that future costs of the Pension Systems be calculated each fiscal year by actuarial valuations separately carried out by each of the respective Pension Systems and the City. The annual valuation establishes the City’s legally mandated payments to meet the costs of the respective Pension Systems.
- **Risk Sharing.** The City and the Pension Systems share the risk that returns on pension assets are less than projected so that the City’s maximum annual contribution is capped.

Utilizing lower long-term discount rate assumptions, the total recalculated GASB Net Pension Liability of the Pension Systems as of July 1, 2016 was estimated by the City to be approximately \$8.21 billion. The City estimates the Pension Reform Legislation, collectively, reduced the recalculated GASB Net Pension Liability by approximately \$2.9 billion, without giving effect to its pension obligation bonds issued on December 22, 2017 in the aggregate principal amount of \$1,005,145,000 (the “2017 POB Bonds”). See “—Legacy Liability.” Certain of the estimates used herein depend upon the data provided by the Pension Systems and are subject to the completeness and accuracy of the data provided by the Pension Systems, which is in their sole control. As part of the reform plan, the City issued the 2017 POB Bonds on December 22, 2017, to fund a portion of the Legacy Liability relating to the Municipal System and the Police System. See “LITIGATION AND REGULATION – Litigation Challenging the Election Authorizing the Pension Obligation Bonds.”

The following is a general description of the principal benefits changes implemented by the Pension Reform Legislation.

Benefits Reforms. In order to reduce and reform pension costs related to each Pension System, the Pension Reform Legislation (i) increased the age at which an employee can retire with full benefits for HPOPS and HFRRF; (ii) reduced the amount of benefits accrued in each year for HFRRF; and (iii) changed the types of pay included in salary for pension benefit calculations for HFRRF and HPOPS. Significantly, the Pension Reform Legislation suspended COLA increases for up to three years. The minimum guaranteed COLA for future benefits was reduced, and the age at which COLAs begin for retirees increased from no minimum age to age 55 for HPOPS and age 48 to age 55 for HFRRF retirees.

The Pension Reform Legislation substantially changed the Deferred Retirement Option Plans (“DROP”), for active employee members of HFRRF and HPOPS. DROP allows an active employee to be paid a salary and have the monthly pension benefit the employee would have received as a retiree credited to the DROP account. Credited benefits accumulate and are paid to the employee (or retiree, as applicable) as a lump sum, with attributed earnings and with COLA increases, if any, at the end of the member’s period of participation therein. Earnings may reflect actual earnings of the applicable pension fund, but the payment is guaranteed by the applicable Pension System, and ultimately the City. Under the Pension Reform Legislation, the ability of active employees to enter the DROP program has been restricted by reducing the period during that an employee can enter such program, and over time, will eliminate the opportunity for all employees to participate in the DROP program. Additionally, among other changes, earnings on amounts credited to DROP accounts are aligned with expected earnings of the respective Pension Systems, and COLAs for monthly DROP payments have been eliminated.

The Pension Reform Legislation increased employee contributions for each Pension Systems. Additionally, with respect to HMEPS, it reduced survivor benefits generally from 100% of the retirement benefit to which a deceased member would have been entitled to 80% of the retirement benefit to which a deceased member would have been entitled. For HMEPS, a cash balance plan component is added for group D members, which is comprised of employees hired after January 1, 2008. In addition to the required employee contribution for group D members, the Pension Reform Legislation requires each group D member to contribute an additional 1.0% of salary, that will be credited to a notional cash balance plan account on the member’s behalf. Such amounts are credited with earnings at a rate equal to the discount rate on amounts credited to an eligible member’s DROP account. See “—Municipal System.”

Legacy Liability. The Pension Reform Legislation implements a fixed maximum 30-year closed period (as opposed to a rolling 30-year open period used prior to pension reform) to amortize the Legacy Liability. Based on the risk sharing valuation studies (“RSVS”) conducted for each Pension System by the Pension System and the City, the Legacy Liability for HMEPS is calculated to be \$2.0 billion as calculated by the City’s actuary compared to \$2.1 billion as calculated by the Pension System actuary; for HPOPS \$1.3 billion as calculated by the Pension System actuary compared to \$1.4 billion as calculated by the City’s actuary; and for HFRRF \$900 million as calculated by the Pension System actuary compared to \$602 million as calculated by the City’s actuary.

Future Costs. Costs of the Pension Systems arising after the Reform Effective Date are required to be calculated each fiscal year by actuarial valuations separately carried out by the respective Pension Systems and the City. The annual actuarial valuations establish the City’s required payments to meet Pension System costs, based on pension system normal costs and unfunded accrued liabilities. New liability losses will be amortized over a new 30-year period. New liability gains will be amortized over the remaining period of the largest remaining liability loss layer, or if there is none, 30 years.

Risk Sharing. The Pension Reform Legislation enacted a risk sharing and cost control mechanism. Under the risk sharing mechanism, the City and each Pension System are required to share information and cooperate to evaluate the performance of the Pension System. The City and each Pension System are required to conduct an annual valuation study—the RSVS—which is subject to review by the Texas Pension Review Board. The initial RSVS process is complete and sets the City’s projected future contribution rates, the corridor midpoint, as a percent of projected pensionable payroll for each Pension System for the next 31 years. For years one through 30, the corridor midpoint for HMEPS ranges from 8.17% in Fiscal Year 2018 to 8.81% in Fiscal Year 2047. Similarly for HPOPS, the corridor midpoint ranges between 31.77% in Fiscal Year 2018 to 32.13% in Fiscal Year 2047, while the corridor midpoint for HFRRF is constant at 31.89% for the 30 year period. The projected contribution rates and the annual contribution rates for HPOPS and HFRRF include the amortization of the Legacy Liability. The annual cost of amortization of the Legacy Liability for HMEPS is excluded from the calculation of projected and annual contribution rates; however, the HMEPS Legacy Liability is paid on a fixed-dollar schedule rather than based on a percentage of pensionable payroll. Because pensionable payroll for each Pension System is projected to increase, the actual dollar amounts required to be paid based on the projected corridor midpoints and contribution rates are also projected to increase. The calculation of the City’s contribution rates for future fiscal years is calculated by each subsequent year’s RSVS.

Under the Pension Reform Legislation, because the differences in the calculations for HPOPS and HMEPS by the City and the Systems for any year were less than two percent of projected payroll, the System’s calculations were used to establish the corridor midpoints for future years. Because for HFRRF the differences for each year were greater than two percent of projected payroll, the arithmetic means of the City and System calculations were used to establish the corridor midpoints.

The City bears the risk of pension contribution costs increasing up to 5% of pensionable payroll above the corridor midpoint. If the increase is greater than 5% of the pensionable payroll, then steps must be taken, including the reduction of benefits or increase of Pension System member contributions, to reduce the City's cost. Conversely, if costs are 5% of pensionable payroll less than projected for any plan, steps must be taken to maintain the City's contribution at the minimum level. If on or after July 1, 2021, the funded ratio of HPOPS or HFRRF is less than 65% as determined in an RSVS, then the City and the Pension System are required to establish a cash balance retirement plan for any new participants in HPOPS or HFRRF, as applicable. If on or after July 1, 2027, the funded ratio of HMEPS is less than 60% as determined in an RSVS, then the City and the Pension System are required to establish a cash balance retirement plan for any new participants in HMEPS.

Investment Considerations Relating to the Implementation of Pension Reform

The changes to be implemented under the Pension Reform Legislation are prospective. There are foreseen and unforeseen risks arising from that implementation that could affect the general financial condition of the City and that should be considered by any potential investor. The City has identified the following investment considerations, but any potential investor should consult their own advisor, and should recognize that additional risks may occur with implementation of the Pension Reform Legislation.

Conduct of the RSVS. The RSVS requires the sharing of information and comparison of results by the City and each Pension System. While the Pension Reform Legislation requires the City and each Pension System to conduct the RSVS and to share information, failure to do so by the City or a Pension System could result in litigation or other enforcement efforts which could delay conduct of the RSVS in any year. If a Pension System fails to provide information, the City may conduct its RSVS based on estimates, but the estimated payments could carry a greater risk of under- or over-payments by the City.

Pension bond election litigation. See "LITIGATION AND REGULATION – Litigation Challenging the Election Authorizing the Pension Obligation Bonds."

Status of Funding of the Pension Systems

The following information is based on reports prepared reflecting the current system of funding and benefits under the Pension Statutes

Recent changes in pension accounting rules have resulted in significant changes to the presentation of the City's liabilities for each Pension System in its financial statements beginning in Fiscal Year 2015. For a comparison of the liabilities, see "—Net Pension Liability Under GASB 67 and 68" below as well as Note 10 to the Financial Statements set forth in APPENDIX B to this Official Statement. GASB 67 and 68 do not affect the City's pension contributions or contribution rates.

The City has historically funded the Pension Systems in amounts agreed upon by the City and the respective boards of the Pension Systems either (i) as part of jointly-sponsored changes in State law or (ii) in negotiations with the Municipal System's and Police System's respective boards through the "meet and confer" process. As stated in the Fiscal Year 2018 Budget, the total amount of the City's contribution to the three Pension Systems for Fiscal Year 2018 will be approximately \$405.5 million, which represents an approximate \$10 million decrease from the Fiscal Year 2017 contribution. See "—Municipal System," "—Police System" and "—Firefighter System."

The City has made all payments required under the HMEPS Agreements, and, as contemplated by the HMEPS Agreement, previously issued pension obligation bonds in the approximate aggregate amount of \$447 million and delivered the proceeds thereof to the Municipal System. The issuance of pension obligation bonds in lieu of using cash resulted in an increase in the City's tax-supported bond indebtedness in order to achieve a reduction in UAAL; however, the UAAL has increased since Fiscal Year 2010. Under the Pension Reform Legislation, the City issued the 2017 POB Bonds on December 22, 2017 and used \$250 million of the proceeds of the 2017 POB Bonds to reduce the UAAL of the Municipal System. Pursuant to the HPOPS Agreement, the City previously issued pension obligation bonds in the approximate amount of \$161 million and delivered the proceeds thereof to the Police System to satisfy a portion of its Fiscal Year 2005 through Fiscal Year 2011 funding commitment. See "Schedule 9—Part 2: Actuarially Determined Contribution Amount and Actual City Contribution as a Percentage of Payroll." As part of its pension reform program, the City issued the 2017 POB

Bonds on December 22, 2017 and used \$750 million of the proceeds of the 2017 POB Bonds to reduce the unfunded liability of the Police System. The City has made all payments required under the HFRRF Statute. While there is an unfunded liability for HFRRF, no pension obligation bonds were issued to reduce any unfunded liability of the Firefighter Fund.

Given that the proceeds of the 2017 POB Bonds were delivered before March 31, 2018, or the reestablished deadline, the City projects that its Fiscal Year 2018 budgeted contribution to the Pensions Systems will be sufficient to fund the annual cost of amortizing the Legacy Liability and funding normal and administrative costs of the Pension Systems.

Net Pension Liability Under GASB 67 and 68. As reflected in the schedule below, the Financial Statements now reflect a calculation of the City’s Net Pension Liability to describe the City’s funding obligation to the Pension Systems. The “Net Pension Liability” is the difference between the City’s “Total Pension Liability” and the “Fiduciary Net Position” of each respective Pension System’s plan. The Total Pension Liability is the present value of pension benefits that are allocated to current members due to past service by the entry age normal actuarial cost method. It includes benefits related to projected salary and service, and automatic cost of living adjustments. In addition, ad hoc cost of living adjustments are also included in the Total Pension Liability to the extent they are substantially automatic. Fiduciary Net Position is determined on the same basis used by the respective Pension System. The City’s Net Pension Liability was measured as of June 30, 2017.

NET PENSION LIABILITY AS OF JUNE 30, 2017

	(in thousands)		
	HFRRF	HMEPS	HPOPS
Total Pension Liability	\$4,673,681	\$4,959,510	\$6,508,122
Fiduciary Net Position	(4,025,090)	(2,602,665)	(4,457,178)
Net Pension Liability	\$ 648,591	\$2,356,845	\$2,050,944

The calculation of Net Pension Liability under GASB 67 and 68 as reported in the City’s financial statements for Fiscal Year 2017 factors in the reforms enacted by the Pension Reform Legislation, with the exception of the delivery of bond proceeds, which will be reflected in the Financial Statements for Fiscal Year 2018 and thereafter.

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Schedule 9: Actuarially Determined Contribution Amounts and Changes in Pension Plan Assets

Each part of the following tables should be read in context with the sections that follow describing in more detail the Pension Systems individually. Such information is historic, and does not reflect the Pension Reform Legislation calculation of the City’s required contributions thereunder for Fiscal Year 2018 and thereafter. See “Pension Reform Legislation – Risk Sharing.” Part 1 sets forth for each of the Fiscal Years 2013 through 2017 the amount of the annual pension cost to the City and the percentage contribution made by the City to each of the Pension Systems. Amounts paid in Fiscal Year 2017 are established by the meet and confer agreements with HPOPS and HMEPS and the pre-reform HFRRF legislation. For Fiscal Year 2018 and thereafter, contribution amounts are established by the Pension Reform Legislation.

Part 2 sets forth for each of the Fiscal Years 2014 through 2018 actuarially determined amounts and actual City pension contribution amounts as a percentage of payroll. Part 3 sets forth certain information from the City’s financial statements for Fiscal Year 2017 (June 30, 2017). The tables reflect annual pension costs and contributions prior to the enactment of the Pension Reform Legislation. See “—Pension Reform Legislation.”

**Part 1: Annual Pension Costs and Contributions Made
(in millions)**

Fiscal Year	Municipal System			Police System			Firefighter Fund		
	Annual Pension Cost	City Contrib. ^(a)	Percent Contrib.	Annual Pension Cost	City Contrib. ^(a)	Percent Contrib.	Annual Pension Cost	City Contrib. ^(b)	Percent Contrib.
2013	\$144.1	\$113.7	79%	\$146.3	\$84.5	58%	\$80.7	\$62.1	77%
2014	159.7	130.2	82	158.2	102.8	65	89.0	64.1	72
2015 ^(c)	241.0	145.0	60	333.0	113.0	34	128.0	92.6	72
2016	315.3	160.0	51	340.0	137.4	40	223.0	94.3	42
2017 ^(d)	(319.1)	182.6	N/A	(594.1)	133.8	N/A	(318.2)	93.7	N/A

- (a) Contribution amounts are determined in accordance with the applicable “meet and confer” agreements.
- (b) Contribution amounts are determined by the applicable Pension Statute.
- (c) Fiscal Year 2015 is the first year subject to GASB 68 accounting requirements. The change in accounting methodology caused a substantial increase in annual pension costs and contributions.
- (d) As the result of the pension reform legislation, for the Fiscal Year ended June 30, 2017, the City recognized a negative pension expense. Therefore, the percent contrib. calculation is not applicable.

Part 2: Actuarially Determined Contribution Amount and Actual City Contribution as a Percentage of Payroll^{(a)(b)}

Fiscal Year	Municipal System		Police System		Firefighter Fund	
	Actuarial	Actual	Actuarial	Actual	Actuarial	Actual
2014	26.1%	21.4%	34.5%	26.6%	31.1%	30.9%
2015 ^(c)	27.5	23.2	36.0	28.7	33.2	33.3
2016	27.4	25.0	38.2	33.8	N/A ^(e)	33.6
2017 ^(d)	31.8	29.4	39.6	34.0	30.8	33.2
2018 ^(f)	27.8	TBD	31.8	TBD	31.9	TBD

- (a) Actuarial numbers from the funding valuations prepared by the retirement systems may be different from the GASB 68 accounting valuations used to prepare the City’s financial statements.
- (b) Adopted actuarial reports for the respective Pension System for actuarially determined percentages and internal City figures for actual contribution percentages. See “—Municipal System,” “—Police System” and “—Firefighter System.”
- (c) Fiscal Year 2015 is the first year subject to GASB 68 accounting requirements.
- (d) Fiscal Year 2017 actual numbers are projections based on the meet-and-confer agreements for each of HMEPS and HPOPS and the contributions set in the actuarial valuation report for July 1, 2013 for HFRRF.
- (e) The Firefighter Fund did not perform a valuation for the period referenced.
- (f) Source: HMEPS Final Initial Risk Sharing Valuation Study as of July 1, 2016; HPOPS Final Risk Sharing Valuation Study as of June 30, 2016; and Joint Addendum to HFRRF Final Initial Risk Sharing Valuation Study as of July 1, 2016. Actual contributions during Fiscal Year 2018 are in process.

Part 3: Changes in Pension Plan Assets^(a)
(in millions)

Fiscal Year 2017	Municipal	Police	Fire	Total
Additions ^(b)	\$ 490.6	\$841.4	\$ 552.0	\$1,884.0
(Deductions) ^(c)	(288.0)	(464.7)	(256.6)	(1,009.3)
Net Increase	<u>(\$ 202.6)</u>	<u>(\$376.7)</u>	<u>(\$ 295.4)</u>	<u>(\$ 874.7)</u>
City's Total Contribution	<u>\$ 182.6</u>	<u>\$ 133.8</u>	<u>\$ 93.7</u>	<u>\$ 410.1</u>

(a) Amounts are derived from the City's Financial Statements for Fiscal Year 2017.

(b) Includes contributions by the employees and the City, net increase (decrease) in the fair value of investments, income from investments, and other income.

(c) Includes benefits paid to members, refunds to members, and other costs, including professional services and administrative expenses.

Houston Airport System's Contributions to the Municipal System

The City budgets for its contributions to the Municipal System by allocating the cost among its General Fund and various Special Revenue and Enterprise Funds, like the Houston Airport System, based upon the percentage of total payroll paid by the funds. For Fiscal Year 2018, municipal employees of the Houston Airport System comprise approximately 10.5% of the total civilian workforce payroll of the City, and, accordingly, the Houston Airport System is responsible for approximately 10.5% (\$18.8 million) of the City's estimated \$178.7 million contribution to the Municipal System. The General Fund is responsible for approximately 35.4% (\$63.2 million) of the City's contribution to the Municipal System, with the remainder being split by the City's remaining Enterprise Funds, Special Revenue Funds, Internal Service Funds, and Service Chargeback Funds. If the share of budgeted payroll for municipal employees of the Houston Airport System changes in the future, then the allocable percentage of the budgeted contributions by the Houston Airport System to the Municipal System will also change.

Payments of pension benefits to retirees from Houston Airport System contributions to HMEPS is not limited to Houston Airport System retirees, so an overall increase in the City's UAAL which causes an overall increase in pension contributions would increase Airport System contributions, even though the Houston Airport System personnel as a percentage of the City's total civilian workforce or the number of Houston Airport System retirees would not necessarily have increased.

In addition to the cash contributions made by the City, the City has issued \$448 million in Pension Obligations for the benefit of HMEPS. Although these bonds are secured by a pledge of ad valorem tax revenues, the Houston Airport System is responsible for repaying its pro-rata share of debt service on \$2.0 million of pension obligation bonds issued by the City in 2005. Interest expense on these bonds is \$106,500 per year. Principal payments will begin in Fiscal Year 2029. In January 2009, the City refunded its \$300 million 2004 Collateralized Pension Note (the "Pension Note"). The Houston Airport System did not participate in the refunding, but instead paid \$34.8 million in cash to retire its share of the Pension Note. In December 2017, the City issued \$1.005 billion of pension obligation bonds. The Houston Airport System is obligated to transfer to the City \$27.61 million for its pro-rata share of the principal payable on March 1, 2019. The Houston Airport System is also responsible for the share of interest attributed to this principal, totaling \$724,829.22. Upon payment, the Houston Airport System will have no obligation on such 2017 bonds.

Municipal System

The Municipal System is a contributory defined benefits pension program that provides benefits to most municipal employees (other than classified police officers and firefighters) pursuant to three different programs. Employees hired between January 1, 1999 and January 1, 2008 are provided benefits pursuant to a contributory defined benefits pension program ("Group A"), under which, prior to the enactment of the Pension Reform Legislation, the employees contributed 5% of their salary to the plan. Employees hired prior to January 1, 1999 had a choice to enroll in either Group A, the contributory defined benefit program, or a non-contributory plan ("Group B"). Employees hired after January 1, 2008 are covered by a defined benefit plan ("Group D"), which prior to the enactment of the Pension Reform Legislation was non-

contributory. The HMEPS Risk Sharing Valuation Study as of July 1, 2017 reports that 43.42% of active employees of the City were enrolled in Group A, 11.03% were enrolled in Group B and 44.55% were enrolled in Group D. Group A employees contribute 8% of their salary after a phase in period, Group B employees contribute 4% of their salary after a phase in period, and Group D employees contribute 2% of salary, with 1% of salary placed in a notional cash balance plan account.

Prior to the enactment of the Pension Reform Legislation, the City’s annual contributions were determined through the “meet and confer” process; the board of directors of HMEPS and the City entered into an agreement in 2004, as amended in 2011, which is referred to as the HMEPS Agreement. For Fiscal Year 2018 and thereafter, the annual contribution is governed by the Pension Reform Legislation, and annual contributions for Fiscal Year 2018 to the Municipal System will be 27.84% of payroll.

Municipal System Fiscal Year Funding. The City budgets its contributions by allocating the cost between its General Fund and Enterprise Funds based upon the nature of the employment of the covered employees. In Fiscal Year 2016, the General Fund was responsible for approximately 37.8% (\$60.5 million) of the City’s \$160.0 million contribution to the Municipal System; in Fiscal Year 2017 the General Fund was responsible for approximately \$66.8 million of the City’s approximately \$182.6 million contribution to the Municipal System (approximately 29.36% of payroll); and the Fiscal Year 2018 Budget provides that the General Fund will be responsible for approximately \$63.2 million of the City’s estimated \$178.7 million contribution to the Municipal System.

The table below reflects actuarial accrued liability, actuarial value of plan assets, unfunded actuarial accrued liability or surplus and funded ratio for each of the years 2012-2017. The information contained therein is derived from the HMEPS actuarial valuation reports from July 1 in each of the respective years through 2015. For 2016, the values are based on the HMEPS Final Initial Risk Sharing Valuation Study (“RSVS”) as of July 1, 2016 and reflect the enactment of the Pension Reform Legislation. See “—Pension Reform Legislation.”

Schedule 9A: Municipal System Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability^(a)
(in millions)

	2012	2013	As of July 1,		2016	2017
			2014	2015		
					Post- Reform ^(b)	Post- Reform ^(c)
Actuarial Accrued Liability.....	\$3,966	\$4,130	\$4,289	\$4,766	\$4,735	\$4,866
Actuarial Value of Plan Assets ^(d)	2,344	2,383	2,491	2,583	2,626	2,743
Unfunded Actuarial Accrued Liability.	<u>\$1,622</u>	<u>\$1,747</u>	<u>\$1,798</u>	<u>\$2,183</u>	<u>\$2,109</u>	<u>\$2,123</u>
Funded Ratio	59%	58%	58%	54.2%	55.5%	56.4%

- (a) Source: Municipal System Actuarial Valuation Reports. This information is no longer presented in the City’s financial statements.
- (b) Source: HMEPS Final Initial Risk Sharing Valuation Study as of July 1, 2016. These values are post-enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate, changes in future benefits, delivery of the proceeds of the 2017 POB Bonds, and allocable payments by the City in Fiscal Year 2017.
- (c) Source: HMEPS Risk Sharing Valuation Study as of July 1, 2017. These values are post-enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate, changes in future benefits, and delivery of the proceeds of the 2017 POB Bonds.
- (d) The actuarial value of plan assets is determined by the actuary for HMEPS; such value represents a generally accepted method of recognizing market gains and losses (relative to the assumed discount rate) over a five-year period.

Police System

The Police System is a contributory defined benefits pension program that provides benefits to the City’s classified police officers. Prior to the enactment of the Pension Reform Legislation, the City’s annual contributions were determined through the “meet and confer” process; the board of trustees of the Police System and the City entered into an agreement in 2004, as amended in 2011, which is referred to as the HPOPS Agreement.

Police System Fiscal Year Funding. In Fiscal Years 2016 and 2017, the General Fund covered substantially all of the City’s contributions to the Police System, and substantially all of the City’s contributions to the Police System for Fiscal Year 2018 are projected to be paid from the General Fund. The Fiscal Year 2016 contribution to the Police System was \$137.4 million, which was set through “meet and confer” negotiations and an additional one-time payment of \$25.5 million to the Police System under the terms of the HPOPS Agreement. The Fiscal Year 2017 contribution to HPOPS was \$133.8 million, as contemplated by the HPOPS Agreement. The Fiscal Year 2018 Budget sets the contribution to HPOPS at \$143.2 million, as determined by the Pension Reform Legislation.

The table below reflects actuarial accrued liability, actuarial value of plan assets, unfunded actuarial accrued liability or surplus and funded ratio for each of the years 2013-2017. The information contained therein is derived from the HPOPS actuarial valuation reports from July 1 in each of the respective years. For 2016, the values are based on the HPOPS actuarial valuation report (pre-reform) and HPOPS Final Initial Risk Sharing Valuation Study as of July 1, 2016 (post-reform). The table reflects annual pension costs and contributions prior to and following the enactment of the Pension Reform Legislation. See “—Pension Reform Legislation.”

Schedule 9B: Police System Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability^(a)
(in millions)

	As of July 1,					
	2013	2014	2015	2016	2017	
				Pre- Reform ^(b)	Post- Reform ^(c)	Post- Reform ^(d)
Actuarial Accrued Liability	\$5,010	\$5,364	\$5,706	\$6,013	\$6,081	\$6,218
Actuarial Value of Plan Assets ^(e)	4,071	4,343	4,551	4,662	4,758	4,869
Unfunded Actuarial Accrued Liability	\$ 939	\$ 1,021	\$ 1,156	\$1,351	\$1,323	\$1,350
Funded Ratio	8%	81%	79.7%	77.5%	78.2%	78.3%

- (a) Source: Police System Actuarial Valuation Reports. This information is no longer presented in the City’s financial statements due to the implementation of GASB 68.
- (b) Source: HPOPS Actuarial Valuation Report as of July 1, 2016. These values are prior to the enactment of the Pension Reform Legislation.
- (c) Source: HPOPS Final Initial Risk Sharing Valuation Study as of June 30, 2016. These values are post-enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate, changes in future benefits, delivery of the proceeds of the Bonds and allocable payments by the City in Fiscal Year 2017.
- (d) Source: HPOPS Risk Sharing Valuation Study as of July 1, 2017. These values are post-enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate, changes in future benefits, and delivery of the proceeds of the Bonds.
- (e) The actuarial value of plan assets is determined by the actuary for the Police System. Such value represents a generally accepted method of recognizing market gains and losses (relative to the assumed discount rate) over a five-year period

Firefighter Fund

The Firefighter Fund provides benefits to the City’s classified firefighters and is structured as a contributory defined benefits pension program. Prior to the Pension Reform Legislation, each fund member in active service made contributions to the fund in an amount equal to 9% of the member’s salary at the time of the contribution. Under the Pension Reform Legislation, firefighters must contribute 10.5% of the member’s pensionable pay.

Prior to the Pension Reform Legislation, State law provided that the City contribution to the Firefighter Fund be the greater of two times the firefighter’s contribution or an actuarially determined rate established at least once every three years. The City contribution is now determined by the RSVS process. See “—Pending Pension System Litigation” regarding the Firefighter lawsuit relating to the Pension Reform Legislation.

Firefighter Fund Fiscal Year Funding. In Fiscal Years 2016 and 2017, the General Fund covered substantially all of the City’s contributions to the Firefighter System, and substantially all of the City’s contributions to HFRRF for Fiscal Year 2018 are projected to be paid from the General Fund. In accordance with the HFRRF Statute, the City’s Fiscal Year 2016 contribution was also approximately 33.2% of payroll, or approximately \$94.3 million. The City’s Fiscal Year 2017 contribution to HFRRF is estimated to be \$93.7 million as required under the HFRRF Statute before the Reform Effective Date. As of September 30, 2017, the City projects that the Fiscal Year 2018 contribution to HFRRF will be \$83.6 million as determined by the Pension Reform Legislation. See “Schedule 9 – Part 2: Actuarially Determined Contribution

Amount and Actual City Contribution as a Percentage of Payroll,” in Fiscal Years 2013 through 2017. For a discussion of certain lawsuits related to the Firefighter Fund where the City is the plaintiff, see “—Pending Pension System Litigation.”

The table below reflects actuarial accrued liability, actuarial value of plan assets, unfunded actuarial accrued liability or surplus and funded ratio for each of the available years from 2012 to 2017 (data is not available for 2014). The information contained therein is derived from the HFRRF Actuarial Valuations from July 1 in each of the respective years. The decrease in the funded ratio for 2016 shown in the table below is partially attributable to a change in the assumption for the rate or return on investment from 8.5% to 7.25%. For 2016, the values are shown based on both the HFRRF actuarial valuation report (pre-reform) and the initial RSVS calculation of the Legacy Liability as of July 1, 2016 (post-reform). See “—Pension Reform Legislation”

Schedule 9C: Firefighter Fund Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability^(a)
(in millions)

	As of July 1,					
	2012	2013	2015	2016	2016	2017
				Pre- Reform ^(b)	Post- Reform ^(c)	Post- Reform ^(d)
Actuarial Accrued Liability	\$3,753	\$3,963	\$4,397	\$5,074	\$4,629	\$4,828
Actuarial Value of Plan Assets	3,263	3,430	\$3,930	4,089	3,730	3,884
Unfunded Actuarial Accrued Liability	<u>\$ 490</u>	<u>\$ 533</u>	<u>\$ 467</u>	<u>\$ 984</u>	<u>\$ 900</u>	<u>\$ 944</u>
Funded Ratio ^(d)	87%	87%	89.4%	80.6%	80.6%	80.4%

- (a) Source: Firefighter Fund Actuarial Valuation Reports. This information is no longer presented in the City’s financial statements.
- (b) Source: HFRRF Actuarial Valuation Report as of July 1, 2016. These values are prior to the enactment of the Pension Reform Legislation.
- (c) Source: HFRRF Final Initial Risk Sharing Valuation Study as of July 1, 2016. These values are post enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate, changes in future benefits, and allocable payments by the City in Fiscal Year 2017.
- (d) Source: HFRRF Risk Sharing Valuation Study as of July 1, 2017. These values are post-enactment of the Pension Reform Legislation, and reflect a reduction in the discount rate and changes in future benefits.
- (e) The actuarial value of the plan assets is determined by the actuary for the Firefighter Fund. Such value represents a generally accepted method of recognizing market gains and losses (relative to the assumed discount rate) over a five-year period.

Pending Litigation Related to the Pension Systems

Litigation Challenging the Election Authorizing the Pension Obligation Bonds. On December 15, 2017, Noteware v. Turner was filed in the 269th District Court in Harris County, Texas, challenging the validity of the election approving the pension obligation bonds held November 7, 2017. The suit alleges that because of language in the election proposition, the City misled the voters as to the effect of the election on the revenue limitations of the City Charter and is therefore void.

On December 21, 2017, the court denied Noteware’s motion to temporarily restrain the City from issuing the bonds or distributing the bond proceeds to the pension funds. The plaintiff continues to pursue claims for relief. As of the date of this Official Statement, no trial date and no hearing date for interim relief have been set. The City has complied with all legal requirements pertaining to the election and is required to comply with the City Charter revenue limitations in respect to the pension obligation bonds. As such, the City believes that no case or controversy is presented which would adversely affect the pension obligation bonds. The City believes that the suit is without merit and frivolous. Upon issuance of the Attorney General’s opinion in connection with the delivery of the pension obligation bonds on December 22, 2017, the pension obligation bonds were deemed valid and incontestable under Texas law.

Litigation Regarding Actuarial Consultant. In *City of Houston v. Towers Watson & Co.*, the City seeks damages from Towers Watson & Co. (“Towers”) for providing negligent actuarial advice regarding the Firefighter Fund. More specifically, the City alleges that Towers negligently represented the financial condition of the Firefighter Fund, the cost of

increasing the benefits provided by the Firefighter Fund, the assets and liabilities of the Firefighter Fund, and the cost of future City contributions to the Firefighter Fund, and that these services were done incompetently and not in accordance with generally accepted actuarial principles and practices in connection with benefits increases.

Firefighter Litigation Regarding Pension Reform Legislation. In *Houston Firefighters' Relief and Retirement Fund v. City of Houston, et. al.*, filed on May 30, 2017, HFRRF sued the City challenging the constitutionality of the Pension Reform Legislation and sought injunctive relief and declaratory judgment in respect to such legislation. Specifically, HFRRF alleged that the Pension Reform Legislation violates Article XVI, Section 67 of the Texas Constitution ("Section 67") because it allegedly violates the HFRRF Board's "exclusive" authority to select an actuary, and adopt actuarial assumptions regarding the City contribution rates. On June 30, 2017, the district court judge sustained all defendants' Pleas to the Jurisdiction, ordered that the case be dismissed in its entirety, and, in the alternative, should the dismissal be found to have been granted in error, denied the Fund's request for a temporary injunction. HFRRF filed its appeal brief on October 9, 2017, and the City response was filed January 8, 2018.

Litigation Regarding HMEPS. The City is also currently involved in a lawsuit involving the Municipal System. Before this current suit, on March 20, 2015, the Texas Supreme Court issued its opinion in *Klumb v. Houston Municipal Employees Pension System* ("Klumb"). At issue in the case was whether the board of the Municipal System violated the HMEPS Statute by resolving that employees of certain local government corporations and not-for-profit corporations are employees of the City for purposes of the Municipal System. The Texas Supreme Court found, among other things, that the HMEPS board's actions were within its "broad discretionary authority" under the HMEPS Statute, and thus held that the City "failed to plead actionable ultra vires and constitutional claims against HMEPS and the Trustees." Following the issuance of the Texas Supreme Court's ruling in *Klumb*, the Municipal System asked the City to turn over certain identifying information and make pension contributions for employees of the local government corporations and not-for-profit corporations at issue in that case. On June 18, 2015, the Municipal System initiated a new lawsuit, seeking mandamus relief and asserting an ultra vires action against the City, the Mayor and several other City officers. The City filed a counterclaim and third-party claim alleging breach of the meet-and-confer agreement related to the Municipal System's definition of "employee". HMEPS filed a motion for summary judgment and the City filed a plea to the jurisdiction. In October 2015, the trial court denied the City's plea to the jurisdiction, and the City filed an interlocutory appeal. The trial court did not rule on the summary judgment motion filed by HMEPS. The denial of the City's plea was reversed in part and affirmed in part by the Court of Appeals. The City and HMEPS each filed a petition for review in the Texas Supreme Court. The Supreme Court requested each side to file briefs on the merits, which were filed on December 12, 2017. The reply briefs have also since been filed and oral arguments have been scheduled for March 20, 2018. The City intends to continue to vigorously defend this litigation.

City Charter Tax and Revenue Propositions

General. In addition to certain constitutional and statutory limitations described above, the City may limit, increase or change the revenue resources available during a given Fiscal Year, either by voter authorization as provided by the City Charter or by amending the City Charter itself. The City Charter may not be amended more frequently than once every two years. Since 2006, voters of the City have imposed limits on increases in ad valorem tax revenues and other revenues in Proposition 1 (codified in Article III, Sec. 1 and Article IX, Sec. 20 of the City Charter) and Proposition 2 (codified in Article VI-a, Sec. 7 of the City Charter but not effective). Voters also have increased available revenue sources in Proposition G (codified in Article IX, Sec. 21 of the City Charter) and Proposition H, which did not amend the City Charter. Notwithstanding any limitations on revenue described below, the City Charter provides that, in preparing the City's budget, provision shall first be made for the payment of debt service on the City's outstanding Tax Obligations, with the remaining revenues to be apportioned among the City's respective departments. In future Fiscal Years, the amount of the tax levy allocated to debt service may need to be increased, reducing the amount allocable for the delivery of essential governmental services if there is no corresponding increase in the overall tax levy or other revenues.

Proposition 1 and Proposition 2 (2004). In 2004, voters approved Proposition 1 (Article III, Sec. 1 and Article IX, Sec. 20, City Charter) in order to limit increases in (i) the City's ad valorem tax revenues by requiring voter approval for increases in ad valorem taxes in future years above a limit equal to the lesser of the actual revenues in the preceding Fiscal Year, plus 4.5%, or a formula that is based upon the actual revenues received in Fiscal Year 2005 adjusted for the cumulative combined rates of inflation and the City's population growth; and (ii) water and sewer rates (i.e., the City's Combined Utility System) by limiting rate increases to the combined increases in the rates of inflation and population growth, excluding rate increases required by certain bond covenants and rates established by contract, unless approved by

the voters. At the same election, the voters also approved Proposition 2 (City Charter Article VI-a, Sec. 7), which proposed to limit increases in the City's "combined revenues," which would include revenues of the General Fund, Special Funds and Enterprise Funds. Based on the specific language of Proposition 1 and Proposition 2, the number of votes for each proposition, and the language of the City Charter, the City declared that Proposition 2 was not effective.

Proposition 2 Litigation. Supporters of Proposition 2 filed a lawsuit to declare Proposition 2 effective. After protracted litigation, on August 26, 2011, the Texas Supreme Court vacated the judgment of the trial court (for lack of ripeness) without reference to the merits and dismissed the case for want of jurisdiction. In April of 2014, the suit was refiled. The City filed a plea to the jurisdiction, which was denied by the district court. The City has appealed the denial. On August 17, 2017 the appeals court affirmed the trial court's denial of the plea. The City has filed a petition for review at the Texas Supreme Court. The Texas Supreme Court has not requested the filing of briefs and no hearing date has been set. The trial court proceedings are stayed pending the resolution of the appeal.

Propositions G and H. In response to Proposition 1 and Proposition 2, the City held an election on November 7, 2006, at which the voters approved Proposition G and Proposition H, which are currently effective. Proposition G amended the City Charter to exclude revenues of the City's enterprise systems (i.e., Combined Utility System, Houston Airport System and the Convention and Entertainment Facilities Department) from the types of revenues limited under the City Charter. Voter approval of Proposition G removed the enterprise systems from the revenue limitations of Proposition 2, although the limitation on water and sewer rate increases included in Proposition 1 remains in effect. **Consequently, the Houston Airport System revenues are exempted from the revenue limitations imposed on the City by Propositions 1 and 2.** Proposition H allows the City to collect and spend up to \$90 million of revenue, over and above any Proposition 2 limitations, for increased police, fire and emergency medical services and related matters. The amount collected and spent in each year becomes part of the base revenue calculations for the following year. Propositions G and H are incorporated into the City's Financial Policies, and the City has collected revenues and made expenditures for public safety purposes in compliance with Proposition H.

LITIGATION AND REGULATION

Houston Airport System Claims and Litigation

The City is aware of various pending claims and lawsuits associated with the operation of the Houston Airport System. These include, but are not limited to, certain personal injury claims, claims involving rents and charges and property disputes. The City intends to defend itself vigorously against these claims and lawsuits; however, no prediction of the City's liability with respect to the claims, or the final outcome of the lawsuits, can be made at this time. In the opinion of management of the Houston Airport System, it is improbable that the lawsuits now outstanding against the City that are associated with the operation of the Houston Airport System could become final in a time and manner so as to have a material adverse financial impact upon the operations of the City or the Houston Airport System.

Other Claims and Litigation Affecting the City

The City is a defendant in various lawsuits and is aware of pending claims arising in the ordinary course of its municipal and enterprise activities, certain of which seek substantial damages. That litigation includes lawsuits claiming damages that allege that the City caused personal injuries and wrongful deaths; class actions and other lawsuits and claims alleging discriminatory hiring and promotion practices and certain civil rights violations arising under the Federal Voting Rights Act; various claims from contractors for additional amounts under construction contracts; claims involving ad valorem tax assessments; and various other liability claims. The status of such litigation ranges from an early discovery stage to various levels of appeal of judgments both for and against the City. The amount of damages is limited in certain cases under the Texas Tort Claims Act and is subject to appeal. The City intends to defend itself vigorously against the suits; however, no prediction can be made, as of the date hereof, with respect to the liability of the City for such claims or the final outcome of such suits. The City typically utilizes its General Fund to liquidate claims and judgments; however, the City may, at its option, issue Tax-Supported Bonds to pay any final, unappealable judgments and settlements resulting from lawsuits against the City.

The City is also aware that various claims for inverse condemnation may be asserted against the City in connection with the City's operations, the aggregate amounts of which are unknown. The city intends to defend itself

vigorously against all such inverse condemnation claims; however, the City's liability with respect to such claims cannot be predicted.

Environmental Regulation

The City is subject to the environmental regulations of the State and the United States. These laws and regulations are subject to change, and the City may be required to expend substantial funds to meet the requirements of such regulatory authorities, such as requirements relating to quality of the City's water supply or wastewater discharges or to the handling and disposal of wastes. Failure to comply with these laws and regulations may result in the imposition of administrative, civil and criminal penalties, or the imposition of an injunction requiring the City to take or refrain from taking certain actions. In addition, the City may be required to remediate contamination on properties owned or operated by the City, or at sites where the City has sent waste for disposal.

Other Environmental Measures

Air quality control measures required by the United States Environmental Protection Agency (the "EPA") and the Texas Commission on Environmental Quality ("TCEQ") may adversely affect new industrial, commercial and residential development in Houston and adjacent areas. Under the Clean Air Act Amendments of 1990, the eight county Houston-Galveston-Brazoria Area ("HGB Area") has been designated by the EPA as a non-attainment area under the EPA's ozone standards. Such areas are required to demonstrate progress in reducing ozone concentrations each year until compliance with EPA's standards are achieved. To provide for annual reductions in ozone concentrations, the EPA and the TCEQ have imposed increasingly stringent limitations on emissions of volatile organic compounds and nitrogen oxides (chemical precursors of ground level ozone) from existing stationary sources of air emissions. In addition, any significant new source of those types of emissions, such as a new industrial plant, must provide for a net reduction of those air emissions by arranging or paying for reductions of emissions by 1.3 times the amount of pollutants proposed to be emitted by the new source. Even though existing air emissions controls are quite stringent, studies have indicated that even more stringent air emissions controls will be necessary in order for the HGB Area to achieve compliance with ozone standards. Due to the magnitude of air emissions reductions required as well as shortage of economically reasonable control options, the development of a successful air quality compliance plan has been and continues to be extremely challenging and will inevitably impact a wide cross-section of the business and residential community. More stringent controls on sources of air emissions in the HGB Area could make the Houston area a less attractive location to businesses in comparison to other areas of the country that are not subject to similarly stringent air emissions controls. Although air quality data indicates steady improvements in the HGB Area, if it fails to meet EPA's standards, EPA may impose a moratorium on the awarding of federal highway construction grants and other federal grants for certain public works construction projects. The EPA may also impose more stringent emissions offset requirements on new major sources of emissions for which construction has not already commenced.

Other constraints on economic growth and development include lawsuits filed under the Clean Air Act by plaintiffs seeking to require emission reduction measures that are even more stringent than those adopted by TCEQ and approved by EPA. From time to time, various plaintiff environmental organizations have filed lawsuits against TCEQ and EPA seeking to compel the early adoption of additional emission reduction measures, many of which could make it more difficult for businesses to construct or expand industrial facilities or which could result in new restrictions on the actions of businesses, governmental entities and private citizens. Any successful court challenge to the currently effective air emissions control plan could result in the imposition of even more stringent air emission controls that could threaten continued growth and development in the HGB Area.

Periodic Flooding

Owing in part to its relatively flat topography and moist coastal climate, certain areas in the City are subject to periodic flooding and associated severe property damage as a result of storm events and hurricanes. The City and Harris County each participate in the National Flood Insurance Program, which is administered by FEMA. Communities participating in the National Flood Insurance Program are required by FEMA to adopt restrictions on development in designated flood prone areas. In exchange, the National Flood Insurance Program makes federally subsidized flood insurance available to homeowners, renters, and business owners located in the participating communities.

In connection with its administration of the National Flood Insurance Program, FEMA will from time to time revise its Flood Insurance Rate Maps, which serve to classify the relative flooding potential of geographic areas. FEMA revised its Flood Insurance Rate Maps for the Greater Houston area as well as unincorporated Harris County in late 2006. As a result of this most recent revision, some homes and businesses within the City and the surrounding area that were outside of the 100-year flood plain (those areas that are determined to have a greater than 1% chance of flooding in any given year) under the previous Flood Insurance Rate Maps are now included in the 100-year flood plain under the new maps. Residential, commercial, and industrial properties in the City that recently have been reclassified as being within the 100-year flood plain could experience a diminution in value, the extent of which has not yet been determined.

RATINGS

The rating services of Moody's Investor Service and Fitch Ratings, Inc. have assigned ratings of "A1" and "A", respectively, on the Series 2018 Bonds. Ratings reflect only the views of the rating agencies, from whom an explanation of the significance of such ratings may be obtained. There is no assurance that ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely if, in the judgment of the rating agency, circumstances so warrant. Any such downward revision or withdrawal could have an adverse effect on the market price of the Series 2018 Bonds. The City and the Co-Financial Advisors will undertake no responsibility to oppose any revision or withdrawal of such ratings.

Due to changes in rating criteria and the current economic conditions of the United States, obligations issued by state and local governments, such as the Series 2018 Bonds, could be subject to a rating downgrade. Additionally, if a significant financial crisis or budgetary reductions should occur in the affairs of the U.S. Government or of any of its agencies or political subdivisions, then such an event could adversely affect the market for and ratings, liquidity and market value of outstanding debt obligations, including the Series 2018 Bonds..

VERIFICATION OF MATHEMATICAL ACCURACY

Grant Thornton LLP, a firm of independent certified public accountants, will verify the accuracy of the mathematical computations of (i) the adequacy of the maturing principal of and interest earned on the Refunded Notes Escrowed Securities, together with other available funds held in the Refunded Notes Escrow Fund, to provide for the payment of the Refunded Notes when due, (ii) the adequacy of the maturing principal of and interest earned on the Refunded Bonds Escrowed Securities, together with other available funds held in the Refunded Bonds Escrow Fund, to provide for the payment of the Refunded Bonds when due, and (iii) the "yield" on the Refunded Notes Escrowed Securities, the Refunded Bonds Escrowed Securities, and the Series 2018 Bonds, prepared by the Underwriters.

These computations will be based upon information and assumptions supplied by the Underwriters on behalf of the City. Grant Thornton LLP has restricted its procedures to recalculating the computations provided by the Underwriters and has not evaluated or examined the assumptions or information used in the computations.

TAX MATTERS

Tax Exemption

In the opinion of Bracewell LLP and Edgardo E. Colon, P.C., Co-Bond Counsel, under existing law, (i) interest on the Series 2018A Bonds is excludable from gross income for federal income tax purposes, except for any period during which a Series 2018B Bond is held by a person who is a "substantial user" of the facilities financed or refinanced with the proceeds of the Series 2018A Bonds or a "related person" to such a "substantial user," each within the meaning of section 147(a) of the Internal Revenue Code, as amended (the "Code") and (ii) interest on the Series 2018A Bonds is an item of tax preference that is includable in alternative minimum taxable income for purposes of determining a taxpayer's alternative minimum tax liability. Furthermore, in the opinion of Co-Bond Counsel, under existing law, (i) interest on the Series 2018B Bonds is excludable from gross income for federal income tax purposes and (ii) the Series 2018B Bonds are not "private activity bonds" under the Code, and, as such, interest on the Series 2018B Bonds is not subject to the alternative minimum tax.

The Code imposes a number of requirements that must be satisfied for interest on state or local obligations, such as the Series 2018 Bonds, to be excludable from gross income for federal income tax purposes. These requirements include,

among other things, limitations on the use of the bond-financed project, limitations on the use of bond proceeds and the source of repayment of bonds, limitations on the investment of bond proceeds prior to expenditure, a requirement that excess arbitrage earned on the investment of bond proceeds be paid periodically to the United States and a requirement that the issuer file an information report with the Internal Revenue Service (the “Service”). The City has covenanted in the Ordinance that it will comply with these requirements.

Co-Bond Counsel’s opinion will assume continuing compliance with the covenants of the Ordinance pertaining to those sections of the Code that affect the excludability of interest on the Series 2018 Bonds from gross income for federal income tax purposes and, in addition, will rely on representations by the City, the City’s Co-Financial Advisors and the Underwriters with respect to matters solely within the knowledge of the City, the City’s Co-Financial Advisors and the Underwriters, respectively, which Co-Bond Counsel have not independently verified. Co-Bond Counsel will further rely on the report (the “Report”) of Grant Thornton LLP, certified public accountants, regarding the mathematical accuracy of certain computations. If the City fails to comply with the covenants in the Ordinance or if the foregoing representations or the Report are determined to be inaccurate or incomplete, interest on the Series 2018 Bonds could become includable in gross income from the date of original delivery of each issue of the Series 2018 Bonds, regardless of the date on which the event causing such inclusion occurs.

The Code imposes an alternative minimum tax on the “alternative minimum taxable income” of an individual, if the amount of such alternative minimum tax is greater than the amount of such individual’s regular income tax. Generally, the alternative minimum tax rate for individuals is 26% of so much of such taxable excess as does not exceed \$175,000, as adjusted for inflation, plus 28% of so much of such taxable excess as exceeds \$175,000, as adjusted for inflation. Generally, the alternative minimum taxable income of an individual will include items of tax preference under the Code, such as the amount of interest received on “private activity bonds” issued after August 7, 1986. Accordingly, Co-Bond Counsel’s opinion will state that interest on the Series 2018A Bonds is an item of tax preference that is includable in alternative minimum taxable income for purposes of determining a taxpayer’s alternative minimum tax liability.

Except as stated above, Co-Bond Counsel will express no opinion as to any federal, state or local tax consequences resulting from the receipt or accrual of interest on, acquisition, ownership or disposition of, the Series 2018 Bonds.

Co-Bond Counsel’s opinions are based on existing law, which is subject to change. Such opinions are further based on Co-Bond Counsel’s knowledge of facts as of the date thereof. Co-Bond Counsel assumes no duty to update or supplement their opinions to reflect any facts or circumstances that may thereafter come to Co-Bond Counsel’s attention or to reflect any changes in any law that may thereafter occur or become effective. Moreover, Co-Bond Counsel’s opinions are not a guarantee of result and are not binding on the Service; rather, such opinions represent Co-Bond Counsel’s legal judgment based upon their review of existing law and in reliance upon the representations and covenants referenced above that they deem relevant to such opinions. The Service has an ongoing audit program to determine compliance with rules that relate to whether interest on state or local obligations is includable in gross income for federal income tax purposes. No assurance can be given as to whether or not the Service will commence an audit of the Series 2018 Bonds. If an audit is commenced, in accordance with its current published procedures, the Service is likely to treat the City as the taxpayer and the Owners may not have a right to participate in such audit. Public awareness of any future audit of any issue of the Series 2018 Bonds could adversely affect the value and liquidity of the Series 2018 Bonds regardless of the ultimate outcome of the audit.

Additional Federal Income Tax Considerations

Collateral Tax Consequences

Prospective purchasers of the Series 2018 Bonds should be aware that the ownership of tax-exempt obligations may result in collateral federal income tax consequences to financial institutions, life insurance and property and casualty insurance companies, certain S corporations with Subchapter C earnings and profits, individual recipients of Social Security or Railroad Retirement benefits, taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations, low and middle income taxpayers qualifying for the health insurance premium assistance credit, and individuals otherwise qualifying for the earned income tax credit. In addition, certain foreign corporations doing business in the United States may be subject to the “branch profits tax” on their effectively connected earnings and profits, including tax-exempt interest such as interest on the Series 2018 Bonds. These categories of prospective purchasers should consult their own tax advisors as to the applicability of these consequences. Prospective purchasers of the Series 2018

Bonds should also be aware that, under the Code, taxpayers are required to report on their returns the amount of tax-exempt interest, such as interest on the Series 2018 Bonds, received or accrued during the year.

Tax Accounting Treatment of Original Issue Premium

The issue price of all of each issue of the Series 2018 Bonds exceeds the stated redemption price payable at maturity of such Series 2018 Bonds. Such Series 2018 Bonds (the “Premium Bonds”) are considered for federal income tax purposes to have “bond premium” equal to the amount of such excess. The basis of a Premium Bond in the hands of an initial owner is reduced by the amount of such excess that is amortized during the period such initial owner holds such Premium Bond in determining gain or loss for federal income tax purposes. This reduction in basis will increase the amount of any gain or decrease the amount of any loss recognized for federal income tax purposes on the sale or other taxable disposition of a Premium Bond by the initial owner. No corresponding deduction is allowed for federal income tax purposes for the reduction in basis resulting from amortizable bond premium. The amount of bond premium on a Premium Bond that is amortizable each year (or shorter period in the event of a sale or disposition of a Premium Bond) is determined using the yield to maturity on the Premium Bond based on the initial offering price of such Premium Bond.

The federal income tax consequences of the purchase, ownership and redemption, sale or other disposition of Premium Bonds that are not purchased in the initial offering at the initial offering price may be determined according to rules that differ from those described above. All owners of Premium Bonds should consult their own tax advisors with respect to the determination for federal, state, and local income tax purposes of amortized bond premium upon the redemption, sale or other disposition of a Premium Bond and with respect to the federal, state, local, and foreign tax consequences of the purchase, ownership, and sale, redemption or other disposition of such Premium Bonds.

Tax Legislative Changes

Public Law No. 115-97 (i.e., Tax Cuts and Jobs Act), which makes significant changes to the Code, including changing certain provisions affecting tax-exempt obligations, such as the Bonds, was signed into law on December 22, 2017. The changes include, among others, changes to the federal income tax rates for individuals and corporations and the alternative minimum tax for tax years beginning after December 31, 2017. Current law may change so as to directly or indirectly reduce or eliminate the benefit of the excludability of interest on the Series 2018 Bonds from gross income for federal income tax purposes. Any proposed legislation, whether or not enacted, could also affect the value and liquidity of the Series 2018 Bonds. Prospective purchasers of the Series 2018 Bonds should consult with their own tax advisors with respect to any recently-enacted proposed, pending or future legislation.

LEGAL INVESTMENTS AND ELIGIBILITY TO SECURE PUBLIC FUNDS IN TEXAS

Pursuant to Section 1201.041 of the Public Security Procedures Act (Chapter 1201, as amended, Texas Government Code), the Series 2018 Bonds are negotiable instruments governed by Chapter 8, Texas Business and Commerce Code, and are legal and authorized investments for insurance companies, fiduciaries and trustees and for the sinking funds of municipalities and other political subdivisions or public agencies of the State of Texas. The Series 2018 Bonds also are generally eligible to secure deposits of any public funds of Texas municipalities, counties, school districts and Texas State agencies.

The City has made no investigation of any other laws, rules, regulations or investment criteria that might affect the suitability of the Series 2018 Bonds for any of the above purposes or limit the authority of any of the above persons or entities to purchase or invest in the Series 2018 Bonds.

CONTINUING DISCLOSURE

In the Ordinance, the City has made certain agreements regarding the continuing disclosure of information for the benefit of the holders and Beneficial Owners of the Series 2018 Bonds. The City is required to observe such agreements for so long as it remains obligated to advance funds to pay the Series 2018 Bonds. Under the agreements, the City will be obligated to provide certain updated financial information and operating data annually, and timely notice of specified events, whether or not material, to the information repository described below.

Annual Reports

The City will provide certain updated financial information and operating data to the Municipal Securities Rulemaking Board (the “MSRB”) annually. The information to be updated includes quantitative financial information and operating data with respect to the City’s Airport System in APPENDIX B and under the schedules listed in APPENDIX E. The City will update and provide this information within six months after the end of each fiscal year. See APPENDIX E relating to the City’s limited obligations to update Schedules 9, 9A, 9B, and 9C, which contain actuarial information related to the pension plans.

The City may provide updated information in full text or in such other form consistent with the Ordinance, or may incorporate by reference certain other publicly available documents, as permitted by Commission Rule 15c2-12 (the “Rule”). The updated information will include audited financial statements if the City commissions an audit and it is completed by the required time. If audited financial statements are not provided by that time, the City will provide audited financial statements when and if they become available, but if such audited financial statements are unavailable, the City will provide such financial statements on an unaudited basis within the required time. Any such financial statements will be prepared in accordance with the accounting principles described in APPENDIX B or such other accounting principles as the City may be required to employ from time to time pursuant to state law or regulation.

The City’s current fiscal year end is June 30. Accordingly, it must provide updated information by December 31 in each year, unless the City changes its fiscal year. If the City changes its fiscal year, it will notify the MSRB of the change.

Certain Event Notices

The City will also provide notice to the MSRB of any of the following events with respect to the Series 2018 Bonds in a timely manner and not more than 10 Business Days after occurrence of the event: (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 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 rights of holders of the Series 2018 Bonds, 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; and (14) appointment of a successor or additional trustee or the change of name of the trustee, if material. In addition, the City will provide timely notice of any failure by the City to provide information, data or financial statements and notice of events in accordance with its agreement described above under “Annual Reports” and in this paragraph. Neither the Ordinance nor the Series 2018 Bonds provide for property securing repayment of the Series 2018 Bonds (other than the subordinate lien on Net Revenues) or appointment of a trustee.

For the purposes of the event numbered (12) in the preceding paragraph, 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.

Availability of Information

The City has agreed to provide the foregoing information only to the MSRB. The information is expected to be available to holders of the Series 2018 Bonds from the MSRB through the EMMA website at www.emma.msrb.org; however, the City makes no representation regarding the availability of such information from the MSRB.

Limitations and Amendments

The City has agreed to update information and to provide notices of the events only as described above. The City has not agreed to provide other information that may be relevant or material to a complete presentation of its financial results of operations, condition or prospects or agreed to update any information that is provided, except as described above. The City makes no representation or warranty concerning such information or concerning its usefulness to a decision to invest in or sell the Series 2018 Bonds at any future date. The City disclaims any contractual or tort liability for damages resulting in whole or in part from any breach of its continuing disclosure agreement or from any statement made pursuant to its agreement, although holders of the Series 2018 Bonds may seek a writ of mandamus to compel the City to comply with its agreement.

The City may amend its continuing disclosure agreement to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status or type of operations of the City, if the agreement, as amended, would have permitted an underwriter to purchase or sell the Series 2018 Bonds in the offering made hereby in compliance with the Rule taking into account any amendments or interpretations of the Rule to the date of such amendment, as well as such changed circumstances and either the holders of a majority in aggregate principal amount of the Outstanding Series 2018 Bonds consent or any person unaffiliated with the City (such as nationally recognized bond counsel) determines that the amendment will not materially impair the interests of the Beneficial Owners of the Series 2018 Bonds. The City may also amend or repeal the agreement if the Commission amends or repeals the applicable provisions of the Rule or a court of final jurisdiction determines that such provisions are invalid, and the City may amend the agreement in its discretion in any other circumstance or manner, but in either case only to the extent that its right to do so would not prevent the Underwriters from purchasing the Series 2018 Bonds in the offering described herein in compliance with the Rule. If the City amends its agreement, it must include with the next financial information and operating data provided in accordance with its agreement described above under “Annual Reports” an explanation, in narrative form, of the reasons for the amendment and of the impact of any change in the type of information and data provided. See APPENDIX E relating to the City’s limited obligation to update Schedule 9, which contains actuarial information related to the Municipal System Pension Plan.

Compliance with Prior Undertakings

The City has made certain filings to describe its compliance with its continuing disclosure undertakings with respect to debt obligations issued by the City. Please see the filings made by the City on June 17, 2014, July 14, 2014, July 28, 2014, February 11, 2015, May 12, 2015, May 15, 2015, October 22, 2017, December 5, 2017 and January 25, 2018, which are available by accessing the following link to the City's page on EMMA (<https://emma.msrb.org/IssuerHomePage/Issuer?id=122D8F57A31F0F0513F7133054BC213B&type=G>) and locating each of these dated filings under the “Event-Based Disclosures” tab and, with regard to the May 15, 2015 notice, the “Financial Disclosures” tab. The contents of each of the aforementioned filings are incorporated by reference herein.

No Continuing Disclosure Undertakings by Airlines

No airline has made any agreement regarding the continuing disclosure of information for the benefit of the holders and Beneficial Owners of the Series 2018 Bonds. However, certain of the certificated major domestic airlines (or their respective parent corporations) are subject to the information reporting requirements of the Securities Exchange Act of 1934, as amended, and thus must file reports and other information with the Commission. See “THE AIRLINE INDUSTRY FINANCIAL INFORMATION.” In addition, pursuant to the Rule, certain airlines may have agreed to continuing disclosure undertakings in connection with the issuance and sale of obligations other than the Series 2018 Bonds. In those instances the airlines would have undertaken, in a written agreement or contract for the benefit of the holders of such obligations, to provide to various information repositories certain annual financial information and operating data, including audited financial statements, and to provide notice to such repositories and the MSRB of certain

specified material events. Such information is available to securities brokers and others who subscribe to receive the information from such repositories.

LEGAL PROCEEDINGS

The delivery of the Series 2018 Bonds is subject to the approving opinion of the Attorney General of the State of Texas and the opinion of Bracewell LLP and Edgardo E. Colon, P.C., Co-Bond Counsel for the City, as to the validity of the issuance of the Series 2018 Bonds under the Constitution and laws of the State of Texas. The opinion of Co-Bond Counsel will be based upon an examination of a transcript of certain certified proceedings of the City incident to the issuance and authorization of the Series 2018 Bonds. A copy of the proposed opinion of Bracewell LLP and Edgardo E. Colon, P.C., to be delivered in connection with the Series 2018 Bonds, is attached to this Official Statement as APPENDIX D.

In their capacity as Co-Bond Counsel, Bracewell LLP, Houston, Texas, and Edgardo E. Colon, P.C., Houston, Texas, have reviewed the statements and information contained in the Official Statement under the captions and sub-captions “PURPOSE AND PLAN OF FINANCING – The Refunded Bonds,” and “ – The Refunded Notes,” “THE SERIES 2018 BONDS,” “SECURITY FOR THE SERIES 2018 BONDS” (except for information under the sub-caption “Bondholders’ Remedies”), “COVENANTS AND TERMS OF THE ORDINANCE” (except for the information under the sub-caption “Rate Covenant – Other Factors Impacting Rate Covenant”), “CONTINUING DISCLOSURE” (except for the information under the sub-captions “Compliance With Prior Undertakings” and “No Continuing Disclosure Undertakings by Airlines” as to which no opinion is expressed), and APPENDICES C-1 and C-2, and Co-Bond Counsel is of the opinion that the statements and information contained therein, insofar as such statements and information summarize certain provisions of the Ordinance and the Series 2018 Bonds, in all material respects fairly and accurately reflect the provisions of the Ordinance and the Series 2018 Bonds; further, Co-Bond Counsel has reviewed the statements and information contained in the Official Statement under the captions and sub-captions “TAX MATTERS” and “LEGAL INVESTMENTS AND ELIGIBILITY TO SECURE PUBLIC FUNDS IN TEXAS,” and Co-Bond Counsel is of the opinion that the statements and information contained therein are correct as to matters of law.

Such firms have not, however, independently verified any of the factual information contained in this Official Statement nor have they conducted an investigation of the affairs of the City or the Houston Airport System for the purpose of passing upon the fairness, accuracy or completeness of this Official Statement. No person is entitled to rely upon such firms’ limited participation as an assumption of responsibility for, or an expression of opinion of any kind with regard to, the fairness, accuracy or completeness of any of the information contained herein. The fees of Bracewell LLP and Edgardo E. Colon, P.C., for their services with respect to the Series 2018 Bonds are contingent upon the sale and delivery of the Series 2018 Bonds.

Certain matters will be passed upon by for the City by its Special Disclosure Co-Counsel, Norton Rose Fulbright US LLP, Houston, Texas, and West & Associates, LLP, Houston, Texas. Certain other legal matters will be passed on for the Underwriters by their counsel, Greenberg Traurig, LLP, Houston, Texas.

Bracewell LLP, Edgardo E. Colon, P.C., Norton Rose Fulbright US LLP, and West & Associates, LLP, represent the Underwriters from time to time in matters unrelated to the issuance of Series 2018 Bonds. Greenberg Traurig, LLP represents the City from time to time in matters unrelated to the Series 2018 Bonds.

The various legal opinions to be delivered concurrently with the delivery of the Series 2018 Bonds express the professional judgment of the attorneys rendering the opinions as to the legal issues explicitly addressed therein. In rendering a legal opinion, the attorney does not become an insurer or guarantor of that expression of professional judgment, of the transaction opined upon, or the future performance of the parties to the transaction. Nor does the rendering of an opinion guarantee the outcome of any legal dispute that may arise out of the transaction.

CO-FINANCIAL ADVISORS

Hilltop Securities Inc., which in turn has retained YaCari Consultants, LLC (together, the “Co-Financial Advisors”), has been retained by the City in connection with the issuance of the Series 2018 Bonds and, in such capacity, the Co-Financial Advisors have assisted the City in the preparation of documents. The fee for services rendered by the Co-

Financial Advisors with respect to the sale of the Series 2018 Bonds is not contingent upon the issuance and delivery of the Series 2018 Bonds.

Although the Co-Financial Advisors have read and participated in the preparation of this Official Statement, they have not independently verified any of the information set forth herein. The information contained in this Official Statement has been obtained primarily from the City's records and from other sources that are believed to be reliable, including financial records of the City and other entities that may be subject to interpretation. No guarantee is made as to the accuracy or completeness of any such information. No person, therefore, is entitled to rely upon the participation of the Co-Financial Advisors as an implicit or explicit expression of opinion as to the completeness and accuracy of the information contained in this Official Statement.

INDEPENDENT AUDITORS

The financial statements of the Houston Airport System Fund, as of and for the years ended June 30, 2017 and 2016, included in this Official Statement as APPENDIX B, have been audited by McConnell & Jones LLP/Banks, Finley, White & Co., a Joint Venture Partnership known as M&J/BFW, independent auditors, as stated in their report appearing herein.

UNDERWRITING

Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative and on behalf of all of the Underwriters set forth on the cover page hereof, has agreed to purchase the Series 2018A Bonds, subject to certain conditions, and has agreed to pay therefor a price of \$146,932,170.91 (reflecting the par amount of the Series 2018A Bonds, plus a net offering premium of \$16,913,267.60, less an underwriting discount of \$531,096.69).

Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative and on behalf of all of the Underwriters set forth on the cover page hereof, has agreed to purchase the Series 2018B Bonds, subject to certain conditions, and has agreed to pay therefor a price of \$330,030,174.87 (reflecting the par amount of the Series 2018B Bonds, plus a net offering premium of \$45,905,950.80, less an underwriting discount of \$1,095,775.93).

Siebert Cisneros Shank & Co., L.L.C. has entered into an agreement with Muriel Siebert & Co. for the retail distribution of certain securities offerings, at the original issue prices. Pursuant to said agreement, if applicable to the Bonds, Muriel Siebert & Co. will purchase Bonds at the original issue price less the selling concession with respect to any Bonds that Muriel Siebert & Co. sells. Siebert Cisneros Shank & Co., L.L.C. will share a portion of its underwriting compensation with Muriel Siebert & Co.

Co-manager Fidelity Capital Markets, an Underwriter, is a division of National Financial Services LLC.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the issuer, for which they received or will receive customary fees and expenses. In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of the Houston Airport System. The Underwriters and their respective affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

FORWARD LOOKING STATEMENTS

The statements contained in this Official Statement, and in any other information provided by the City, that are not purely historical are forward-looking statements, including statements regarding the City's expectations, hopes, intentions,

or strategies regarding the future. Readers should not place undue reliance on forward-looking statements. All forward-looking statements included in this Official Statement are based on information available to the City on the date hereof, and the City assumes no obligation to update any such forward-looking statements. It is important to note that the City's actual results could differ materially from those in such forward-looking statements.

The forward-looking statements herein are necessarily based on various assumptions and estimates and are inherently subject to various risks and uncertainties, including risks and uncertainties relating to the possible invalidity of the underlying assumptions and estimates and possible changes or developments in social, economic, business, industry, market, legal and regulatory circumstances and conditions and actions taken or to be taken by third parties, including customers, suppliers, business partners and competitors, and legislative, judicial and other governmental authorities and officials. Assumptions related to the foregoing involve judgments with respect to, among other things, future economic, competitive, and market conditions and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond the control of the City. Any of such assumptions could be inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this Official Statement would prove to be accurate.

GENERAL INFORMATION

All of the summaries of the statutes, ordinances and other related reports set forth herein are made subject to all of the provisions of such documents. The descriptions of the Series 2018 Bonds and the Ordinance herein do not purport to be complete and all such descriptions or references thereto contained in this Official Statement are qualified in their entirety by reference to the complete forms of the Series 2018 Bonds and of the Ordinance. Statements made herein involving estimates or projections, whether or not expressly identified as such, should not be construed to be statements of fact or as representations that such estimates or projections will ever be attained or will even approximate actual results.

Copies of the June 30, 2017 Comprehensive Annual Financial Report of the City of Houston, Texas are available to each of the prospective purchasers of the Series 2018 Bonds upon written request addressed to the office of the City Controller, P.O. Box 1562, Houston, Texas 77251. **HOWEVER, THE SERIES 2018 BONDS ARE PAYABLE SOLELY FROM NET REVENUES OF THE HOUSTON AIRPORT SYSTEM AND CERTAIN RESERVES ESTABLISHED PURSUANT TO THE ORDINANCE, AND NO IMPLICATION IS MADE THAT ANY OTHER REVENUES OR MONEY OF THE CITY ARE TO BE AVAILABLE FOR THE PAYMENT OF THE PRINCIPAL OF OR INTEREST ON THE SERIES 2018 BONDS.** Copies of the Ordinance are available to each of the prospective purchasers of the Series 2018 Bonds upon written request to the Office of the City Attorney, 900 Bagby, 4th Floor, Houston, Texas 77002. This document was approved by the City Council.

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SCHEDULE I

SCHEDULE OF REFUNDED OBLIGATIONS

Refunded Bonds

City of Houston, Texas Airport System Subordinate Lien Revenue Refunding Bonds, Series 2007B (Non-AMT)

<u>Maturity Date</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Call Date</u>
July 1, 2019	\$ 9,960,000	5.000%	4/20/2018
July 1, 2020	10,450,000	5.000%	4/20/2018
July 1, 2021	4,585,000	5.000%	4/20/2018
July 1, 2021	520,000	4.500%	4/20/2018
July 1, 2022	10,020,000	5.000%	4/20/2018
July 1, 2023	2,650,000	5.000%	4/20/2018
July 1, 2024	2,635,000	5.000%	4/20/2018
July 1, 2024	150,000	4.600%	4/20/2018
July 1, 2025	19,075,000	5.000%	4/20/2018
July 1, 2026	20,030,000	5.000%	4/20/2018
July 1, 2027	21,030,000	5.000%	4/20/2018
***	***		***
July 1, 2032	160,225,000	5.000%	4/20/2018 (Term Bond)
TOTAL	<u>\$ 261,330,000</u>		

Refunded Notes

Series 2018A (AMT) Refunded Notes

<u>Commercial Paper, Series A</u>	<u>Par Amount</u>	<u>Maturity Date</u>
	\$ 3,292,660 *	April 4, 2018
	<u>17,819,340</u>	April 12, 2018
	<u>21,112,000</u>	

* Partial refunding of outstanding par amount

Series 2018B (Non-AMT) Refunded Notes

<u>Commercial Paper, Series A</u>	<u>Par Amount</u>	<u>Maturity Date</u>
	\$ 9,734,340 *	April 4, 2018
	<u>52,680,660</u>	April 12, 2018
	<u>62,415,000</u>	

* Partial refunding of outstanding par amount

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APPENDIX A

REPORT OF THE AIRPORT MANAGEMENT CONSULTANT

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Appendix A

REPORT OF THE AIRPORT MANAGEMENT CONSULTANT

on the proposed issuance of

CITY OF HOUSTON

AIRPORT SYSTEM

SUBORDINATE LIEN REVENUE AND REFUNDING BONDS

Series 2018A (AMT) and Series 2018B (Non-AMT)

Prepared for

City of Houston, Texas

Prepared by

LeighFisher
Burlingame, California

February 19, 2018

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February 19, 2018

Mr. Mario C. Diaz
Director of Aviation
Houston Airport System
P. O. Box 60106
George Bush Intercontinental Airport
Houston, Texas 77205

Re: **Report of the Airport Management Consultant
City of Houston, Texas
Airport System Subordinate Lien Revenue and Refunding Bonds**

Dear Mr. Diaz:

We are pleased to submit this Report of the Airport Management Consultant on the proposed issuance of Airport System Subordinate Lien Revenue and Refunding Bonds by the City of Houston, Texas (the City) for the Houston Airport System (the Airport System). The Airport System comprises George Bush Intercontinental Airport/Houston (Intercontinental or IAH), William P. Hobby Airport (Hobby or HOU), and Ellington Airport (Ellington or EFD). The acronym HAS is generally used to refer to the City department that manages the Airport System. This letter and the accompanying attachment and financial exhibits constitute our report.

Houston Airport System

Intercontinental is the 13th busiest airport in the United States as measured by numbers of enplaned passengers in 2016. The airport was the primary connecting hub for Continental Airlines and, following the merger of Continental with United Airlines in 2010, Intercontinental is now the second busiest hub in United's system. In 2016, 20.8 million passengers enplaned at the airport, approximately 50% of them connecting between flights. Intercontinental is an important international gateway, particularly for flights to Latin America. The airport is served by all of the large U.S.-flag airlines except JetBlue Airways and Southwest Airlines (both of which operate at Hobby) and, as scheduled for July 2017, 20 foreign-flag airlines.

Hobby is the 34th busiest airport in the United States as measured by numbers of enplaned passengers in 2016 and an important airport in the Southwest Airlines system for domestic flights and flights to Latin America. In 2016, 6.5 million passengers enplaned at Hobby, approximately 33% of them connecting between flights. Hobby ranks second among Southwest's airports by international seat capacity and seventh by domestic seat capacity (as scheduled for July 2017). Hobby is also the main airport in the Houston region for business and general aviation.

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Ellington is a former U.S. Air Force base that is now operated as a joint civilian-military airport serving business and general aviation. In 2015, Ellington was licensed as the tenth commercial spaceport in the nation, making it a potential launch and landing site for spacecraft.

Proposed Series 2018AB New Money Bonds

The Series 2018A (AMT) Bonds, referred to in this report as the 2018A Bonds, are to be issued to finance or refinance an approximate (1) \$37 million of project costs pursuant to a lease with United in connection with the development of international terminal facilities at Intercontinental, (2) \$116 million of project costs for new international terminal facilities at Hobby, and (3) \$21 million of project costs for a satellite utility plant at Hobby.

Certain of the Series 2018B (Non-AMT) Bonds, referred to in this report as the 2018B (New Money) Bonds, are to be issued to finance or refinance an approximate \$62 million of project costs for a new parking garage and roadway improvements at Hobby.

Proposed 2018AB New Money Bonds		
	Principal amount	Final maturity
2018A (AMT)	\$188,040,000	2047
2018B (Non-AMT)	<u>67,020,000</u>	2048
	\$255,060,000	

Proposed Series 2018B Refunding Bonds

The other Series 2018B (Non-AMT) Bonds, referred to in this report as the 2018B (2007B Refunding) Bonds, are to be issued to refund an approximate \$261 million principal amount of outstanding Airport System Subordinate Lien Revenue and Refunding Bonds, Series 2007B. The proposed Series 2018B (2007B Refunding) Bonds are to be issued to achieve debt service savings.

Proposed 2018B Refunding Bonds		
	Principal amount	Final maturity
2018B (2007B Refunding) (Non-AMT)	264,515,000	2032

The 2018A Bonds, 2018B (New Money) Bonds, and 2018B (2007B Refunding) Bonds are collectively referred to in this report as the 2018AB Bonds.

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Planned Future Bonds to Fund Capital Improvement Program

HAS is redeveloping international terminal facilities at Intercontinental and implementing other capital improvements to the Airport System (collectively referred to in this report as the Capital Improvement Program or CIP). Certain CIP elements are under design, and their scope, cost, and funding plan have not yet been finalized.

This report addresses the issuance of the proposed 2018AB Bonds and the first of a series of future Bonds that the City plans to issue to finance the CIP. The City plans to issue such Bonds in 2019 and they are referred to in this report as the 2019 Bonds. Pending the finalization of the scope and cost of the CIP, the report does not address additional future Bonds that the City plans to issue.

Completed and near-term CIP projects (i.e., those expected to be funded through approximately 2019 and implemented through approximately 2021), their estimated costs, and the funding plan are summarized in the attachment and in Exhibit A. The estimated sources and uses of funds from the sale of the proposed 2018AB Bonds and the planned 2019 Bonds are shown in Exhibit B. The forecast debt service requirements of all outstanding Bonds, proposed 2018AB Bonds, and planned 2019 Bonds are shown in Exhibit C-1.*

Bond Ordinance

The City issues Bonds pursuant to a Master Bond Ordinance adopted by the City in November 2016. A supplemental bond ordinance, adopted by the City in November 2017, provides for the issuance of the proposed 2018AB Bonds. Each series of earlier parity Bonds was issued under the terms of a standalone ordinance incorporating identical covenants to those in the Master Bond Ordinance and the supplemental ordinance for the proposed 2018AB Bonds. The Master Bond Ordinance, supplemental ordinance, and all prior parity ordinances are collectively referred to in this report as the Bond Ordinance. Capitalized terms are used as defined in the Bond Ordinance or in the Airline Agreements (discussed later), except as defined otherwise in this report.

The Bond Ordinance provides for the issuance of Airport System Revenue Bonds and other Obligations having a Senior Lien, Subordinate Lien, or Inferior Lien on Net Revenues (Gross Revenues less Operation and Maintenance Expenses) of the Airport System.

*All financial exhibits are provided at the end of the attachment "Background, Assumptions, and Rationale for the Financial Forecasts."

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The proposed 2018AB Bonds are to be issued as Subordinate Lien Bonds, on a parity with outstanding Subordinate Lien Bonds, and are to be secured by and payable from the Net Revenues of the Airport System subordinate to outstanding Senior Lien Bonds and Notes. For the purposes of this report, it was assumed that the planned 2019 Bonds will also be issued as Subordinate Lien Bonds. All bonds secured by Airport System Net Revenues are referred to as Bonds.

Rate Covenant

Under Section 3.03(a) of the Master Bond Ordinance, the City covenants that it will, at all times, fix, charge, impose, and collect rentals, rates, fees, and other charges for the use of the Airport System and, to the extent that it may legally do so, revise the same as may be necessary or appropriate in order that, in each Fiscal Year, the Net Revenues of the Airport System will, at all times, be at least sufficient to equal the larger of either:

- (i) all amounts required to be deposited in such Fiscal Year to the credit of the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, and the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund, and the Inferior Lien Bond Reserve Fund, or
- (ii) an amount not less than (1) 125% of the Debt Service Requirements for the Outstanding Senior Lien Obligations for such Fiscal Year, plus (2) 110% of the Debt Service Requirements for the Outstanding Subordinate Lien Bonds for such Fiscal Year, plus (3) 100% of the Debt Service Requirements for the Outstanding Inferior Lien Bonds for such Fiscal Year.

Such provision is referred to as the Rate Covenant. The City's Fiscal Year (FY) ends June 30. Forecasts of debt service coverage calculated according to the requirements of the Bond Ordinance and demonstrating compliance with the Rate Covenant are presented in Exhibit G.

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Outstanding Obligations

As of December 31, 2017, the City had outstanding Bonds as follows:

OUTSTANDING OBLIGATIONS		
Outstanding at December 31, 2017		
	<u>Principal amount</u>	<u>Final maturity</u>
Senior Lien (fixed rate)		
2009A Bonds	\$ 420,420,000	2039
Commercial paper notes	<u>95,000,000</u>	2018
	\$515,420,000	
Subordinate Lien (fixed rate)		
2000B Bonds	\$ 44,515,000	2024
2002A Bonds	20,005,000	2032
2002B Bonds	27,450,000	2032
2007B Bonds	270,045,000	2032
2011A Bonds	245,200,000	2026
2011B Bonds	72,650,000	2026
2012A Bonds	280,355,000	2032
2012B Bonds	<u>217,135,000</u>	2032
	\$1,177,355,000	
Subordinate Lien (auction rate)		
2000P-1 Bonds	\$ 34,100,000	2030
2000P-2 Bonds	33,875,000	2030
2002C Bonds	76,875,000	2032
2002D-1 Bonds	55,800,000	2032
2002D-2 Bonds	<u>53,825,000</u>	2032
	\$ 254,475,000	
Subordinate Lien (variable rate)		
2010 Bonds	<u>92,505,000</u>	2030
	\$2,039,755,000	

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Passenger Facility Charge Revenues

The City has authority from the Federal Aviation Administration (FAA) to impose a passenger facility charge (PFC) of \$4.50 per eligible enplaned passenger at Intercontinental and Hobby and use PFC revenues to pay certain of the Debt Service Requirements of outstanding Bonds and the proposed 2018AB Bonds. Under the Master Bond Ordinance, the calculation of Debt Service Requirements allows for a credit of the amount of PFC revenues that have been irrevocably committed by the City to the payment of principal or interest on Bonds by the deposit of such PFC revenues into the respective debt service funds. For the purposes of this report, all PFC revenues that the City expects to use to pay future Bond debt service were credited against Debt Service Requirements in calculating debt service coverage.

Airline Special Facilities Bonds

The City has issued certain special facilities revenue bonds to finance terminal and other facilities for United at Intercontinental. Under the provisions of special facilities lease agreements, United is obligated to pay, directly to the trustee for the bonds, amounts equal to the debt service requirements of all such bonds. None of the debt service requirements of United's special facilities revenue bonds are secured by or payable from Net Revenues and none of the special facilities revenues derived from the special facilities lease agreements are included in Net Revenues. Except as noted in the attachment, the debt service requirements of the special facilities revenue bonds are not considered further in this report.

Rental Car Special Facilities Bonds

HAS imposes a customer facility charge (CFC) of \$4.00 per rental car transaction-day on on-airport rental car transactions at Intercontinental. Revenues from the CFC are used to pay debt service on special facilities revenue bonds issued by the City to fund the construction of a consolidated rental car center. The adequacy of such CFC revenues to meet the debt service requirements of the rental car special facilities revenue bonds was not evaluated in this report. None of the debt service requirements of the rental car special facilities revenue bonds are secured by or payable from Net Revenues and the debt service requirements of such bonds are not considered further in this report.

Airline Agreements

The City has entered into various use, lease, and special facility lease agreements with the airlines to govern their use of Intercontinental and Hobby. The various agreements are referred to collectively in this report as the Airline Agreements. As described in the attachment, the Airline Agreements generally require the signatory airlines to pay landing fees, terminal building rentals, and other charges to enable the City to recover the capital and operating costs allocable to the facilities used or occupied by the airlines.

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At both Intercontinental and Hobby, most terminal rentals have historically been set according to a compensatory rate-making methodology whereby the airlines pay only the costs allocable to the premises they rent. Costs allocable to public circulation and other nonairline premises are the responsibility of HAS and paid from concession, parking, rental car, and other nonairline revenues.

As described in the attachment, at Intercontinental, HAS has transitioned most of the terminals used by United from the historical compensatory rate-making arrangements to net lease arrangements whereby United generally assumes responsibility for all capital recovery and operating costs, including those for public and other nonairline premises, and, in return, retains concession revenues generated inside the terminal buildings.

At both Intercontinental and Hobby, landing fees are set according to a cost-center residual rate-making methodology under which airfield costs are 100% recovered from airline landing fees and general aviation fuel flowage fees.

Exhibits E-2 (for Intercontinental) and E-4 (for Hobby) present forecasts of payments to be made by the passenger airlines in the form of landing fees, terminal rentals, and other fees and charges calculated in accordance with the provisions of the Airline Agreements.

Scope of Report

This report was prepared to evaluate the ability of the City to generate sufficient Net Revenues to pay the Debt Service Requirements of outstanding Bonds, the proposed 2018AB Bonds, and the planned 2019 Bonds (as such may be reduced by the commitment of PFC revenues) and meet the debt service coverage requirements of the Rate Covenant.

In preparing the report, we analyzed:

- Future airline traffic demand at the Airport System airports, giving consideration to the demographic and economic characteristics of the Houston region, historical trends in airline traffic, the role of Intercontinental as a hub for United, the role of Hobby as a key airport for Southwest, and other factors that will affect future airline traffic
- Estimated sources and uses of funds for the Capital Improvement Program and associated annual Bond debt service requirements
- Historical and estimated future PFC revenues and the use of certain of such revenues to pay Bond debt service

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- Historical relationships among revenues, expenses, and airline traffic at the Airport System airports
- The facilities to be provided as part of the Capital Improvement Program and other operational considerations affecting revenues and expenses
- The City’s policies and contractual agreements relating to the use and occupancy of Airport System facilities, including the calculation of airline rentals, fees, and charges under the Airline Agreements; the operation of concession privileges; and the leasing of buildings and grounds

We also identified key factors upon which the future financial results of the Airport System may depend and formulated assumptions about those factors. On the basis of those assumptions, we assembled the financial forecasts presented in the exhibits at the end of the report. Forecasts are presented for a five-year period through FY 2022. Estimated project costs, financing assumptions, and estimated debt service requirements were provided by the sources noted in the exhibits.

Forecast Debt Service Coverage

Exhibit G and the following tabulation present the forecasts of Net Revenues (Gross Revenues less Operating and Maintenance Expenses), net Debt Service Requirements, and Bond debt service coverage. The debt service coverage requirements of the Rate Covenant are forecast to be exceeded in each year of the forecast period.

Fiscal Year	(in thousands)		Debt service coverage ratio [A/B]
	Net Revenues [A]	Net Debt Service Requirements[B] (a)	
2018	\$191,453	\$128,584	149%
2019	196,109	131,681	149
2020	204,529	132,517	154
2021	191,197	132,767	144
2022	202,994	144,994	140

(a) Debt service net of PFC revenues that HAS intends to use to pay debt service, consistent with the definition of Debt Service Requirements in the Bond Ordinance.

* * * * *

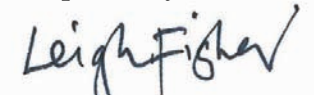
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The forecasts are based on information and assumptions that were provided by or reviewed with and agreed to by HAS management. The forecasts reflect management's expected course of action during the forecast period and, in management's judgment, present fairly the expected financial results of the Airport System. 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, express or implied, with respect to the information, assumptions, forecasts, opinions, or conclusions disclosed in this 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 City's Airport Management Consultant.

Respectfully submitted,



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Attachment

BACKGROUND, ASSUMPTIONS, AND RATIONALE
FOR THE FINANCIAL FORECASTS

REPORT OF THE AIRPORT MANAGEMENT CONSULTANT

on the proposed issuance of

CITY OF HOUSTON

AIRPORT SYSTEM

SUBORDINATE LIEN REVENUE AND REFUNDING BONDS

Series 2018A (AMT) and Series 2018B (Non-AMT)

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AIRPORT FACILITIES AND CAPITAL IMPROVEMENT PROGRAM

GEORGE BUSH INTERCONTINENTAL AIRPORT/HOUSTON

George Bush Intercontinental Airport/Houston was opened in 1969 as Houston Intercontinental Airport and renamed in 1997 in honor of President George H. W. Bush. Intercontinental is located on approximately 10,200 acres 22 miles north of central Houston. Airport property is generally bounded by Humble-Westfield Road (FM 1960) to the north, Lee Road to the east, Greens Road to the south, and Aldine-Westfield Road to the west. Primary roadway access is provided via Interstate 45 (I-45), U.S. Highway 59 (co-signed with I-69), the Hardy Toll Road, and the Sam Houston Parkway (Beltway 8). Access to the passenger terminal complex is provided via John F. Kennedy Boulevard from the south (from the Sam Houston Parkway) and Will Clayton Parkway from the east (from U.S. Highway 59).

Airfield

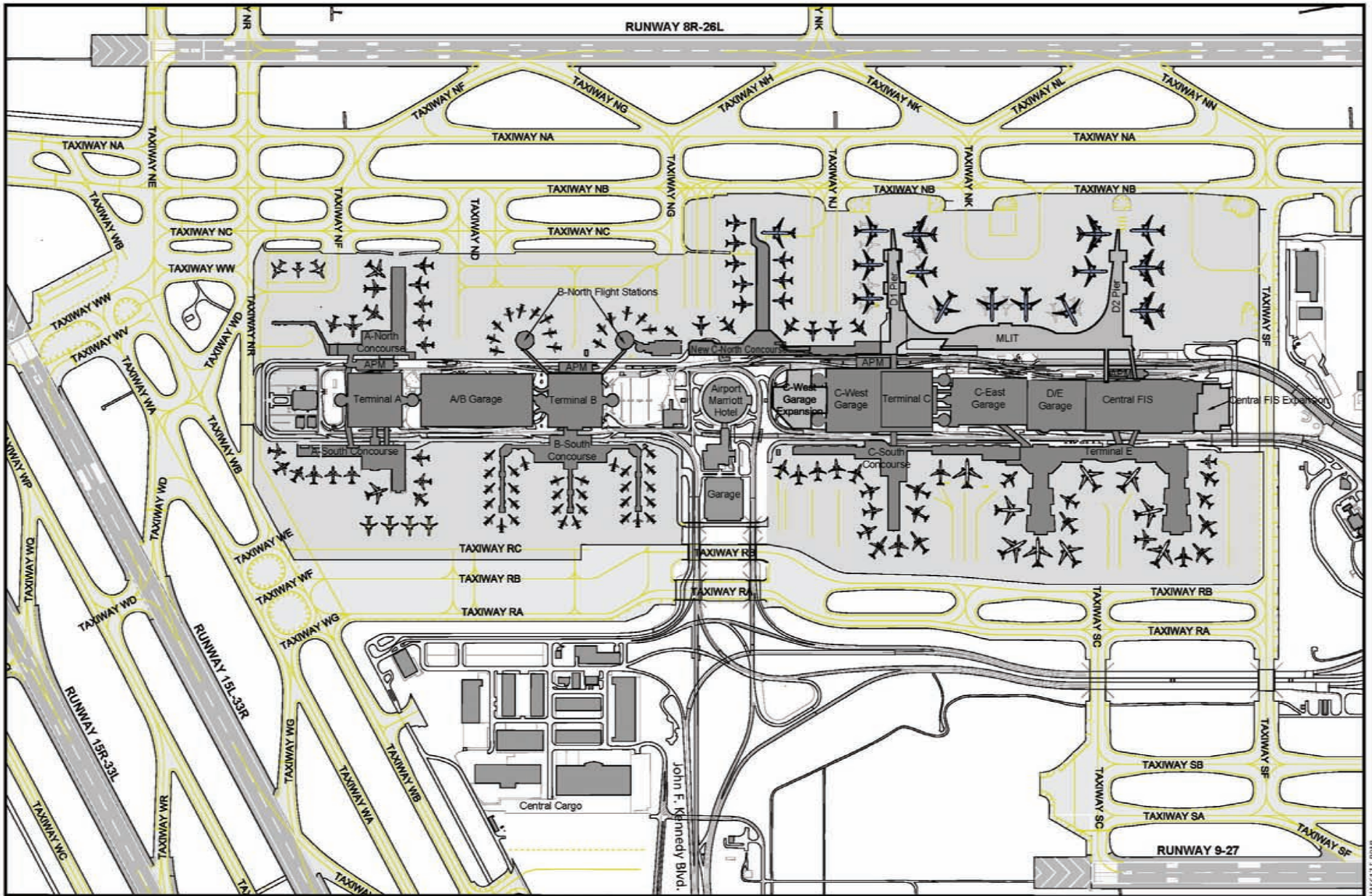
Intercontinental has five runways and associated taxiway systems. Three of the runways are oriented east-west – Runway 8L-26R (9,000 feet long), Runway 8R-26L (9,402 feet long), and Runway 9-27 (10,000 feet long) – and two runways are oriented northwest-southeast – Runway 15L-33R (12,001 feet long) and Runway 15R-33L (9,999 feet long). Runway 15L-33R and Runway 8R-26L date from the 1969 opening of the airport. Runway 15R-33L was opened in 1981 (originally at 6,000 feet in length, extended to 9,999 feet in 2002). Runway 9-27 was opened in 1987. Runway 8L-26R was opened in 2003. All runways are 150 feet wide.

In most weather conditions, aircraft arrive on the east-west runways and depart on the northwest-southeast runways. Centerline-to-centerline separations between the east-west runways (5,000 feet between Runways 8L-26R and 8R-26L and 5,760 feet between Runways 8R-26L and 9-27) allow simultaneous aircraft approaches to the three runways in most weather conditions.

Passenger Terminals

Figure 1 shows the Intercontinental passenger terminal complex, which extends approximately 6,400 feet east-west on the site between Runways 8R-26L and 9-27. Five separate passenger terminals together provide 131 gates for aircraft parking and associated passenger check-in, security screening, baggage claim, international passenger processing, concession, and other functions in approximately 4.5 million square feet of space. A loop roadway system (Terminal Road), accessed from John F. Kennedy Boulevard and Will Clayton Parkway, connects the terminals, each of which has multiple curbsides for the drop-off and pick-up of passengers by private and commercial vehicles.

Table 1 shows the distribution and use of gates by airline. Leasing and business arrangements for terminal facilities are described in the later section, “Airline Agreements.”



Note: The Mickey Leland International Terminal (MLIT) and the expansion of the Central FIS are under design and the final configurations will likely differ from those shown.

LEGEND

- Existing facilities
- Proposed facilities

Figure 1
TERMINAL COMPLEX
 George Bush Intercontinental Airport
 December 2017

HA5617 F-0018

Table 1
GATE DISTRIBUTION AND USE BY AIRLINE
George Bush Intercontinental Airport
July 2017

	Number of gates					Total	Average daily scheduled departures		Average daily scheduled departing seats	
	Terminal						Number	Per gate	Number	Per gate
	A (a)	B (b)	C (c)	D (d)	E (d)					
United Airlines and affiliates (d)										
United	--	--	29	--	23	52	244	4.7	38,683	744
United Express (e)	<u>10</u>	<u>42</u>	--	--	--	<u>52</u>	<u>261</u>	5.0	<u>15,622</u>	300
Subtotal, United	10	42	29	--	23	104	505	4.9	54,305	522
American Airlines	5	--	--	--	--	5	33	6.7	3,947	789
Spirit Airlines (f)	3	--	--	--	--	3	23	7.5	4,300	1,433
Delta Air Lines	4	--	--	--	--	4	25	6.2	2,431	608
Air Canada (f)	1	--	--	--	--	1	9	9.0	663	663
Common use										
Domestic (g)	2	--	--	--	--	2	7	3.6	1,600	800
International (h)	--	--	--	<u>12</u>	--	<u>12</u>	<u>22</u>	1.9	<u>5,086</u>	424
Airport total	25	42	29	12	23	131	624	4.8	72,331	552

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

- (a) At Terminal A, 6 of 10 gates are configured for use by United Express regional jet aircraft and are not equipped with passenger loading bridges.
- (b) At Terminal B, 30 of 42 gates (at the C-South concourse) are configured for use by United Express regional jet aircraft and are not equipped with passenger loading bridges.
- (c) All gates at Terminals D and E provide access to the Central FIS and may be used for arriving international flights.
- (d) United is the leasing airline for all gates.
- (e) United Express also operates from gates at Terminals D and E.
- (f) Air Canada and Spirit also occasionally operate from the domestic common use gates, but all of their departures and departing seats are shown at their leased gates, so the calculated average of departures and departing seats per gate slightly overstates actual gate use.
- (g) Alaska, Frontier, and WestJet routinely operate from the common use gates. Because departures and departing seats for Air Canada and Spirit are not included, the calculated average departures and departing seats per gate slightly understates actual gate use.
- (h) Gates used by all foreign flag airlines except Air Canada and WestJet, by Spirit (for all international arrivals), and by United and United Express (for limited international arrivals).

Sources: Average daily departures and seats: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Number of leased gates by airline and terminal: Houston Airport System records.

Terminal A. Terminal A, which dates from the 1969 opening of the airport, provides 750,000 square feet of building space and 25 gates configured for operations by narrowbody aircraft (FAA Airplane Design Group (ADG) III, such as the B-737 and A320) and regional jet aircraft (6 of the gates are not equipped with loading bridges and are used by United Express). The original circular flight stations were demolished and replaced by linear concourses in 1999 (A-South concourse) and 2002 (A-North concourse). Delta Air Lines, Air Canada, and United Express operate from 15 preferential use gates at the A-North concourse. American and Spirit airlines operate from seven preferential use gates at the A-South concourse. Three common use gates, one located on the A-North concourse and two located on the A-South concourse, accommodate the operations of Air Canada, Alaska, Frontier, Spirit, WestJet, and other airlines. United Airlines and United Express do not have check-in or baggage claim facilities at Terminal A (passengers check in and claim bags at Terminal B). In October 2010, a corridor was opened at the west side of the central Terminal A building, linking the north and south concourses post-security screening and providing access to the Skyway APM (discussed later).

Terminal B. Terminal B, which dates from the 1969 opening of the airport, provides 570,000 square feet of space and 42 aircraft gates, all of which are now configured and used for United Express regional jet operations. The two original flight stations at the south side were demolished and replaced in May 2013 with a new B-South concourse providing 30 gates at three piers configured for the ground-level loading of aircraft and not equipped with loading bridges. The two original flight stations at the north side remain in use and provide 12 loading-bridge-equipped gates. One of the north flight stations and a Federal Inspection Services (FIS) facility in the central terminal building accommodated international operations until the opening of Terminal D in 1990.

Terminal C. Terminal C accommodates most of United's mainline domestic operations and provides 1,150,000 square feet of space and 29 gates equipped with loading bridges for both narrowbody and widebody aircraft operations. The new 14-gate C-North concourse, providing 280,000 square feet of space, was opened in May 2017, replacing the original 13-gate, 210,000-square-foot C-North concourse, which is not now in use and is to be refurbished and redeveloped. Terminal C was opened in 1981, with Continental Airlines operating from the original C-North concourse and Texas International Airlines operating from the C-South concourse. Continental and Texas International merged in 1982. An FIS facility at the C-South concourse accommodated international operations by Continental between 1987 and 1990.

Terminal D. Terminal D, which was opened in 1990 as the Mickey Leland International Arrivals Building (IAB) to replace international facilities in Terminals B and C, provides 490,000 square feet of space and 12 aircraft gates (three of which were previously part of at the C-North concourse). Of the 12 gates, 7 can accommodate operations by widebody ADG V aircraft, such as the B-777, and 2 can accommodate operations by large widebody ADG VI aircraft, such as the A380 (although with

restrictions on the use of adjacent gate(s)). All gates are connected by sterile corridors to the Central FIS building. Terminal D is used primarily by foreign-flag airlines and is connected to the C-North concourse by walkways (post-security screening).

Central FIS. The Central FIS building, located between Terminal D and Terminal E inside the terminal loop roadway, was opened in 2005, replacing the FIS facilities at Terminal D, which were taken out of service. The Central FIS building provides 840,000 square feet of space, accommodating immigration, baggage claim, customs, and other U.S. Customs and Border Protection (CBP) functions for international passengers arriving at Terminals D and E. The Central FIS building has the capacity to process up to approximately 4,000 arriving passengers per hour. The upper level of the building also accommodates international passenger check-in (for United) and security screening functions.

Terminal E. Terminal E accommodates most of United's mainline international operations (as well as domestic operations) and provides 690,000 square feet of space and 23 gates equipped with loading bridges for operations by narrowbody and widebody aircraft (up to 6 ADG V-capable as currently configured). All gates are connected by sterile corridors to the Central FIS building and may be used for both domestic and international arriving and departing flights. Terminal E was opened in two phases in 2003 and 2004. Passenger ticketing, check-in, and security screening functions for Terminal E are provided in the Central FIS building. Baggage claim for arriving domestic passengers is provided in Terminal C. Terminal E is connected to Terminals C and D by walkways (post-security screening).

Subway ITT. Since Intercontinental's opening, an automated underground inter-terminal transportation system, now called the Subway inter-terminal train (ITT), connects the terminals (pre-security screening). The ITT tunnel also accommodates a pedestrian walkway between all terminals. Originally connecting Terminals A and B, the ITT was upgraded in 1972 and again in 1981. The ITT was extended to stations serving the airport hotel (in 1972), Terminal C (in 1981), and Terminal D (in 1990). The Terminal D station also serves Terminal E and the Central FIS building. The Subway uses WEDway vehicles operated in three-car trains, each with a capacity of 36 passengers. The trains operate at three-minute headways, providing a system capacity of 720 passengers per hour in each direction.

Skyway APM. In 1998, an elevated automated people-mover (APM) system, now called the Skyway, was opened to connect Terminals B and C (post-security screening). The Skyway was extended to a station serving Terminal D, Terminal E, and the Central FIS building in 2005, and to a station serving Terminal A in 2010. The Skyway uses Bombardier Innovia 100 vehicles operated in two-car trains, each with a capacity of 120 passengers. The trains operate at 90-second headways, providing a system capacity of 5,400 passengers per hour in each direction. The trip time between the stations serving Terminal A and Terminals D/E/FIS is approximately 5 minutes.

Airport Hotel

The airport hotel, located east of Terminal B, opened in 1972 with 350 guest rooms in the circular building now at the center of the terminal complex. The hotel was expanded with the addition of the 250-room south tower in 1982. The Airport Marriott Hotel now provides 573 guest rooms, 34 meeting rooms, and 30,000 square feet of meeting space. A \$60 million renovation program was completed in January 2016.

Automobile Parking

HAS provides 23,930 revenue-producing public automobile parking spaces at Intercontinental, 13,020 in garages adjacent to the passenger terminals and 10,910 at remote lots served by courtesy shuttles. An additional 6,130 spaces are provided for contract (employee) parking, 1,850 in the passenger terminal area and 4,280 at a remote lot (leased to United).

Public parking was originally provided on the two top levels of Terminals A and B. These levels are now used for employee parking. The C-West garage, with 4,370 spaces on eight levels, opened in 1981; the C-East garage, with 2,060 spaces on eight levels, most opened in 1998; the A/B garage, with 4,720 spaces on seven levels, opened in 2001; and the D/E garage, with 1,870 spaces on seven levels, opened in 2005. The C-West, C-East, and D/E garages are interconnected to function as one 8,300-space C/D/E garage.

Consolidated Rental Car Center

A consolidated rental car center occupying a 140-acre site east of John F. Kennedy Boulevard provides approximately 4,300 parking spaces for ready-return cars and a 95,000-square-foot customer service building. Car service and storage centers for each rental car company are also provided at the site. The rental car center accommodates the operations of all rental car companies operating at Intercontinental (Advantage, Alamo/National, Avis, Budget, Dollar/Thrifty, Enterprise, Hertz, and Payless). A fleet of shuttle buses provides service to the passenger terminals. The customer service building and shuttle buses are operated by a rental car company consortium.

Air Cargo

Air cargo buildings and aircraft parking aprons are provided at two separate areas at Intercontinental. A 67-acre Central Cargo area south of the passenger terminal complex dates from the opening of the airport and is accessed via John F. Kennedy Boulevard. A 228-acre East Cargo area, opened in 2003, is accessed via Lee Road from Will Clayton Parkway and FM 1960. The Central Cargo area provides 25 acres of aircraft parking apron. Among other tenants, FedEx operates from a 63,000 square-foot building and United processes belly cargo from a 157,000 square-foot building. The East Cargo area provides 58 acres of aircraft parking, all of it common use and managed by HAS. Cargo buildings constructed by third-party developers provide 460,000 square feet of space and are used by UPS Air Cargo, among other cargo carriers.

General Aviation

Two fixed base operators (FBOs) provide business and general aviation services at Intercontinental. Atlantic Aviation occupies a 20-acre site at the east side of Runway 15L-33R off John F. Kennedy Boulevard. Signature Flight Support occupies a 20-acre site at the west side of Runway 15R-33L. Each FBO accommodates aircraft parking aprons, a terminal building, hangars, and fuel storage facilities. Corporate tenants, most of them petroleum, oil field services, and other energy companies, lease 12 sites for corporate aviation hangars in the vicinity of the FBO facilities.

Airport Support

Airport support facilities at Intercontinental include an FAA airport traffic control tower east of the terminal complex (opened in 1997 to replace the original tower at the west side of the complex), an FAA Air Route Traffic Control Center (ARTCC, Houston Center), an FAA Terminal Radar Approach Control (TRACON) facility, other FAA air navigation facilities, three aircraft rescue and firefighting (ARFF) stations, HAS administration buildings, and HAS airfield maintenance facilities. The west tower is to be demolished.

Airline Support

Airline support facilities at Intercontinental include hangars, buildings, and other facilities for training, aircraft maintenance, catering, ground service equipment (GSE) maintenance, fuel storage and distribution, and other airline administration and operations. United operates a flight attendant training center in buildings encompassing approximately 160,000 square feet at a site adjacent to the corporate aviation facilities. United formerly operated a pilot training and simulator center at the site. The center was closed in August 2017 when the airline consolidated pilot training in Denver. ExpressJet Airlines continues to operate a flight training center at the site. United performs aircraft and GSE maintenance in facilities encompassing approximately 140,000 square feet at a site east of the terminal complex.

United is constructing a new 270,000-square-foot technical operations center to accommodate a hangar for widebody aircraft maintenance and is improving and expanding other aircraft maintenance and support facilities. The new and expanded facilities are expected to be completed in 2019.

Airline catering services are provided by Chelsea Flight Kitchen and LSG Sky Chefs from flight kitchens in buildings encompassing approximately 260,000 square feet at sites east of the terminal complex.

A fuel farm is located at the west boundary of the airport and provides storage capacity for approximately 13 million gallons. Fuel is delivered to aircraft at the passenger terminal aprons via a hydrant fueling system.

INTERCONTINENTAL CAPITAL IMPROVEMENT PROGRAM

In 2015, HAS adopted a recommended update to the master plan to guide the future development of Intercontinental. As discussed in the later section “IAH Terminal Redevelopment Program Memorandum of Agreement,” HAS and United in 2014 executed a Memorandum of Agreement providing for the construction of key elements of the master plan, in particular the new Mickey Leland International Terminal (MLIT) and other projects in the IAH Terminal Redevelopment Program (ITRP). MLIT and other ITRP elements are under design, and the scope, configuration, and programming of development has not yet been finalized.

Improvements to the Airport System that HAS expects to implement are collectively referred to as the Capital Improvement Program or CIP. Key elements of the CIP are described in the following sections. Estimated project costs and funding sources for near-term elements of the CIP, i.e., those expected to be funded through approximately 2019 and implemented through approximately 2021, are discussed in the later section, “Sources of Funds.”

IAH Terminal Redevelopment Program

Mickey Leland International Terminal. The site occupied by Terminal D, the original C-North concourse, and adjacent aircraft parking aprons will be redeveloped in phases to provide needed additional widebody aircraft-capable gates and terminal facilities. As currently programmed, MLIT will ultimately provide approximately 560,000 square feet of space and up to 16 gates capable of accommodating widebody aircraft, two of them A380-capable. All gates will be connected to the Central FIS building via sterile corridors and be capable of accommodating both domestic and international flights. MLIT will provide improved concessions, club rooms, and other passenger amenities. The MLIT construction program includes enabling utilities and other projects and new or reconstructed aircraft aprons and taxiways.

Central FIS and Check-In Expansion. The Central FIS building will be renovated and enlarged to improve arriving international passenger flows through primary and secondary processing functions and to facilitate the use of automated passport control technology. A new baggage handling system will be installed and a new baggage claim annex will be constructed to provide four additional baggage claim units for passengers being processed through the FIS. After the removal of one existing baggage claim unit during reconfiguration, 14 units will be provided, four with the capacity for A380 aircraft. A separate baggage claim area with four claim units will be provided for domestic and precleared passengers deplaning at Terminals D and E.

As currently programmed, the upper level of the Central FIS building will be enlarged and another level will be added to provide facilities for the check-in and security screening of all international passengers, including those on United, who now check in at the Central FIS building, and those on foreign-flag airlines, who now

check in at Terminal D. Passenger security screening checkpoints for international departing and connecting passengers will be consolidated.

Approximately 320,000 square feet of space will be added to Central FIS building, requiring the demolition of the D/E garage. To offset the loss of parking spaces, a new level will be added to the C-East garage, resulting in a net loss of approximately 1,500 parking spaces.

New C-North Concourse. A new C-North concourse for United has been constructed to the west of the original C-North concourse, replacing domestic gates that will be redeveloped as part of MLIT. The new concourse, opened in May 2017, provides 280,000 square feet of space on two levels (including a renovated portion of the original C-North concourse), an increase of 40,000 square feet over the original concourse. The new C-North concourse provides 14 domestic gates, an increase of one gate compared with the original concourse. The new C-North project included reconstruction of the apron and utilities and installation of equipment to allow bags to be transferred from the new concourse to the baggage sortation complex at Terminal C. The original C-North concourse is not now in use.

Infrastructure and Utilities. Improvements to utility supply and distribution systems will be constructed as required for the entire Intercontinental terminal complex as well as to enable implementation of MLIT and other ITRP elements. Roadway and signage improvements and other landside projects will also be implemented as part of ITRP.

HAS is investigating options for building a new electrical power generating plant and distribution system to serve the Intercontinental terminal complex through a design, build, operate, and maintain (DBOM) contract, with financing to be provided from private sources. HAS believes that the development of new electrical infrastructure through such a contracting approach would result in reduced electricity costs. However, no such contracting approach (or related reductions in electricity costs) is assumed for this report.

Other Capital Improvement Program Elements

Airfield projects in the CIP include the rehabilitation and replacement of taxiway pavement as it reaches the end of its design life. Planned improvements to Terminal A include the construction of additional loading-bridge-equipped gates at the A-North concourse to replace a covered walkway now used for the ground loading of regional airline aircraft, upgrades to building systems, and other modernization projects. Most other terminal projects in the CIP involve the renewal, replacement, and upgrading of electrical distribution, baggage handling, baggage screening, and other systems. Similarly, projects to upgrade the Skyway APM and Subway ITT systems are planned. (As described in the later section, "Airline Agreements," United largely has responsibility for capital improvements at Terminals B, C, and E.)

Parking, ground transportation, and roadway projects in the CIP include construction of the ecopark2 economy lot off Will Clayton Parkway (opened in June 2016), installation of space locator technology in the parking garages, and rehabilitation of structures and pavement.

Other CIP projects include renovation of the Airport Marriott Hotel (completed in January 2016), construction of an aircraft parking apron for an expanded United aircraft maintenance facility (planned for relocation from Hobby in 2019), acquisition of an off-airport parking facility (to be used for airport employee parking), construction of a new consolidated concession distribution facility, and expansion of the fuel farm.

WILLIAM P. HOBBY AIRPORT

William P. Hobby Airport was developed in the 1940s and 1950s as Houston Municipal Airport. Regularly scheduled international service started at the airport in 1946, with nonstop DC-4 flights to Havana (by Chicago & Southern Airlines) and to Mexico City (by Pan American World Airways). By 1950, Hobby was an established gateway to Latin America. In 1957, KLM Royal Dutch Airlines started DC-7 service to Amsterdam (via Montreal), the South's first service to Europe. The airport was renamed Houston International Airport in 1954, then William P. Hobby Airport in 1967 in honor of the former Texas Governor and publisher of the former Houston Post newspaper. Hobby accommodated all domestic and international airline service in the Houston region until commercial airline service was transferred to Intercontinental in 1969.

In 1971, Southwest started intrastate airline service from Hobby to Dallas Love Field and San Antonio International Airport. Following deregulation of the U.S. airline industry in 1978, other airlines added service and, by the mid-1980s, airline service to many domestic destinations was again provided from Hobby. In the 1970s, 1980s, and 1990s, American, Delta, and United (or predecessor airlines) all served Hobby at times. Hobby is now an important airport in Southwest's system. In FY 2017, Hobby accounted for 24% of enplaned passengers and 31% of originating passengers at the City's two commercial service airports.

Hobby is also the principal business and general aviation airport serving the region. In FY 2017, general aviation accounted for 29% of aircraft operations (landings and takeoffs) at the airport. Hobby is located on a constrained 1,500-acre site approximately 11 miles southeast of central Houston and is accessed via local streets from I-45 and I-610 and the Sam Houston Parkway (Beltway 8). Airport property is generally bounded by Airport Boulevard to the north, Monroe Road to the east, Braniff Avenue to the south, and Telephone Road (SH 35) to the west.

Airfield

Hobby has four intersecting runways and associated taxiways. Runway 4-22 and Runway 12R-30L are used primarily for airline operations (both 7,602 feet long and

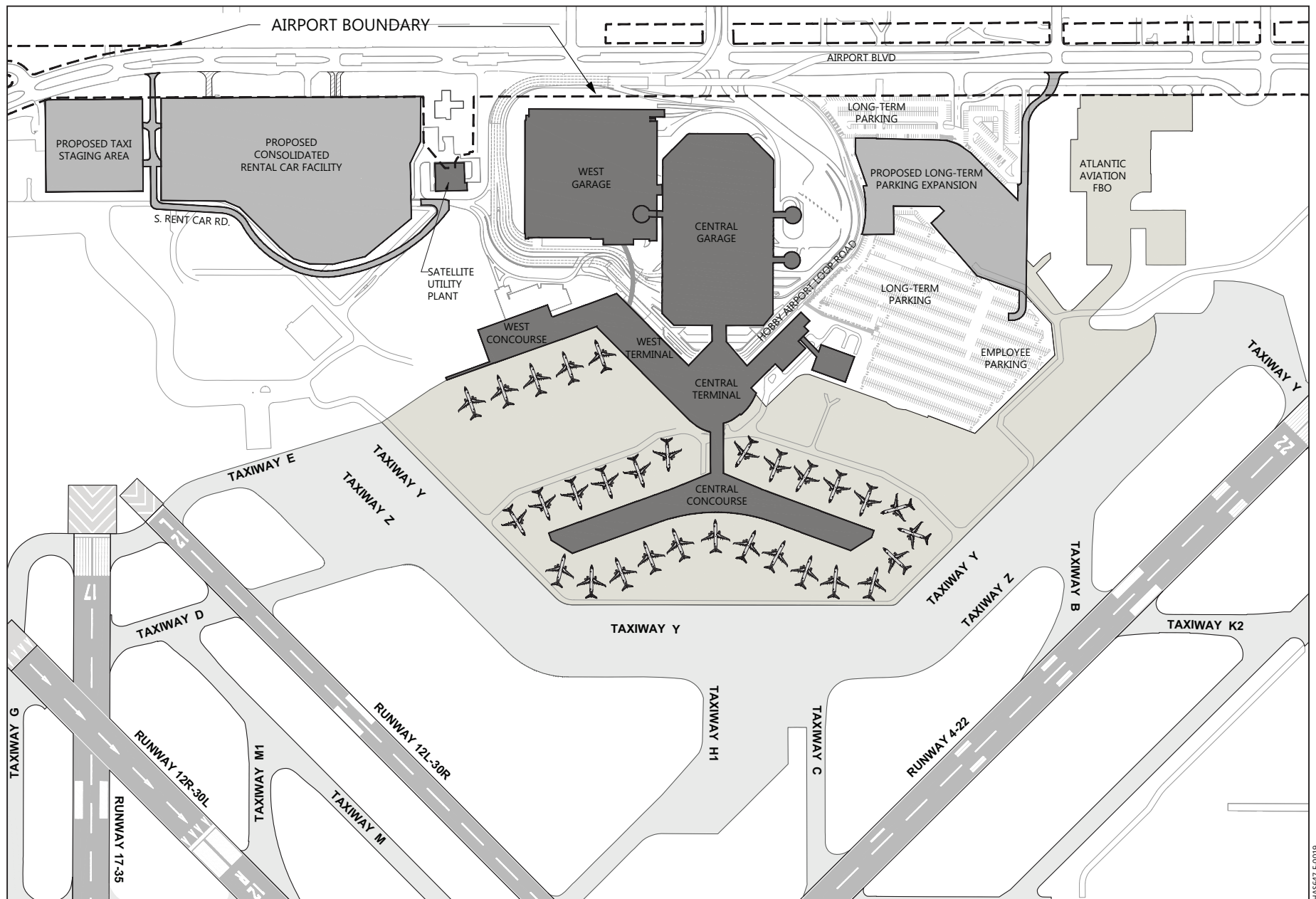
150 feet wide). Runway 12L-30R (5,148 feet long and 100 feet wide) and Runway 17-35 (6,000 feet long and 150 feet wide without paved shoulders) are used primarily for general aviation aircraft operations.

Passenger Terminals

Figure 2 shows the Hobby terminal area. The 1954 terminal at Hobby was rebuilt and expanded in 2008 with the opening of the Central Concourse, then expanded again with the opening of international facilities in the West Terminal and West Concourse in October 2015.

Central Terminal and Concourse. The Central Terminal and Central Concourse provide 650,000 square feet of space on three levels for domestic airline operations. The lower (arrivals) level provides five domestic baggage claim devices; baggage handling equipment; public circulation space; airline operations space; mechanical, electrical, and plumbing equipment; and HAS office space. The upper (departures) level provides space for passenger check-in (for airlines other than Southwest), security screening, holdrooms, restrooms, public circulation, concessions, and other passenger amenities. The Central Concourse provides 25 gates for ADG III aircraft, with holdrooms averaging 2,400 square feet. A mezzanine level primarily provides airline office space.

West Terminal and Concourse. The West Terminal and West Concourse (together commonly referred to as the international terminal) provide 285,000 square feet of space on two levels for international airline operations, as well as passenger check-in for Southwest (domestic and international). The lower (arrivals) level provides FIS and other facilities for arriving international passengers (with three baggage claim devices), airline operations, and other support space. The FIS facility has the capacity to process up to approximately 800 arriving passengers per hour. The upper (departures) level provides space for passenger check-in (for Southwest), security screening, holdrooms, restrooms, public circulation, concessions, and other passenger amenities for five ADG III aircraft gates. The West Terminal is connected to the Central Terminal (pre-security screening) and the West Concourse is connected to the Central Concourse (post-security screening).



LEGEND

-
 Existing facilities
 Proposed facilities

Figure 2
TERMINAL AREA
 William P. Hobby Airport
 December 2017

HAS647 F-0019

Table 2 shows the distribution and use of the 30 gates at Hobby by airline.

Table 2
GATE DISTRIBUTION AND USE BY AIRLINE
 William P. Hobby Airport
 July 2017

	Number of gates			Average daily scheduled departures		Average daily scheduled departing seats	
	Concourse			Number	Per gate	Number	Per gate
	Central (domestic)	West (international)	Total				
Southwest Airlines	21	4	25	157	6.3	23,480	939
Delta Air Lines	1	--	1	6	6.4	620	620
American Airlines	1	--	1	7	6.9	516	516
Common use (a)	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	0.8	<u>323</u>	108
Airport total	25	5	30	173	5.8	24,939	831

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

(a) Gates routinely used by JetBlue and Southwest. Southwest's departures and departing seats are not included, so the calculated average numbers of departures and departing seats per gate understate actual gate use.

Sources: Average daily departures and seats: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed May 2016.
 Number of leased gates by airline and terminal: Houston Airport System records.

Parking and Rental Car

HAS provides 6,530 revenue-producing public automobile parking spaces at Hobby, 2,670 in the four-level central parking (Red) garage adjacent to the Central Terminal, 2,930 in the adjacent four-level west (Blue) garage (opened in June 2016), and 930 in an economy lot within walking distance of the terminal. A contract (employee) parking lot provides 870 spaces.

Rental car companies operate from sites on airport property (Alamo/National, Avis, and Budget) and off airport (Advantage, Dollar/Thrifty, Enterprise, and Hertz). All sites are served by courtesy shuttles.

General Aviation

Five FBOs provide aircraft parking, hangar rentals, fueling, maintenance and repair, passenger services, and other services for business and general aviation customers: Atlantic Aviation (from a leasehold of approximately 9 acres), Jet Aviation (25 acres), Million Air (23 acres), Signature Flight Support (25 acres), and Wilson Air Center (15 acres). A sixth FBO, to be developed by Galaxy FBO, a division of Black Forest

Ventures, has been approved. Approximately 220 general aviation aircraft are based at Hobby. Other aviation businesses provide aircraft charter and management services. Five corporate tenants operate from hangars on leaseholds totaling 14 acres. The Houston Police Department operates a fleet of 13 helicopters and fixed-wing aircraft from a 3-acre facility at Hobby.

Airline and Airport Support

Southwest operates an aircraft maintenance base on a 15-acre site at Hobby and is constructing a new 240,000-square-foot hangar at the site, expected to open in 2019. United also operates a maintenance base (inherited from Texas International, which was headquartered at Hobby) on a 2-acre site. Other airline support facilities include a Southwest air cargo and aircraft provisioning building. Airport support facilities include an FAA airport traffic control tower, an ARFF station, a central utility plant, a fuel farm, and HAS airport operations and administration facilities. The 1940 terminal building now houses an aviation museum.

HOBBY CAPITAL IMPROVEMENT PROGRAM

HAS completed an update to the master plan for Hobby in 2015. Key airfield projects in the long-term development plan for Hobby include the relocation, widening, and extension of Runway 12L-30R from a general aviation runway to a full air-carrier-capable runway 8,000 feet long and 150 feet wide with a full-length parallel taxiway. Land is to be acquired at the southeast end of the extended runway for the runway protection zone and air navigation aids are to be relocated. Following the construction of Runway 12L-30R, Runway 17-35 will be decommissioned. Construction of the extended runway is not planned until after 2023, but planning and environmental studies are included in the CIP. Other airfield projects in the CIP are the reconstruction of Runway 12R-30L (not expected until after 2023) and the rehabilitation of taxiway and apron pavement.

The long-term Hobby development plan provides for expansion of the international concourse and apron to add up to seven gates (for a total of 12 international gates). Construction is not planned to begin until after 2023. Terminal projects included in the CIP are construction of a canopy over the curbside roadways and various rehabilitation projects.

Construction of a consolidated rental car center is included in the CIP. Subject to agreement with the rental car companies on scope and funding, the center would include a customer service building, a parking structure for ready and return spaces, and a quick turnaround area.

ELLINGTON AIRPORT

Ellington Airport, named in honor of Lieutenant Eric L. Ellington, an army aviator killed in an air crash in 1913, originated as a flight training base during World War I and was used as an advanced training base for bomber pilots and navigators during World War II. As Ellington Air Force Base, the airfield was the base for U.S. Air Force

and U.S. Air Force Reserve units in the 1950s through the 1970s before being deactivated as an Air Force base in 1976.

The airfield was acquired by the City in 1984 to be operated as a joint military-civilian facility called Ellington Field as part of the Airport System and was renamed Ellington Airport in 2009. Military activities by the Texas Air National Guard (TxANG), other military reserve units, and the U.S. Coast Guard continue at the cantonment known as the Ellington Field Joint Reserve Base.

Since the 1960s, the National Aeronautics and Space Administration (NASA) has operated facilities at Ellington for astronaut flight training and other aviation activities connected with the Lyndon B. Johnson Space Center, located 8 miles southeast of Ellington. The military cantonment and NASA facilities are outside the HAS property line and not subject to HAS leases.

Ellington occupies approximately 2,300 acres and is located 15 miles southeast of central Houston. Access is provided via I-45 and the Sam Houston Parkway (Beltway 8). Limited commercial passenger airline service was provided at Ellington by Continental Express (to Intercontinental) until 2004. UPS Air Cargo conducted its Houston operations at Ellington until 2003, when it relocated to Intercontinental (at the new East Cargo area). No commercial passenger or cargo airline service is currently provided or foreseen at Ellington.

Airfield

The airfield's three runways include two parallel runways, Runway 17R-35L (9,000 feet long and 150 feet wide) and Runway 17L-35R (4,609 feet long and 80 feet wide), separated by 2,600 feet centerline-to-centerline. Crosswind Runway 4-22 is 8,001 feet long and 150 feet wide. Approximately 100,000 aircraft operations are conducted annually at the airport, approximately 26% military, 8% NASA, and 66% business and general aviation.

General Aviation

Approximately 200 general aviation aircraft are based at Ellington. Signature Flight Support provides full FBO services for based and itinerant aircraft, including fueling, airframe and engine repair and maintenance, and aircraft storage, from a 35,000-square-foot building. A flight school provides training using a fleet of 12 aircraft. HAS leases 90 T-hangar units and tiedown parking. Three corporate hangars provide storage for high-performance corporate aircraft. Other commercial facilities at Ellington include a 15-acre site leased by Orion Group for an office building and a City-owned office building. The Lone Star Flight Museum, (relocated from Galveston and opened in September 2017) is housed in a 140,000-square building on 13-acre site.

Airport Support

Airport support facilities at Ellington include an airport traffic control tower, an ARFF station, fuel storage facilities, a deicing pad, and HAS airfield maintenance and

administration facilities. The airport traffic control tower is owned by HAS and operated by TxANG. A replacement tower is under construction and scheduled to be completed in 2019. The ARFF station is owned by HAS and operated by TxANG with TxANG equipment.

Houston Spaceport

In June 2015, the FAA awarded HAS a license making Ellington the tenth commercial spaceport in the nation. With this license, Ellington is a potential launch and landing site for suborbital, reusable space vehicles to be launched from the airport's runways (rather than vertically). In November 2015, HAS and NASA executed an umbrella agreement under which NASA will provide access to capabilities at the Johnson Space Center to support the development of future space flight at the Houston Spaceport. No spaceflight operations are currently scheduled.

ELLINGTON CAPITAL IMPROVEMENT PROGRAM

HAS completed an update to the master plan for Ellington in 2015. Projects in the long-term development plan (not expected to be implemented until after 2023) include the extension of Runway 17R-35L to 10,000 feet, land acquisition for a runway protection zone for the extended runway, construction of a full-length taxiway parallel to Runway 4-22, reconfiguration of other airfield facilities, construction of additional general aviation hangars, and development of infrastructure to enable future Houston Spaceport and other commercial development. Near-term projects include new control tower construction, roadway improvements, and airfield pavement rehabilitation.

Available land at Ellington would allow eventual development of facilities for research, engineering, manufacturing, and related aerospace activities at a 400-acre campus. As part of the first phase of campus development, in 2015, the City acquired a light manufacturing and office building from the Boeing Company. HAS renamed the building the Houston Aerospace Support Center and is modifying it to provide 53,000 square feet of space for offices, laboratories, and fabrication facilities.

AIRLINE TRAFFIC ANALYSIS

AIRPORT SYSTEM SERVICE REGION

The primary region served by the three Houston Airport System airports, as defined for purposes of this report, is the nine-county, 8,400-square-mile Houston-The Woodlands-Sugar Land Metropolitan Statistical Area (Houston MSA) shown on Figure 3. The Houston MSA is also referred to as Greater Houston.

The secondary service region for Intercontinental and Hobby is defined by the location of (and airline service provided at) the nearest commercial service airports. As shown on Figure 3, the nearest such airports are those serving Austin and San Antonio (both classified as medium air traffic hubs by the FAA). Dallas Fort Worth International Airport, 265 miles north of central Houston, is the nearest airport classified as a large air traffic hub.

DEMOGRAPHIC AND ECONOMIC PROFILE

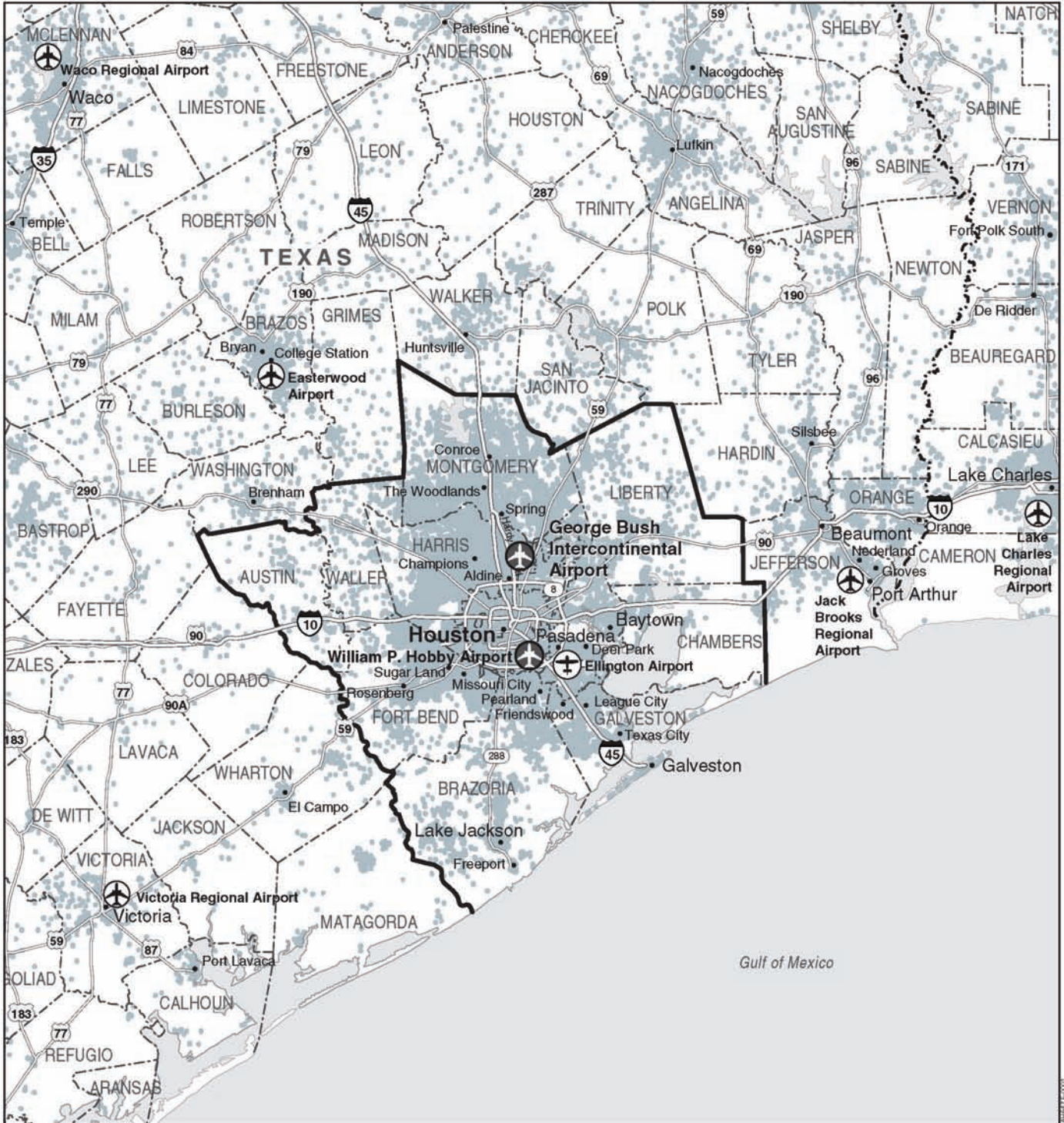
The population and economy of an airport's service region are the primary determinants of the numbers of originating passengers using the airport. Numbers of connecting passengers are primarily determined by airline decisions to provide connecting service. As discussed in later sections, in FY 2017, approximately 53% of the enplaned passengers at the two HAS airports combined were originating and 47% were connecting between flights.*

Historical Socioeconomic Data








Table 3 shows historical data on population, per capita personal income, nonagricultural employment, and unemployment rates for the Houston MSA, the State of Texas, and the nation. Table 4 shows population data for the 20 most populous U.S. MSAs.

Population. Between 2000 and 2016, the population of the Houston MSA increased an average of 2.3% per year, compared with an average increase of 0.9% per year for the nation as a whole. In 2016, the Houston MSA was the fifth most populous metropolitan area in the nation. Between 2000 and 2016, the population of the Houston MSA increased 22.2%, by far the largest percentage increase among large MSAs (8.6% on average). Much of the population increase was the result of

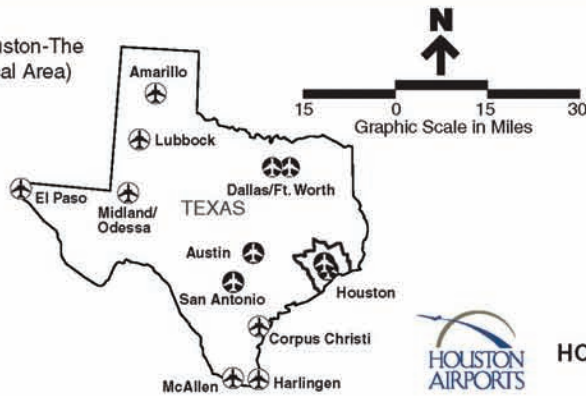
*Estimates of originating and connecting passengers (and originating percentages) presented in this report differ from those presented in HAS statistical reports in part because of inconsistencies in the way some airlines have historically reported passengers connecting "off-line" (i.e., to or from the flights of a different airline). In some cases, these off-line connecting passengers have been reported as originating passengers. For the calculations presented in this report, all passengers connecting between flights, whether on the same or a different airline, are recorded as connecting passengers.



LEGEND

-  Houston Airport System Service Region (Houston-The Woodlands-Sugar Land Metropolitan Statistical Area)
-  Population density:
1 dot represents 100 people
-  Large or medium hub airport (as defined by the FAA for 2013)
-  Other commercial service airport
-  Non commercial service airport
-  State boundary
-  County boundary

Source: U.S. Census data, 2010.



Road miles from Houston to:	
Austin (AUS)	157
Baton Rouge (BTR)	275
Corpus Christi (CRP)	219
Dallas (DAL)	244
Dallas/Ft. Worth (DFW)	265
San Antonio (SAT)	201



Figure 3
HOUSTON AIRPORT SYSTEM SERVICE REGION

Table 3
HISTORICAL SOCIOECONOMIC DATA

	Population (thousands)			Per capita personal income (2016 dollars)			Nonagricultural employment (thousands)			Unemployment rate		
	MSA	State of	United	MSA	State of	United	MSA	State of	United	MSA	State of	United
		Texas	States		Texas	States		Texas	States		Texas	States
1990	3,751	17,057	249,623	\$36,712	\$31,890	\$35,975	1,774	7,099	109,527	5.1%	6.3%	5.6%
2000	4,718	20,944	282,162	46,300	39,228	42,652	2,271	9,429	132,019	4.2	4.3	4.0
2001	4,818	21,320	284,969	46,242	39,835	42,743	2,310	9,511	132,074	4.6	5.0	4.7
2002	4,937	21,690	287,625	44,072	38,961	42,445	2,304	9,413	130,628	6.0	6.4	5.8
2003	5,036	22,031	290,108	43,972	38,856	42,643	2,290	9,367	130,318	6.7	6.7	6.0
2004	5,133	22,394	292,805	45,127	38,817	43,600	2,307	9,494	131,749	6.1	5.9	5.5
2005	5,234	22,778	295,517	47,308	40,300	44,123	2,373	9,738	134,005	5.6	5.4	5.1
2006	5,424	23,360	298,380	49,495	41,677	45,411	2,472	10,064	136,398	5.0	4.9	4.6
2007	5,541	23,832	301,231	50,556	42,401	46,094	2,574	10,393	137,936	4.2	4.3	4.6
2008	5,676	24,309	304,094	53,231	44,070	45,796	2,630	10,607	137,170	4.7	4.8	5.8
2009	5,826	24,802	306,772	48,667	41,051	44,051	2,559	10,306	131,233	7.6	7.6	9.3
2010	5,949	25,246	309,347	48,979	41,706	44,332	2,555	10,339	130,275	8.3	8.1	9.6
2011	6,061	25,657	311,722	50,700	43,560	45,305	2,621	10,570	131,842	7.8	7.8	8.9
2012	6,187	26,094	314,112	54,020	45,136	46,290	2,726	10,880	134,104	6.6	6.7	8.1
2013	6,334	26,506	316,498	52,522	44,712	45,839	2,828	11,207	136,393	6.0	6.2	7.4
2014	6,490	26,957	318,857	54,534	46,447	47,106	2,925	11,550	139,042	4.9	5.1	6.2
2015	6,657	27,469	321,419	54,538	47,608	48,798	2,989	11,838	141,865	4.6	4.5	5.3
2016	6,772	27,863	323,128	51,913	47,636	49,571	3,001	12,028	144,306	5.2	4.6	4.9
	Average annual percent increase (decrease)											
1990-2000	2.3%	2.1%	1.2%	2.3%	2.1%	1.7%	2.5%	2.9%	1.9%			
2000-2016	2.3	1.8	0.9	0.7	1.2	0.9	1.8	1.5	0.6			

MSA = Houston-The Woodlands-Sugar Land Metropolitan Statistical Area comprising the nine counties shown on Figure 2 for all years.

Notes: Population numbers are estimated as of July 1 each year. Income and employment numbers and unemployment rates represent annual averages. Calculated percentages may not match those shown because of rounding.

Sources: Population: U.S. Department of Commerce, Bureau of the Census website, www.census.gov, accessed August 2017.
Income: U.S. Department of Commerce, Bureau of Economic Analysis website, www.bea.gov, accessed December 2017.
Employment: U.S. Department of Labor, Bureau of Labor Statistics website, www.bls.gov, accessed August 2017.

in-migration from other parts of the nation and the world. Of the Houston MSA's population of approximately 6.7 million in 2016, 1.6 million were foreign-born, with 63% of them being from Latin America and 26% from Asia. The high proportion of immigrants contributes to the ethnic and cultural diversity of the Houston MSA and to the demand for airline travel to visit friends and relatives as well as international business travel.

Table 4
**POPULATION IN THE MOST POPULOUS
 U.S. METROPOLITAN STATISTICAL AREAS**

Metropolitan Statistical Area	Population (thousands)			Percent increase (decrease)	
	2000	2007	2016	2000-2007	2007-2016
New York-Newark-Jersey City	18,353	18,901	20,154	3.0%	6.6%
Los Angeles-Long Beach-Anaheim	12,401	12,693	13,310	2.4	4.9
Chicago-Naperville-Elgin	9,118	9,452	9,513	3.7	0.6
Dallas-Fort Worth-Arlington	5,196	6,157	7,233	18.5	17.5
Houston-The Woodlands-Sugar Land	4,718	5,541	6,772	17.5	22.2
Washington-Arlington-Alexandria	4,822	5,373	6,132	11.4	14.1
Philadelphia-Camden-Wilmington	5,693	5,913	6,071	3.9	2.7
Miami-Fort Lauderdale-West Palm Beach	5,027	5,465	6,066	8.7	11.0
Atlanta-Sandy Springs-Roswell	4,282	5,268	5,790	23.0	9.9
Boston-Cambridge-Newton	4,402	4,504	4,794	2.3	6.5
San Francisco-Oakland-Hayward	4,137	4,202	4,679	1.6	11.4
Phoenix-Mesa-Scottsdale	3,279	4,176	4,662	27.4	11.6
Riverside-San Bernardino-Ontario	3,278	4,049	4,528	23.5	11.8
Detroit-Warren-Dearborn	4,458	4,457	4,298	(0.0)	(3.6)
Seattle-Tacoma-Bellevue	3,052	3,307	3,799	8.3	14.9
Minneapolis-St. Paul-Bloomington	2,982	3,204	3,551	7.5	10.8
San Diego-Carlsbad	2,825	2,976	3,318	5.3	11.5
Tampa-St. Petersburg-Clearwater	2,404	2,711	3,032	12.8	11.8
Denver-Aurora-Lakewood	2,194	2,453	2,853	11.8	16.3
St. Louis	2,702	2,806	2,807	3.9	0.0

Notes: Population numbers are estimates as of July 1 of each year. Calculated percentages may not match those shown because of rounding.

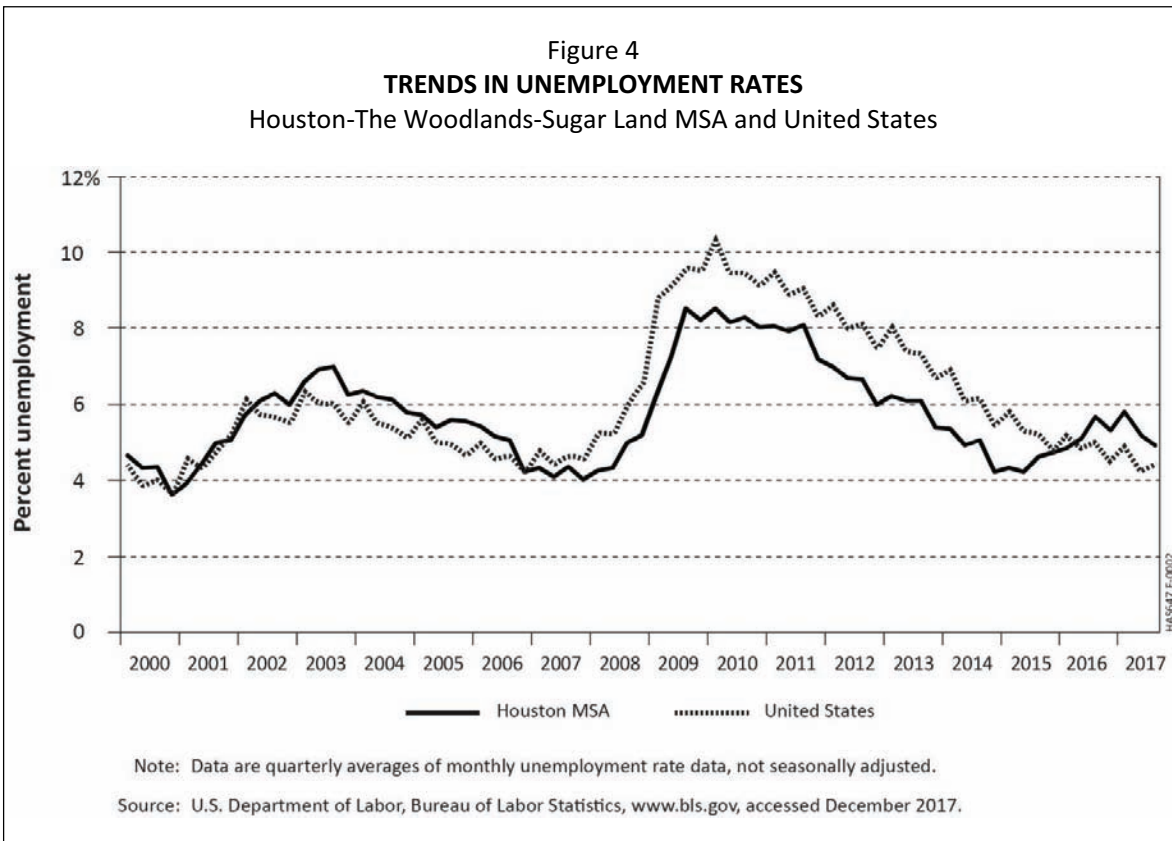
Source: U.S. Department of Commerce, Bureau of the Census website, www.census.gov, accessed August 2017.

Per Capita Personal Income. Per capita personal income in the Houston MSA in 2016, (\$51,913) was 4.7% higher than the national average (\$49,571). Between 2000 and 2016, per capita personal income in the Houston MSA increased an average of 0.7% per year, compared with an average increase of 0.9% per year in the nation. The Houston MSA's high average personal income is magnified by a cost of living advantage relative to other metropolitan areas. According to the Council for

Community and Economic Research Cost of Living Index (published in May 2017), the Houston MSA ranks 16th in living costs among the top 20 most populous metropolitan areas.

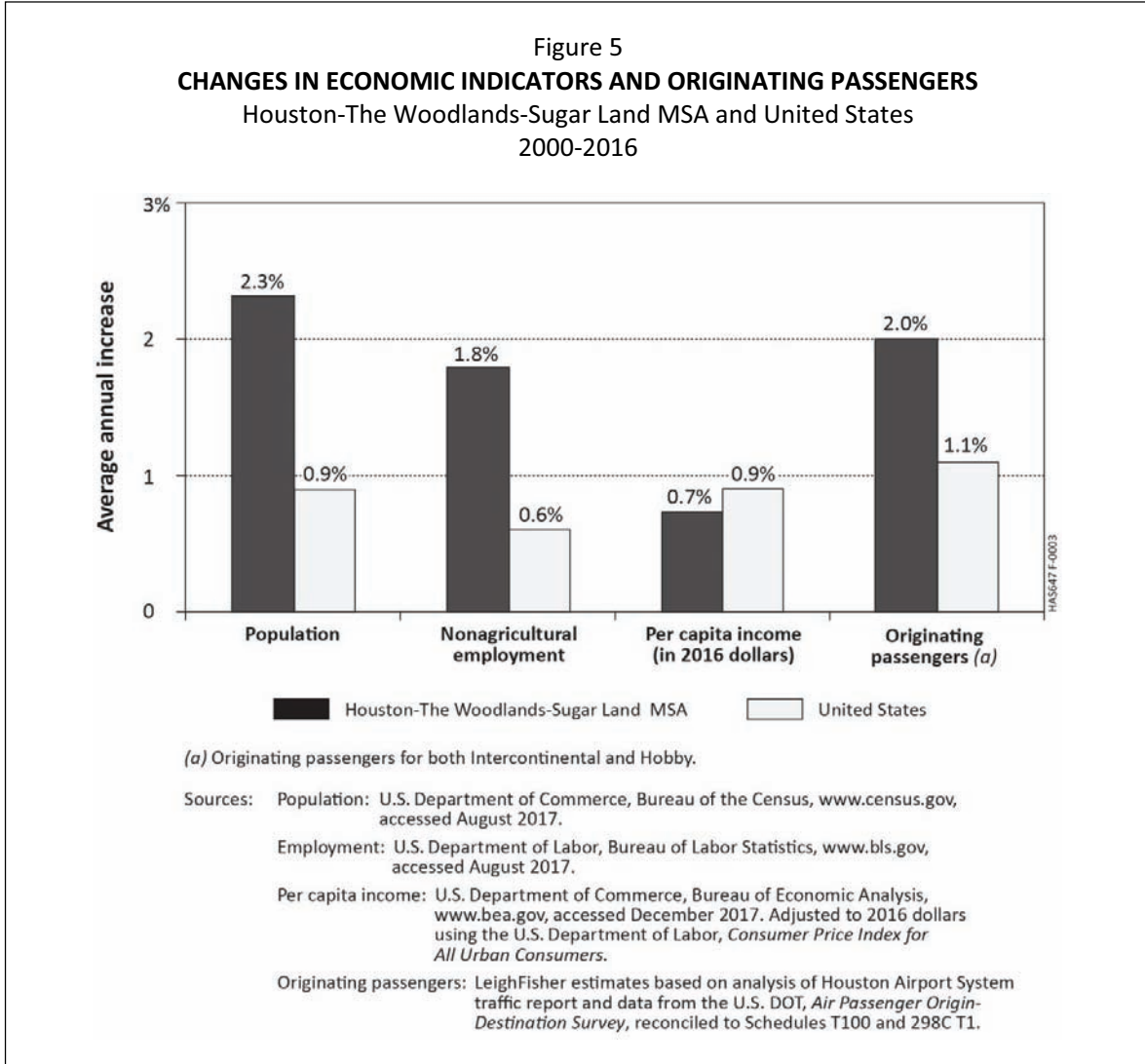
Nonagricultural Employment. Between 2000 and 2016, nonagricultural employment in the Houston MSA increased an average of 1.8% per year, compared with an average increase of 1.5% in the nation as a whole. By 2016, employment in the Houston MSA was 16.6% higher than the 2007 (pre-recession) number, while employment nationwide was 4.6% higher than the pre-recession number.

Unemployment Rates. As shown on Figure 4, from the 2008-2009 recession through mid-2015, the unemployment rate was consistently lower in the Houston MSA than in the nation as a whole. Between mid-2015 and early 2017, the unemployment rate increased in the Houston MSA while continuing to decrease in the nation. Since early 2017, the MSA rate has again decreased. In October 2017, the unemployment rate in the Houston MSA was 4.1% compared with 3.9% in the nation.



Historical Socioeconomic Indicators and Enplaned Passengers

Figure 5 presents a comparison of historical growth rates for population, nonagricultural employment, per capita income, and originating passengers in the Houston MSA and the United States between 2000 and 2016. Over the 16 year-period, the number of originating passengers at Intercontinental and Hobby combined increased an average of 2.0% per year, similar to the 1.8% average annual increase in employment in the Houston MSA.



Global Energy Capital

Houston is recognized as the national and international center for virtually every sector of the energy industry: exploration, drilling, oil field services, production, pipeline, refining, engineering, technology, and petrochemical manufacturing. Many of the Houston MSA's leading employers are energy companies and employment in the oil,

gas, and supporting sectors is central to the MSA economy. Houston's role as a global energy capital has created economic links and associated demand for airline travel between the Houston MSA and energy producing countries around the world.

Dominance in the energy sector has been a key driver of Houston's economic success over the decades, but, for better or worse, such dominance makes the economy of the Houston MSA highly dependent on the price of oil and gas. The decrease in energy prices and the resulting collapse of oil and gas well drilling in 1982 led to a 5-year downturn in the Houston economy and the loss of 13.3% of overall employment.

Drilling activity again decreased in the early 1990s and early 2000s, although the Houston economy recovered relatively quickly each time. More recently, the boom in U.S. oil production made possible by horizontal drilling, hydraulic fracturing, and other extraction technologies, together with high oil prices, underpinned strong economic growth in 2011 through 2013 and helped the Houston economy recover from the 2008-2009 recession faster than the rest of the nation.

The precipitous decrease in the price of oil between mid-2014 and early 2016 again drastically reduced oil exploration and drilling. The price of West Texas intermediate crude oil, a common benchmark, decreased from a peak of \$107 per barrel in June 2014 to a low of \$26 per barrel in February 2016 then increased to \$57 in December 2017. Paralleling this price fluctuation, the number of active North American drilling rigs decreased from a high of 2,360 in September 2014 to 720 in February 2016 then increased to 1,151 in December 2017. The decrease in oil drilling has had, and continues to have, negative consequences for many sectors of the Greater Houston economy.

Although subject to the business cycles of the energy industry, the Houston economy has proved resilient to past downturns. Between 2001 and 2016, real domestic product for the Houston MSA increased 54% (compared with an average of a 29% increase for all U.S. MSAs), making the Houston MSA the fourth fastest expanding economy among the 30 largest U.S. MSA economies as measured by GDP (after Austin-Round Rock, San Jose-Sunnyvale-Santa Clara and Portland-Vancouver-Hillsboro). The decrease in oil prices between 2014 and 2016 led to layoffs by oil services and other energy and service companies and a loss of 32,500 jobs in the oil and gas industries. Nevertheless, overall employment in the Houston MSA increased by 75,700 jobs between 2014 and 2016.

Similarly, originating passenger numbers at Intercontinental and Hobby, while generally correlated with employment trends over the years, have not been particularly sensitive to the business cycles of the energy industry.

Employment by Industry Sector

Table 5 shows the distribution of nonagricultural employment by industry sector in the Houston MSA and the United States. Relative to the national average, employment in the Houston MSA is high in the mining, logging, and construction sector, which includes much oil and gas industry employment. According to U.S. Department of Labor, Bureau of Labor Statistics data, in 2016 the oil and gas industry directly accounted for approximately 5% of the Houston MSA's nonagricultural workforce. Much of the employment in the professional and business services sector in the Houston MSA, such as that in engineering, accounting, and consulting, supports the energy industry.

Manufacturing employment in the Houston MSA is mainly in petroleum refining, petrochemicals, fabricated metals, machinery, and other energy-related industries. Reduced oil and natural gas prices have benefitted the refining and petrochemical industries as the costs of feedstock have decreased and profit margins have increased. The low cost of oil and natural gas has triggered the construction of new plants for petrochemical manufacturing, liquefaction of natural gas for export, oil refining, and natural gas processing in the Houston MSA and elsewhere along the Gulf Coast. These construction projects have collectively accounted for approximately \$50 billion in investment.

Table 6 lists the top 40 private-sector employers in the Greater Houston region. Many large Greater Houston employers are oil, gas, and petrochemical companies or closely related providers of professional, business, engineering, and technical services. The Houston MSA is the headquarters of 20 companies on the 2017 *Fortune* 500 list of largest U.S. companies (ranking the Houston MSA fourth after the New York-Newark-Jersey City, Chicago-Naperville-Elgin, and Dallas-Fort Worth-Arlington MSAs).

Offsetting the reliance of the Houston economy on the energy industry are employers in the education and health; trade, transportation, and utilities; and technology sectors. The Texas Medical Center is the world's largest medical complex and is home to 59 member institutions, among them the University of Texas MD Anderson Cancer Center, the Baylor College of Medicine, and the Texas Heart Institute. Ten of the top 40 employers listed in Table 6 are providers of healthcare or education in medicine and life sciences.

Table 5
DISTRIBUTION OF NONAGRICULTURAL EMPLOYMENT BY INDUSTRY SECTOR
 Houston-The Woodlands-Sugar Land MSA and United States

	Houston-The Woodlands-Sugar Land MSA				United States			
	2000	2007	2011	2016	2000	2007	2011	2016
Services								
Professional and business	14.3%	15.2%	15.2%	15.6%	12.6%	13.0%	13.1%	14.0%
Education and health	9.8	10.9	12.0	12.7	11.5	13.5	15.3	15.7
Leisure and hospitality	8.1	8.9	9.3	10.4	9.0	9.7	10.1	10.8
Other	<u>4.0</u>	<u>3.6</u>	<u>3.5</u>	<u>3.6</u>	<u>3.9</u>	<u>4.0</u>	<u>4.1</u>	<u>3.9</u>
Subtotal services	36.2%	38.6%	40.0%	42.3%	37.1%	40.2%	42.7%	44.4%
Trade, transportation, and utilities	21.7	20.5	20.7	20.3	19.9	19.3	19.0	18.9
Government	13.6	13.6	14.1	13.4	15.7	16.1	16.8	15.4
Manufacturing	10.2	9.0	8.6	7.4	13.1	10.1	8.9	8.6
Financial activities	5.9	5.7	5.3	5.2	5.9	6.1	5.8	5.7
Mining, logging, and construction	10.2	11.1	9.9	10.2	5.6	6.1	4.8	5.1
Information	<u>2.1</u>	<u>1.5</u>	<u>1.2</u>	<u>1.1</u>	<u>2.7</u>	<u>2.2</u>	<u>2.0</u>	<u>1.9</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total employment (thousands)	2,271	2,574	2,621	3,001	132,019	137,936	131,842	144,306

MSA = Metropolitan Statistical Area.

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

Source: U.S. Department of Labor, Bureau of Labor Statistics, www.bls.gov, accessed August 2017.

Table 6
GREATER HOUSTON TOP EMPLOYERS
2017

More than 20,000 employees		10,000-19,999 employees	
Company	Type of business	Company	Type of business
H-E-B	Retail grocer	ExxonMobil	Oil and gas
Houston Methodist	Education and healthcare	HCA	Healthcare
Memorial Hermann Health System	Healthcare	Kroger	Retail grocer
UT MD Anderson Cancer Center	Healthcare	Landry's	Hospitality services
Walmart Stores	Retail	Schlumberger Limited	Oil and gas
		Shell Oil Company	Oil and gas
		United Airlines	Airline
		UT Medical Branch Health System	Education and healthcare
5,000-9,999 employees		5,000-9,999 employees (cont'd.)	
Company	Type of business	Company	Type of business
Academy Sports & Outdoors	Retail	Hewlett Packard Enterprise	Information technology
ARAMARK Corp.	Hospitality services	Home Depot	Retail
Archdiocese of Galveston-Houston	Religion-based services	Houston Community College	Education
AT&T	Telecommunications	JPMorgan Chase	Financial services
Baker Hughes (a)	Oil and gas	Lone Star College	Education
Baylor College of Medicine	Education	Macy's	Retail
BP America	Oil and gas	National Oilwell Varco (a)	Oil and gas
CenterPoint Energy (a)	Utilities	Pappas Restaurants, Inc.	Hospitality services
Chevron	Oil and gas	S&B Engineers and Constructors	Engineering
CHI St. Luke's Health	Healthcare	TechnipFMC	Oil and gas
Dow Chemical Company	Chemicals	Texas Children's Hospital	Healthcare
Fluor Corporation	Engineering	University of Houston	Education
GE Oil and Gas	Oil and gas	UT Health Science Center at Houston	Education and healthcare
Harris Health System	Healthcare		

Note: Excludes government employers (except hospitals, universities and research centers) and fast food chains. A merger between Baker Hughes and GE Oil and Gas was completed in July 2017.

(a) Fortune 500 company (based on 2016 revenue) headquartered in Houston.

Source: Greater Houston Partnership Research, June 2017.

The Port of Houston (the Port) is a major generator of economic activity in the Houston MSA. The Port ranked first in the nation by foreign export and import freight tonnage in 2016 according to the World Institute for Strategic Economic Research and second in the nation by total tonnage (after the Port of Louisiana on the Mississippi River between Baton Rouge and New Orleans) according to data published by the U.S. Department of Transportation (DOT), Bureau of Transportation Statistics (for 2014, the latest year for which data are available). Several oil pipelines converge at the Port of Houston. Most of the freight tonnage handled through the Port consists of petroleum, petroleum products, chemicals, plastics, and machinery, but the Port is also the largest Gulf Coast container port. The Houston Ship Channel, a 52-mile-long inland waterway, links Houston to the sea lanes of the Gulf of Mexico and provides direct access to the world's largest complex of petrochemical plants. Other top-20 freight ports in the Houston MSA are the ports of Freeport, Galveston, and Texas City.

The Port of Galveston is also a major port for cruise ships, with more than 1.0 million annual passenger boardings. Many of these cruise passengers use Intercontinental and Hobby, with dedicated ground transportation shuttles between the airports and the cruise port coordinated for ship arrivals and departures.

Although the combined United-Continental located its headquarters in Chicago following the 2010 merger, the Houston MSA is United's largest employment center, with 14,200 people employed at the Intercontinental hub and in systemwide administrative, maintenance, and operations functions.

United's hub at Intercontinental is a major generator of economic activity, and supports the Houston MSA as a center for international business. Leading Houston MSA trading partners, as measured by the value of imports and exports, are Mexico, Brazil, China, Germany, and Colombia.

NASA's Johnson Space Center, the Texas Medical Center, energy companies, and Houston's universities (among them Texas A&M University, the University of Houston, Sam Houston State University, Texas Southern University, Prairie View A&M University, and Rice University) combine to provide resources for research and development in aerospace, healthcare, bioscience, energy, information, and other technologies.

Convention, Sports Venues, and Visitor Attractions

According to the Greater Houston Convention and Visitors Bureau, Houston attracted approximately 20.5 million visitors in 2016. Houston has two convention venues ranked in the 10 largest in the nation, the George R. Brown (GRB) Convention Center and NRG Park. The two convention centers host several annual international energy conventions, including the Offshore Technology Conference (one of the largest annual conferences in the country with approximately 100,000 attendees) and

CERAWeek. Conferences, sports events, and other visitor attractions generate demand for domestic and international airline travel at the HAS airports.

The GRB Convention Center, located within the Houston central business district, provides 1.2 million square feet of exhibition, meeting, and related space. The GRB Convention Center was opened in 1987 and expanded in 2003. Renovations costing \$175 million were completed in 2016. Also located within the central business district is Minute Maid Park, a 41,000-seat baseball stadium, opened in 2000 (home to Major League Baseball's Houston Astros); the Toyota Center, a 19,000-seat basketball and concert stadium opened in 2003 (home to the National Basketball Association's Houston Rockets); and the BBVA Compass Stadium, a 22,000-seat soccer and concert stadium opened in 2012 (home to Major League Soccer's Houston Dynamo).

According to the Greater Houston Convention and Visitors Bureau, approximately 8,000 hotel rooms are available in the central business district. A 1,200-room Hilton Americas hotel and a 1,000-room Marriott Marquis hotel are located adjacent to the GRB Convention Center.

Eight miles southwest of the central business district is NRG Park, a sports and convention complex accommodating NRG Stadium, a 71,500-seat football stadium (home to the National Football League's Houston Texans and the Houston Livestock Show and Rodeo); NRG Center (a convention center with 706,000 square feet of space); and NRG Arena (providing 350,000 square feet of exhibit space, an 8,000-seat arena, and a 2,000-seat pavilion). Houston hosted Super Bowl LI at NRG Stadium in February 2017. The NRG Astrodome, the first domed stadium in the world and the former home of the Houston Astros and the National Football League's Houston Oilers, has not been used since 2008. In January 2017, the Texas Historical Commission designated the Astrodome a State Antiquities Landmark and in February 2018, a \$105 million redevelopment plan for the Astrodome was approved by the Harris County Commissioners Court.

The Houston Museum District is located near Rice University, 5 miles southwest of the central business district. In close proximity, 19 member organizations provide diverse experiences in the arts, history, culture, natural history, and science and collectively attract approximately 8.0 million visitors annually. Among the member organizations are the Museum of Fine Arts Houston (opened in 1924 and the first art museum in Texas), The Menil Collection, the Museum of African American Culture, the Houston Center for Photography, the Houston Zoo, and the Houston Museum of Natural Science. Rice Stadium, a 70,000-seat football stadium opened in 1950, is located on the Rice University campus. Space Center Houston, the visitors' center for the Johnson Space Center, located 25 miles southeast of central Houston, attracts 800,000 visitors annually.

Houston is one of the few U.S. cities with resident companies for orchestra (Houston Symphony, founded in 1919), opera (Houston Grand Opera, founded in 1955), ballet (Houston Ballet, founded in 1955), and theatre (Alley Theatre, founded in 1947),

among others. The Theater District, located in the central business district, provides five major venues for the performing arts (Alley Theatre, Jesse H. Jones Hall for the Performing Arts, Wortham Theater Center, Houston Ballet's Center for Dance, and the Hobby Center for the Performing Arts).

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, and, 1.6% in 2016, the Congressional Budget Office forecasts real GDP growth of 2.1% in 2017, 2.2% in 2018, and 1.8% 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 economic growth in the economies of foreign trading partners.

Outlook for the Houston Economy

In addition to the same factors as those cited for the national economy, the economic outlook for the Houston MSA depends heavily on the prices of oil and natural gas, with some energy industry analysts opining that recovery for the industry will not occur until the price of oil stabilizes at well over \$60 per barrel. The price of West Texas intermediate crude oil has increased over recent months, from around \$45 per barrel in June 2017 to around \$60 per barrel in February 2018. Oil and gas prices change as a function of worldwide supply and demand, which in turn depend on a host of economic, political, and technological factors, and opinions on future price trend vary widely.

In an employment forecast published in December 2016, the Greater Houston Partnership predicted that employment in the Houston MSA in the energy and related sectors would decrease in 2017 and concluded that "it is increasingly difficult to be optimistic about a strong and sustained oil recovery." The Greater Houston Partnership also predicted decreased employment in the construction sector in 2017 as a boom in office, multi-family residential, and industrial construction wound down. Offsetting the decreases in employment in the energy and construction sectors, the Partnership predicted that employment would increase in the healthcare, leisure and hospitality services, government, retail trade, professional and technical services, and other industry sectors. Overall the Partnership predicted a net increase of 29,700 jobs for the Houston MSA in 2017.*

A September 2017 analysis from the Institute for Regional Forecasting at the University of Houston, Bauer College of Business, concluded that, in the near term, growth in the Houston economy will depend largely on the strength of the national

*Greater Houston Partnership, *2017 Houston Employment Forecast*, December 9, 2016.

economy. The Institute's analysis predicted positive overall job growth beginning in 2017, but a relatively slow pace, with a return to a long-term trend rate of employment growth (of between 2.0% and 2.5% per year) not occurring before 2020.*

Table 7 summarizes "medium" population and employment forecasts for the Houston MSA, as developed by the Institute for Regional Forecasting, and for the United States, as developed by the U.S. Department of Labor. Growth in population and employment in the Houston MSA is forecast to exceed national rates.

Heavy rains brought by tropical storm Harvey caused widespread severe flooding to many parts of the Houston MSA in late August and early September 2017. A report by the Institute for Regional Forecasting concluded that, while the flooding caused damage and uninsured losses for many homeowners and small businesses, the flooding will not result in lasting damage to the main engines of growth in the Houston economy.**

HISTORICAL PASSENGER TRAFFIC AT THE AIRPORT SYSTEM

Table 8 provides historical data on numbers of enplaned passengers at Intercontinental and Hobby. Between FY 2007 and FY 2017, enplaned passenger numbers at Hobby increased 53.3%, while enplaned passenger numbers at Intercontinental decreased 3.6%, resulting in a decrease in Intercontinental's share of the two-airport total from 83.2% (of 25.8 million) in FY 2007 to 75.7% (of 27.4 million) in FY 2017. Over the 10-year period, Intercontinental's share of Airport System originating passengers decreased from 73.1% (of 12.0 million) to 69.5% (of 14.6 million). (Historical originating passenger numbers are shown in Table 20 for Intercontinental and in Table 29 for Hobby.)

*Institute for Regional Forecasting, C.T. Bauer College of Business, University of Houston, *A False Start for Oil Markets in 2017 Means Weak Prospects for Houston's Economy*, September 11, 2017.

**Institute for Regional Forecasting, C.T. Bauer College of Business, University of Houston, *Some Early Thoughts on Houston's Economy after Harvey*, September 6, 2017.

Table 7
SOCIOECONOMIC FORECASTS
Houston-The Woodlands-Sugar Land MSA and United States

	Average annual percent increase (decrease)		
	Historical 2000-2016	Forecast	
		2016-2017	2017-2021
Houston-The Woodlands-Sugar Land MSA			
Population	2.3%	2.4%	2.3
Nonagricultural employment	1.8	1.4	1.9
United States			
Population	0.9%	0.8%	0.8%
Nonagricultural employment	0.6	0.6	0.6

MSA = Metropolitan Statistical Area comprising the nine counties shown on Figure 3.

Sources:

Population:

Historical: U.S. Department of Commerce, Bureau of the Census website, www.census.gov, accessed August 2017.

Forecast: Texas Demographic Center website, www.txsd.c.utsa.edu, accessed September 2017.

U.S. Department of Commerce, Bureau of the Census website, www.census.gov, accessed August 2017.

Nonagricultural employment:

Historical: U.S. Department of Labor, Bureau of Labor Statistics website, www.bls.gov, accessed August 2017.

Forecast: University of Houston, Bauer College of Business, Institute for Regional Forecasting, September 2017.

U.S. Department of Labor, Bureau of Labor Statistics website, Employment Outlook 2014-2024, www.bls.gov, accessed August 2017.

Table 8
HISTORICAL ENPLANED PASSENGERS AT HOUSTON AIRPORT SYSTEM AIRPORTS
 William P. Hobby Airport, George Bush Intercontinental Airport, and Ellington Airport
 Fiscal Years ended June 30
 (enplaned passengers in thousands)

Fiscal Year	Intercontinental			Hobby			Houston Airport System (a)		
	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total
2000	14,335	2,678	17,012	4,518	--	4,518	18,899	2,678	21,577
2005	15,751	3,448	19,199	4,151	--	4,151	19,910	3,448	23,357
2006	17,061	3,615	20,676	4,236	--	4,236	21,297	3,615	24,912
2007	17,690	3,796	21,487	4,344	--	4,344	22,034	3,796	25,830
2008	17,633	4,007	21,640	4,562	--	4,562	22,196	4,007	26,202
2009	16,022	3,850	19,872	4,159	--	4,159	20,181	3,850	24,031
2010	16,069	4,064	20,134	4,397	--	4,397	20,467	4,064	24,531
2011	15,834	4,357	20,191	4,739	--	4,739	20,573	4,357	24,930
2012	15,857	4,319	20,176	5,128	--	5,128	20,985	4,319	25,304
2013	15,365	4,392	19,756	5,377	--	5,377	20,741	4,392	25,133
2014	15,380	4,725	20,105	5,836	--	5,836	21,216	4,725	25,941
2015	15,963	4,996	20,959	5,943	2	5,945	21,906	4,998	26,904
2016	15,992	5,438	21,430	6,117	266	6,383	22,109	5,704	27,812
2017	15,400	5,304	20,704	6,220	441	6,660	21,619	5,745	27,364
First 6 months									
2017	7,739	2,669	10,408	3,087	216	3,303	10,825	2,885	13,711
2018	7,535	2,534	10,069	3,152	232	3,384	10,687	2,766	13,453
Average annual percent increase (decrease)									
12152000-2007	3.1%	5.1%	3.4%	(0.6%)	n.c.	(0.6%)	2.2%	5.1%	2.6%
2007-2017	(1.4)	3.4	(0.4)	3.7	n.c.	4.4	(0.2)	4.2	0.6
2000-2017	0.4	4.1	1.2	1.9	n.c.	2.3	0.8	4.6	1.4

Table 8 (page 2 of 2)

HISTORICAL ENPLANED PASSENGERS AT HOUSTON AIRPORT SYSTEM AIRPORTS

William P. Hobby Airport, George Bush Intercontinental Airport, and Ellington Airport

Fiscal Years ended June 30

(enplaned passengers in thousands)

Fiscal Year	Intercontinental			Hobby			Houston Airport System airports (a)		
	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total
	Annual percent increase (decrease)								
2005-2006	8.3%	4.9%	7.7%	2.1%	n.c.	2.1%	7.0%	4.9%	6.7%
2006-2007	3.7	5.0	3.9	2.5	n.c.	2.5	3.5	5.0	3.7
2007-2008	(0.3)	5.5	0.7	5.0	n.c.	5.0	0.7	5.5	1.4
2008-2009	(9.1)	(3.9)	(8.2)	(8.8)	n.c.	(8.8)	(9.1)	(3.9)	(8.3)
2009-2010	0.3	5.6	1.3	5.7	n.c.	5.7	1.4	5.6	2.1
2010-2011	(1.5)	7.2	0.3	7.8	n.c.	7.8	0.5	7.2	1.6
2011-2012	0.1	(0.9)	(0.1)	8.2	n.c.	8.2	2.0	(0.9)	1.5
2012-2013	(3.1)	1.7	(2.1)	4.8	n.c.	4.8	(1.2)	1.7	(0.7)
2013-2014	0.1	7.6	1.8	8.5	n.c.	8.5	2.3	7.6	3.2
2014-2015	3.8	5.7	4.2	1.8	n.c.	1.9	3.3	5.8	3.7
2015-2016	0.2	8.9	2.2	2.9	n.c.	7.4	0.9	14.1	3.4
2016-2017	(3.7)	(2.5)	(3.4)	1.7	65.7	4.3	(2.2)	0.7	(1.6)
First 6 months 2017-2018 (b)	(2.6)	(5.1)	(3.3)	2.1	7.3	2.5	(1.3)	(4.1)	(1.9)
	Share of HAS airports total								
2000			78.8%			20.9%			100.0%
2007			83.2			16.8			100.0
2017			75.7			24.3			100.0

n.c. = not calculated.

Notes: Rows may not add to totals shown because of rounding. Percentages were calculated using unrounded numbers.

(a) Includes small numbers of passengers at Ellington (46,726 in 2000 and 7,840 in 2005).

(b) Change was affected by the temporary closure of the airports in late August and early September 2017 because of flooding caused by tropical storm Harvey.

Source: Houston Airport System records.

Ranking among Other Airports

Table 9 shows the 30 busiest U.S. airports ranked by numbers of enplaned passengers in calendar year 2016. As shown, in 2016, Intercontinental ranked 13th. (Hobby, not shown in the table, ranked 34th.)

Table 10 shows the 30 busiest U.S. airports ranked by numbers of originating passengers in calendar year 2016. As shown, in 2016, Intercontinental ranked 17th. (Hobby, not shown in the table, ranked 43rd.)

Table 11 shows the 30 busiest U.S. airports ranked by numbers of connecting passengers in calendar year 2015. As shown, in 2016, Intercontinental ranked 6th (attributable to United's connecting hub operations) and Hobby ranked 23rd (attributable to Southwest's operations).

Table 12 shows the 30 busiest U.S. gateway airports ranked by numbers of enplaned international passengers in calendar year 2016. Intercontinental ranked 8th. International service from Hobby to Aruba and San Juan (U.S. preclearance destinations) started in March 2015. Service from Hobby to destinations requiring FIS clearance began with the opening of the Hobby international terminal in October 2015. Other international destinations were added in November 2015.

Table 13 shows the 30 busiest U.S. gateway airports ranked by air cargo tonnage in calendar year 2016. Intercontinental ranked 17th. (Hobby, not shown in the table and not served by all-cargo aircraft operators, ranked 106th.) Intercontinental is one of the few top-30 airports to show increased cargo tonnage between 2000 and 2016.

Table 9
ENPLANED PASSENGERS AT TOP-RANKING U.S. AIRPORTS
 Calendar Years

2016 Rank	City (airport)	Enplaned passengers (millions)			Percent increase (decrease) 2000-2016	Increase (decrease) 2000-2016 (millions)
		2000	2007	2016		
1	Atlanta	39.2	43.1	50.5	28.8%	11.3
2	Los Angeles (International)	32.1	30.1	39.7	23.5	7.6
3	Chicago (O'Hare)	33.7	36.5	37.6	11.8	4.0
4	Dallas Fort Worth	28.2	28.4	31.3	11.2	3.2
5	New York (Kennedy)	16.1	23.4	29.3	82.4	13.2
6	Denver	18.3	24.1	28.3	54.4	10.0
7	San Francisco	19.5	17.3	25.8	32.3	6.3
8	Las Vegas	16.4	22.4	22.7	38.3	6.3
9	Seattle-Tacoma	13.8	15.4	21.9	58.2	8.0
10	Charlotte	11.4	16.6	21.5	88.0	10.1
11	Miami	16.5	16.2	20.9	27.2	4.5
12	Phoenix (Sky Harbor)	18.1	20.8	20.9	15.8	2.9
13	Houston (Intercontinental) (a)	17.5	21.6	20.8	18.8	3.3
14	Orlando (International)	14.7	17.6	20.3	37.9	5.6
15	Newark	17.2	18.2	20.0	16.2	2.8
16	Minneapolis-St. Paul	16.8	17.0	18.2	8.5	1.4
17	Boston	13.6	13.8	17.8	30.5	4.2
18	Detroit	17.2	17.5	16.9	(1.9)	(0.3)
19	New York (LaGuardia)	12.7	12.5	14.8	16.4	2.1
20	Philadelphia	12.3	15.7	14.6	18.7	2.3
21	Fort Lauderdale-Hollywood	7.8	11.1	14.3	83.5	6.5
22	Baltimore/Washington	9.6	10.4	12.3	27.5	2.7
23	Washington, DC (Reagan)	7.4	9.0	11.5	55.0	4.1
24	Salt Lake City	9.5	10.6	11.1	16.9	1.6
25	Chicago (Midway)	7.1	9.1	11.0	55.7	4.0
26	Washington, DC (Dulles)	9.1	11.8	10.5	15.7	1.4
27	San Diego	7.9	9.1	10.3	31.1	2.5
28	Honolulu	10.6	10.3	9.7	(7.8)	(0.8)
29	Tampa	8.0	9.3	9.2	15.5	1.2
30	Portland, Oregon	6.8	7.3	9.1	34.4	2.3
	Total top 30 airports				28.6%	

Notes: Airports shown are the top 30 U.S. airports ranked by numbers of passengers for calendar year 2016.

Percentages were calculated using unrounded numbers.

(a) Houston Airport System records.

Source: U.S. DOT, Schedules T100 and 298C T1, except as noted.

Table 10
ORIGINATING PASSENGERS AT TOP-RANKING U.S. AIRPORTS
 Calendar Years

2016 Rank	City (airport)	Originating passengers (millions)			Percent increase (decrease)	Increase (decrease)
		2000	2007	2016	2000-2016	2000-2016 (millions)
1	Los Angeles (International)	24.0	23.3	31.5	31.3%	7.5
2	New York (Kennedy)	12.9	18.8	24.0	86.1	11.1
3	Chicago (O'Hare)	16.4	17.7	21.0	27.4	4.5
4	San Francisco	15.1	12.7	20.4	35.0	5.3
5	Las Vegas	14.1	18.5	19.4	37.6	5.3
6	Orlando (International)	13.8	16.6	19.4	40.5	5.6
7	Atlanta	15.3	15.1	17.8	16.4	2.5
8	Boston	12.6	13.1	16.8	33.5	4.2
9	Denver	9.8	13.0	16.7	71.0	6.9
10	Newark	13.3	13.9	15.0	12.4	1.6
11	Seattle-Tacoma	10.4	11.6	14.9	43.1	4.5
12	Dallas Fort Worth	11.5	12.3	13.9	21.0	2.4
13	Miami	10.0	9.4	13.6	35.8	3.6
14	New York (LaGuardia)	11.8	11.6	13.3	12.1	1.4
15	Phoenix (Sky Harbor)	11.2	12.8	13.2	17.7	2.0
16	Fort Lauderdale-Hollywood	7.6	10.4	12.7	68.3	5.2
17	Houston (Intercontinental)	7.2	9.1	10.1	41.0	2.9
18	Minneapolis-St. Paul	8.2	8.7	10.2	25.4	2.1
19	Washington, DC (Reagan)	7.0	7.7	9.9	42.5	3.0
20	Philadelphia	7.8	9.8	9.9	27.7	2.2
21	San Diego	7.6	8.8	9.8	29.0	2.2
22	Detroit	8.4	9.0	9.1	7.8	0.7
23	Tampa	7.5	8.7	8.8	18.1	1.3
24	Baltimore/Washington	8.2	8.5	8.6	4.3	0.4
25	Honolulu	8.6	8.4	8.0	(6.9)	(0.6)
26	Portland, Oregon	5.7	6.2	6.8	19.2	1.1
27	Washington, DC (Dulles)	7.0	7.8	6.7	(5.3)	(0.4)
28	Chicago (Midway)	5.8	6.5	6.4	10.0	0.6
29	Salt Lake City	5.0	5.7	5.7	15.3	0.8
30	Charlotte	3.0	4.8	5.7	88.8	2.7
	Total top 30 airports				30.2%	

Notes: Airports shown are the top 30 U.S. airports ranked by numbers of originating passengers for calendar year 2016.

Percentages were calculated using unrounded numbers.

Includes a very small number of passengers on foreign-flag airlines making connections between international flights.

Source: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Table 11
CONNECTING PASSENGERS AT TOP-RANKING U.S. AIRPORTS
 Calendar Years

2016 Rank	City (airport)	Connecting passengers (millions)			Percent increase (decrease)	Increase (decrease)
		2000	2007	2016	2000-2016	2000-2016 (millions)
1	Atlanta	24.0	28.1	32.8	36.7%	8.8
2	Dallas Fort Worth	16.7	16.1	17.4	4.4	0.7
3	Chicago (O'Hare)	17.2	18.8	16.7	(3.1)	(0.5)
4	Charlotte	8.4	11.8	15.4	82.2	6.9
5	Denver	8.5	11.1	11.5	35.4	3.0
6	Houston (Intercontinental)	10.4	12.4	10.7	3.5	0.4
7	Los Angeles (International)	8.2	6.8	8.2	0.7	0.1
8	Minneapolis-St. Paul	8.6	8.3	8.0	(7.5)	(0.7)
9	Detroit	8.8	8.5	7.8	(11.2)	(1.0)
10	Phoenix (Sky Harbor)	6.9	8.0	7.7	12.7	0.9
11	Miami	6.4	6.8	7.3	13.7	0.9
12	Seattle-Tacoma	3.4	3.8	6.9	104.6	3.5
13	San Francisco	4.4	4.5	5.4	22.8	1.0
14	New York (Kennedy)	3.2	4.6	5.3	67.5	2.2
15	Newark	3.8	4.3	5.0	29.7	1.1
16	Salt Lake City	4.6	4.9	4.8	4.8	0.2
17	Philadelphia	4.5	5.9	4.6	3.1	0.1
18	Chicago (Midway)	1.3	2.7	4.1	216.8	2.8
19	Baltimore/Washington	1.4	1.9	3.7	161.5	2.3
20	Washington, DC (Dulles)	2.9	4.5	3.6	24.8	0.7
21	Las Vegas	2.3	3.9	3.3	42.7	1.0
22	Dallas (Love)	0.7	1.0	2.4	246.2	1.7
23	Houston (Hobby)	1.1	1.1	2.1	91.3	1.0
24	Honolulu	2.0	1.9	1.8	(11.5)	(0.2)
25	Fort Lauderdale-Hollywood	0.2	0.7	1.6	585.2	1.3
26	Washington, DC (Reagan)	0.9	1.6	1.5	73.9	0.6
27	New York (LaGuardia)	0.8	1.0	1.5	77.0	0.7
28	St. Louis	9.5	1.4	1.4	(85.2)	(8.1)
29	Portland, Oregon	1.1	1.1	1.2	13.2	0.1
30	Boston	1.0	0.7	1.0	(5.5)	(0.1)
	Total top 30 airports				18.3%	

Notes: Airports shown are the top 30 U.S. airports ranked by numbers of connecting passengers for calendar year 2016.
 Percentages were calculated using unrounded numbers.
 Excludes a small number of passengers on foreign-flag airlines making connections between international flights.

Source: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Table 12
INTERNATIONAL PASSENGERS AT TOP-RANKING U.S. AIRPORTS
 Calendar Years

2016 Rank	City (airport)	Enplaned international passengers (millions)			Percent increase (decrease)	Increase (decrease)
		2000	2007	2016	2000-2016	2000-2016 (millions)
1	New York (Kennedy)	9.0	10.7	15.8	75.3%	6.8
2	Los Angeles (International)	8.2	8.3	11.2	36.9	3.0
3	Miami	8.0	7.8	10.4	29.9	2.4
4	San Francisco	4.0	4.3	6.1	55.2	2.2
5	Chicago (O'Hare)	5.0	5.7	6.0	21.8	1.1
6	Newark	4.4	5.3	6.0	35.8	1.6
7	Atlanta	3.1	4.5	5.6	80.8	2.5
8	Houston (Intercontinental) (a)	2.8	3.9	5.4	89.9	2.5
9	Dallas Fort Worth	2.4	2.5	4.0	63.6	1.5
10	Washington, DC (Dulles)	1.9	2.8	3.6	85.3	1.7
11	Boston	2.1	1.9	3.1	46.5	1.0
12	Fort Lauderdale-Hollywood	0.7	1.4	2.9	317.2	2.2
13	Orlando (International)	1.2	1.1	2.7	124.0	1.5
14	Honolulu	2.5	1.8	2.6	3.3	0.1
15	Seattle-Tacoma	1.1	1.3	2.3	111.6	1.2
16	Philadelphia	1.3	1.8	1.8	41.5	0.5
17	Las Vegas	0.5	1.1	1.8	244.8	1.3
18	Detroit	1.9	1.9	1.6	(14.4)	(0.3)
19	Charlotte	0.5	1.0	1.5	210.6	1.0
20	Minneapolis-St. Paul	1.4	1.3	1.4	(2.8)	(0.0)
21	Denver	0.6	1.1	1.1	80.2	0.5
22	Phoenix (Sky Harbor)	0.5	0.9	1.0	112.5	0.6
23	New York (LaGuardia)	0.7	0.6	1.0	46.8	0.3
24	Baltimore/Washington	0.3	0.3	0.5	83.1	0.2
25	Tampa	0.2	0.2	0.4	110.5	0.2
26	Houston (Hobby) (a)	--	--	0.4	n.c.	0.4
27	Chicago (Midway)	0.0	0.1	0.4	n.c.	0.4
28	Salt Lake City	0.1	0.3	0.4	546.9	0.3
29	San Diego	0.1	0.2	0.4	158.5	0.2
30	Portland, Oregon	0.2	0.3	0.3	43.0	0.1
	Total top 30 airports				57.2%	

n.c. = not calculated.

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 international passengers for calendar year 2016. Percentages were calculated using unrounded numbers.

(a) Houston Airport System records.

Source: U.S. DOT, Schedules T100 and 298C T1, except as noted.

Table 13
AIR CARGO AT THE BUSIEST U.S. AIRPORTS
 Calendar Years

Rank 2016	City (airport)	Total cargo (metric tons in thousands)					Average annual percent increase (decrease)	
		2000	2004	2008	2012	2016	2000-2008	2008-2016
1	Memphis	2,489	3,555	3,695	4,016	4,322	5.1%	2.0%
2	Anchorage	1,804	2,253	2,347	2,450	2,543	3.3	1.0
3	Louisville	1,520	1,739	1,975	2,168	2,437	3.3	2.7
4	Miami	1,643	1,779	1,807	1,930	2,014	1.2	1.4
5	Los Angeles	2,039	1,914	1,629	1,772	1,993	(2.8)	2.6
6	Chicago (O'Hare)	1,469	1,475	1,264	1,254	1,528	(1.9)	2.4
7	New York (Kennedy)	1,818	1,706	1,452	1,283	1,279	(2.8)	(1.6)
8	Indianapolis	1,165	932	1,040	989	1,065	(1.4)	0.3
9	Dallas Fort Worth	905	742	653	603	753	(4.0)	1.8
10	Cincinnati	391	413	36	539	742	(25.7)	45.8
11	Newark	1,082	985	887	744	719	(2.5)	(2.6)
12	Atlanta	894	862	655	646	649	(3.8)	(0.1)
13	Ontario, California	464	549	437	413	519	(0.8)	2.2
14	Oakland	685	645	622	481	512	(1.2)	(2.4)
15	San Francisco	870	563	492	381	483	(6.9)	(0.2)
16	Honolulu	441	435	411	412	461	(0.9)	1.5
17	Houston (Intercontinental)	368	401	412	438	432	1.4	0.6
18	Philadelphia	559	571	507	389	404	(1.2)	(2.8)
19	Seattle-Tacoma	457	347	291	284	366	(5.5)	2.9
20	Phoenix (Sky Harbor)	375	302	250	274	322	(4.9)	3.2
21	Boston	475	366	282	248	290	(6.3)	0.4
22	Washington, DC (Dulles)	384	308	334	268	266	(1.7)	(2.8)
23	Denver	472	317	251	237	250	(7.6)	(0.0)
24	Portland, Oregon	282	252	221	199	219	(3.0)	(0.1)
25	Orlando (International)	271	204	160	173	209	(6.4)	3.4
26	Detroit	298	222	211	219	206	(4.2)	(0.3)
27	Minneapolis-St. Paul	370	300	233	199	191	(5.6)	(2.4)
28	Salt Lake City	257	212	161	167	174	(5.7)	1.0
29	San Diego	153	138	123	141	172	(2.7)	4.2
30	Charlotte	185	122	115	127	154	(5.8)	3.8
	Average for airports listed						(0.9%)	1.4%

Notes: Airports shown are the 30 busiest U.S. airports measured by total cargo tonnage (enplaned plus deplaned freight and mail) in calendar year 2016.

Calculated percentages may not match those shown because of rounding.

Source: Airports Council International 2016 North American Airport Traffic Report.

ROLE OF INTERCONTINENTAL AS UNITED HUB

Table 14 presents data on airline service at the 30 busiest U.S. airports as measured by average daily departing seats scheduled for July 2017. Figure 6 shows the data graphically for the 20 busiest U.S. connecting hub airports (plus Hobby). United's hub at Intercontinental ranks fifth (54,530 average daily scheduled departing seats) after Atlanta (Delta, 136,011 seats), Dallas Fort Worth (American, 96,746 seats), Charlotte (American, 71,701 seats) and Chicago O'Hare (United, 63,361 seats).*

As shown in Table 15, Intercontinental is the second busiest airport in United's U.S. system ranked by average daily departing seats scheduled for July 2017 (54,530 seats), behind Chicago O'Hare (63,361 seats) and ahead of Newark (50,510 seats). Between July 2007 and July 2017, United reduced its number of scheduled seats at Intercontinental by 16.3%, compared with a reduction of 4.4% at Chicago O'Hare, an increase of 5.4% at Newark, and a decrease of 10.4% systemwide.

Table 16 shows international departing seat capacity for the 20 busiest international gateway airports (on all airlines) as scheduled for July 2017. Intercontinental ranked eighth overall.

International service at Intercontinental as scheduled for July 2017 accounts for 29% of seat capacity (versus 71% domestic), a higher international percentage than at all but five other large hub airports: New York Kennedy (60%), Miami (55%), Washington Dulles (38%), Newark (33%), and Los Angeles (31%).

*In 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; Northwest Airlines with Delta; Continental Airlines with United; Midwest Airlines with Frontier Airlines; and AirTran Airways with Southwest). Also, except as noted otherwise for United and United Express, data for affiliated regional airlines are accounted for with data for the mainline airline. Regional airlines operating at Intercontinental as code-sharing affiliates of mainline airlines as of July 2017 were Compass Airlines (American Eagle and Delta Connection), Endeavor Air (Delta Connection), ExpressJet Airlines (Delta Connection and United Express), Air Canada Jazz (Air Canada), Mesa Airlines (American Eagle and United Express), Republic Airlines (American Eagle, Delta Connection, and United Express), and SkyWest Airlines (American Eagle, Delta Connection and United Express).

Table 14
AIRLINE SERVICE AT SELECTED U.S. AIRPORTS
 July 2017

City (airport)	Average daily scheduled departing seats			Busiest hubbing airline		
	Domestic	International	Total	Airline	Average daily scheduled departing seats	Airline share of airport total
Atlanta	149,380	23,063	172,443	Delta	136,011	78.9%
Los Angeles	104,009	45,884	149,893	American	28,515	19.0 (a)
Chicago (O'Hare)	116,526	25,535	142,061	United	63,361	44.6
Dallas Fort Worth	98,567	17,137	115,704	American	96,746	83.6
New York (Kennedy)	45,088	67,236	112,324	Delta	30,191	26.9
Denver	100,795	4,311	105,106	United	43,217	41.1
San Francisco	76,397	25,972	102,368	United	44,816	43.8
Seattle-Tacoma	76,415	9,116	85,531	Alaska	38,515	45.0
Charlotte	71,550	7,736	79,286	American	71,701	90.4
Las Vegas	72,508	6,136	78,644	Southwest	31,248	39.7
Newark	51,204	25,723	76,927	United	50,510	65.7
Orlando (International)	60,066	13,983	74,049	Southwest	19,015	25.7
Miami	32,605	39,822	72,427	American	49,692	68.6
Houston (Intercontinental)	51,208	21,123	72,331	United	54,530	75.4
Phoenix (Sky Harbor)	68,481	2,952	71,433	American	34,976	49.0
Boston	54,552	14,393	68,945	JetBlue	17,785	25.8 (b)
Minneapolis-St. Paul	63,130	4,752	67,882	Delta	48,134	70.9
Detroit	53,988	6,352	60,341	Delta	43,833	72.6
Fort Lauderdale-Hollywood	39,030	14,956	53,986	JetBlue	13,257	24.6
Philadelphia	43,907	9,104	53,011	American	37,275	70.3
New York (LaGuardia)	48,891	3,704	52,595	Delta	20,754	39.5
Baltimore/Washington	46,151	2,606	48,757	Southwest	34,147	70.0
Washington, DC (Dulles)	25,924	16,035	41,959	United	25,557	60.9
San Diego	39,647	1,972	41,619	Southwest	15,823	38.0 (c)
Salt Lake City	39,707	1,803	41,510	Delta	28,634	69.0
Chicago (Midway)	39,561	1,759	41,321	Southwest	38,568	93.3
Washington, DC (Reagan)	39,196	886	40,082	American	19,876	49.6
Honolulu	28,168	10,106	38,275	Hawaiian	17,736	46.3 (d)
Portland, Oregon	35,250	1,713	36,963	Alaska	14,414	39.0
Tampa	29,041	2,105	31,146	Southwest	12,272	39.4

Notes: Airports shown are the 30 busiest airports as ranked by numbers of scheduled departing seats in July 2017.
 Rows may not add to totals shown because of rounding.

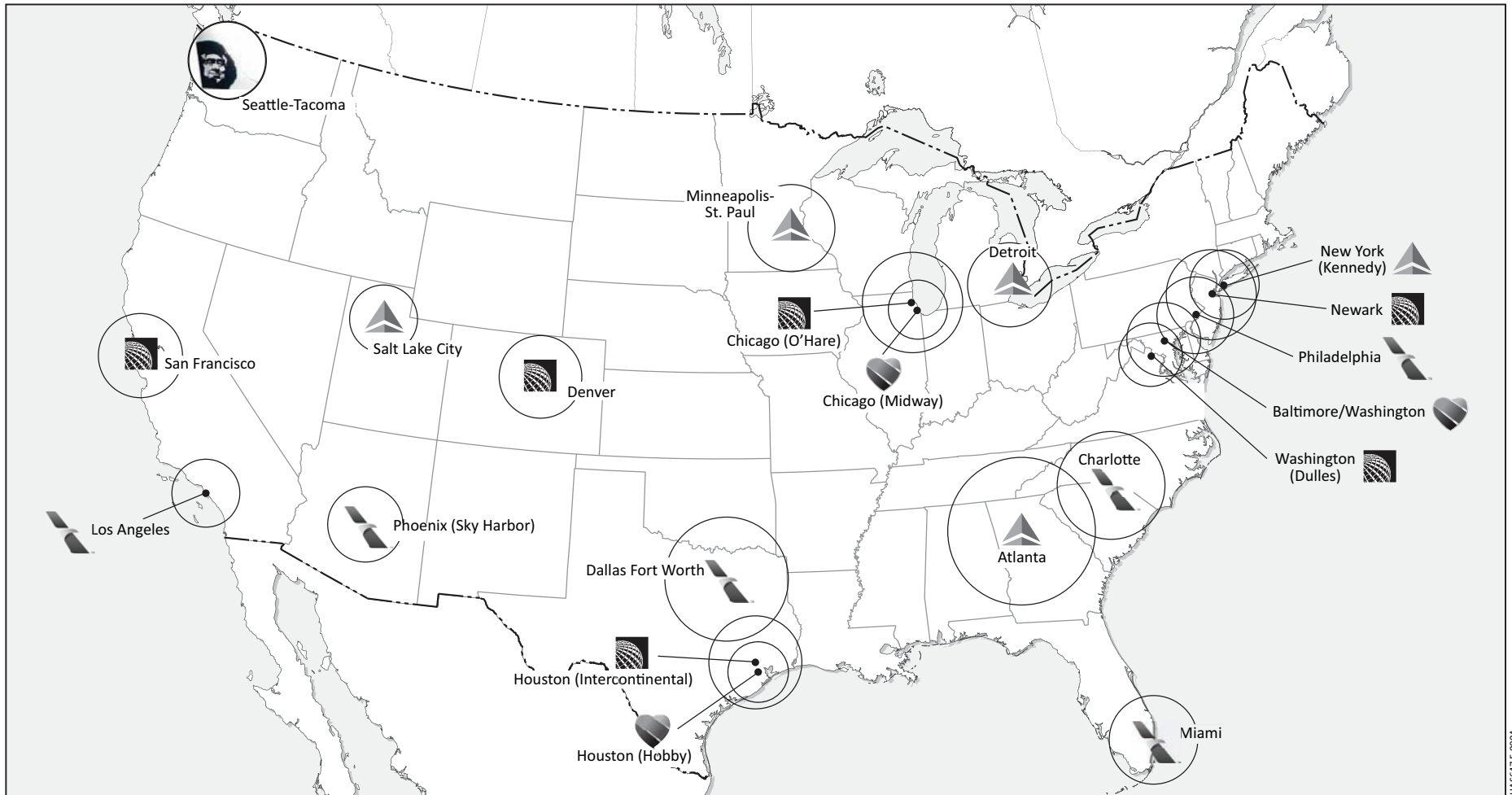
(a) United's share of seats is 13.6%.

(b) United's share of seats is 9.7%.

(c) United's share of seats is 11.2%.






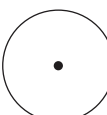
(d) United's share of seats is 12.6%.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.



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LEGEND

-  Alaska Airlines
-  American Airlines
-  Delta Air Lines
-  Southwest Airlines
-  United Airlines
-  = 50,000 average daily departing seats

Note: The area of the circle for each airport is proportional to the number of scheduled seats on domestic and international flights of the principal hubbing airline and its regional airline affiliates at that airport in July 2017. Airports shown are the 20 busiest U.S. airports ranked by numbers of connecting passengers for calendar year 2016 and William P. Hobby Airport. See Tables 11 and 14.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Figure 6
SEAT CAPACITY AT BUSIEST CONNECTING HUB AIRPORTS
Scheduled Service in July 2017

Table 15
UNITED SERVICE AT ITS PRINCIPAL AIRPORTS

City (airport)	July								Increase (decrease)	
	2000	2005	2007	2009	2011	2013	2015	2017	2000-2007	2007-2016
Average daily scheduled aircraft departures										
Chicago (O'Hare)	602	658	648	590	629	625	585	576	45	(71)
Houston (Intercontinental)	527	699	734	674	662	585	565	505	207	(229)
Newark	384	421	442	426	417	413	410	414	57	(27)
San Francisco	345	267	283	269	284	313	282	300	(62)	17
Denver	520	447	453	439	434	407	387	397	(67)	(57)
Washington, DC (Dulles)	369	311	297	302	300	280	222	223	(72)	(74)
Los Angeles	380	266	261	221	229	213	157	142	(119)	(120)
Boston	68	72	55	48	48	47	45	41	(13)	(13)
Orlando (International)	52	49	54	46	35	34	33	34	2	(20)
Seattle-Tacoma	123	65	57	57	51	49	33	34	(66)	(24)
Cleveland	284	230	226	199	184	173	50	45	(58)	(180)
Average daily scheduled departing seats										
Chicago (O'Hare)	75,750	66,006	66,258	59,000	58,649	53,853	57,489	63,361	(9,492)	(2,897)
Houston (Intercontinental)	55,246	62,777	65,176	62,278	63,878	56,290	57,773	54,530	9,930	(10,646)
Newark	46,801	43,089	47,907	46,997	46,499	44,558	46,103	50,510	1,106	2,603
San Francisco	43,700	31,110	32,511	31,221	32,525	35,935	38,208	44,816	(11,189)	12,305
Denver	56,925	45,331	46,792	44,255	40,332	35,818	37,507	43,217	(10,133)	(3,575)
Washington, DC (Dulles)	26,606	25,773	27,824	28,855	28,753	26,063	23,410	25,557	1,218	(2,267)
Los Angeles	40,541	25,608	25,259	23,899	24,673	23,780	21,496	20,345	(15,282)	(4,914)
Boston	10,276	6,943	6,998	6,511	6,758	6,484	6,607	6,661	(3,278)	(337)
Orlando (International)	6,405	6,427	7,255	6,381	5,419	5,073	5,623	5,806	851	(1,449)
Seattle-Tacoma	11,489	8,049	7,561	7,303	6,834	6,379	5,133	5,433	(3,928)	(2,128)
Cleveland	17,226	14,521	14,752	13,432	12,350	10,934	4,606	4,419	(2,474)	(10,333)

Note: Airports shown are the 10 busiest U.S. airports as ranked by departing seats on United and its regional affiliates for July 2017, plus Cleveland, formerly a hub for Continental.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Table 16
INTERNATIONAL DEPARTING SEATS, BY WORLD REGION DESTINATION
 July 2017

Average daily scheduled departing seats									
Rank	City (airport)	Europe	Asia	Latin America	Canada	Caribbean	Africa and Middle East	Oceania (a)	Total
1	New York (Kennedy)	28,678	6,434	8,471	1,609	14,521	7,523	--	67,236
2	Los Angeles	10,329	11,937	11,645	4,854	225	1,763	5,130	45,884
3	Miami	6,762	--	18,780	1,074	12,547	660	--	39,822
4	San Francisco	7,422	9,297	3,285	3,761	--	1,187	1,020	25,972
5	Newark	12,050	2,515	2,682	3,180	4,257	1,039	--	25,723
6	Chicago (O'Hare)	10,798	4,334	3,670	4,070	923	1,740	--	25,535
7	Atlanta	7,486	873	6,802	1,434	5,412	1,056	--	23,063
8	Houston (Intercontinental)	2,998	1,271	12,010	1,937	1,654	1,033	221	21,123
9	Dallas/Fort Worth	2,834	1,970	8,158	1,621	1,109	961	484	17,137
10	Washington, DC (Dulles)	8,452	1,479	1,960	1,065	568	2,510	--	16,035
11	Fort Lauderdale-Hollywood	523	--	3,899	1,237	9,109	189	--	14,956
12	Boston	8,270	879	486	2,096	1,644	1,017	--	14,393
13	Orlando (International)	4,310	--	3,513	1,647	4,251	263	--	13,983
14	Honolulu	--	7,637	--	368	--	--	1,629	9,634
15	Seattle-Tacoma	2,518	2,957	75	3,212	--	354	--	9,116
16	Philadelphia	4,978	--	494	1,058	2,291	283	--	9,104
17	Charlotte	2,418	--	1,089	430	3,799	--	--	7,736
18	Detroit	2,938	1,528	811	955	52	69	--	6,352
19	Las Vegas	1,890	300	1,106	2,839	--	--	--	6,136
20	Guam	--	<u>5,371</u>	--	--	--	--	<u>248</u>	<u>5,619</u>
	Total top 20 gateways	125,654	58,781	88,935	38,449	62,360	21,646	8,732	404,557
	All other gateways	<u>12,281</u>	<u>1,464</u>	<u>12,717</u>	<u>14,868</u>	<u>4,018</u>	<u>54</u>	--	<u>45,403</u>
	Total all U.S. gateways	137,935	60,245	101,653	53,317	66,378	21,700	8,732	449,961

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

(a) Australia, New Zealand, and Pacific Ocean Islands.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

HISTORICAL AIRLINE SERVICE AND TRAFFIC AT INTERCONTINENTAL

Domestic Airline Service

Figure 7 shows the domestic destinations with nonstop service from Intercontinental as scheduled for July 2017.

Table 17 presents data on nonstop airline service from Intercontinental to the top 20 domestic originating passenger destinations. As scheduled for July 2017, United (or affiliated United Express regional airlines) provided nonstop service to all 20 of the top destinations. Two, three, or four airlines (or their affiliated regional airlines) provided nonstop service to 19 of the top 20 destinations. Boston was served nonstop only by United from Intercontinental, but was served nonstop by JetBlue and Southwest from Hobby. Of the top 20 destinations from Intercontinental, 16 were also served nonstop from Hobby (all but Detroit, Miami, Minneapolis-St. Paul, and Philadelphia). Of the top 20 destinations from Intercontinental, 15 were served nonstop by Spirit.

Between July 2007, before the 2008-2009 recession, and July 2017, overall domestic airline service at Intercontinental, as measured by average daily scheduled departing seats, has decreased 12.8%, from 58,704 to 51,208, with much of the decrease occurring in 2017 as United rationalized its aircraft fleet and moved seat capacity from Intercontinental to other connecting hub airports.

Table 18 provides data on domestic airline service at Intercontinental by aircraft type and shows the changes in the shares of service provided by large jet, regional jet, and turboprop aircraft. As scheduled for July 2017, 97 domestic destinations were served nonstop. Large jets accounted for 59.4% of aircraft departures (a decrease from 65.9% in July 2000) and regional jets accounted for 40.6% of departures (an increase from 15.9% in July 2000). As of July 2017, there were no turboprop departures (compared with 18.2% in July 2000). The changes in the mix of aircraft types serving Intercontinental resulted in an overall increase in the average number of seats per domestic departure from 103 in July 2000 to 106 in July 2017.

Before the 2010 merger between Continental and United, Intercontinental was Continental's only mid-continent hub airport. Following the merger, Intercontinental became one of three mid-continent hubs for the merged airline, along with Chicago O'Hare and Denver. As the merged airline has rationalized its network, connecting traffic at Intercontinental has been reduced, although the airport is still the busiest connecting point in the United system.

Intercontinental is the principal Latin American gateway airport in the United system. In July 2017, Intercontinental accounted for 12,410 average daily departing seats by United to Mexico, Central and South America, and the Caribbean (compared with 6,640 from Newark, 1,645 from Chicago, and 308 from Denver).

Table 17
AIRLINE SERVICE TO TOP DOMESTIC DESTINATIONS
 George Bush Intercontinental Airport
 July of years noted

Rank (a)	Destination Airport	Airlines providing nonstop service (b) 2017	Average daily scheduled							
			Aircraft departures				Departing seats			
			2000	2007	2016	2017	2000	2007	2016	2017
1	New York	DL, NK, UA	17	24	20	21	2,791	3,366	2,798	2,999
	Newark	UA, NK	9	11	10	10	1,736	1,769	1,620	1,740
	LaGuardia	DL, UA	8	9	11	11	1,055	1,183	1,177	1,259
	Kennedy	--	--	4	--	--	--	413	--	--
2	Los Angeles	AA, NK, UA	20	21	22	20	2,950	3,317	3,351	3,189
	Los Angeles	AA, NK, UA	14	13	18	16	2,178	2,184	2,750	2,578
	Orange County	UA	4	6	5	5	492	708	601	611
	Ontario	--	2	3	--	--	280	425	--	--
3	Chicago (O'Hare)	AA, NK, UA	18	17	16	15	2,205	1,790	2,247	2,230
4	Washington DC/Baltimore	NK, UA	16	19	15	15	2,021	1,896	1,946	2,077
	Dulles	UA	3	6	5	5	283	334	722	826
	Reagan	UA	7	8	7	7	903	982	804	801
	Baltimore/Washington	NK, UA	6	5	3	3	835	580	419	449
5	Denver	F9, NK, UA	13	17	14	13	1,678	2,125	2,146	2,239
6	San Francisco	F9, NK, UA	14	14	13	12	1,967	1,955	2,126	2,206
	San Francisco	F9, UA	9	8	11	10	1,361	1,152	1,854	1,870
	Oakland	NK	2	3	1	1	209	401	145	228
	San Jose	UA	3	3	1	1	398	403	127	108
7	Las Vegas	F9, NK, UA	7	7	8	7	1,123	1,242	1,269	1,201
8	Atlanta	DL, F9, NK, UA	15	17	16	16	2,081	1,582	1,862	1,861
9	Orlando	NK, UA	6	8	8	8	1,026	1,362	1,237	1,383
10	Miami	AA, UA	10	8	9	9	1,326	1,031	1,104	1,116
11	Philadelphia	AA, F9, UA	8	9	6	7	981	1,003	677	742
12	Boston	UA	6	6	5	5	714	726	723	795
13	Seattle-Tacoma	AS, NK, UA	5	9	7	9	744	1,425	1,228	1,421
14	Detroit	DL, NK, UA	10	10	10	9	1,241	1,314	827	902
15	Fort Lauderdale	NK, UA	4	5	5	5	645	822	815	850
16	Phoenix	AA, UA	10	12	8	7	1,366	1,438	1,010	984
17	Dallas Fort Worth	AA, UA	41	30	17	18	3,986	2,419	1,863	2,165
	Dallas Fort Worth	AA, UA	25	17	17	18	2,781	1,831	1,863	2,165
	Love Field	--	15	13	--	--	1,205	587	--	--
18	New Orleans	NK, UA	12	12	11	11	1,649	1,561	1,135	1,272
19	San Diego	NK, UA	5	8	6	6	770	1,123	960	896
20	Minneapolis/St. Paul	DL, NK, UA	9	9	11	10	1,071	835	941	955
	Total top 20 markets		245	261	226	225	32,337	32,331	30,265	31,485
	Other markets		296	410	263	259	23,635	26,372	18,778	19,723
	Total all markets		541	671	489	484	55,972	58,704	49,043	51,208

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

(a) Top 20 destinations ranked by numbers of domestic originating passengers for the 12 months ended June 2016.

(b) Airlines operating scheduled passenger service. Legend: AA=American Airlines, AS=Alaska Airlines, DL=Delta Air Lines, F9=Frontier Airlines, NK=Spirit Airlines, UA=United Airlines.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Table 18
DOMESTIC AIRLINE SERVICE BY AIRCRAFT TYPE
George Bush Intercontinental Airport
July of years noted

	2000	2007	2017	Increase (decrease)	
				2000-2007	2007-2017
Destinations served nonstop (a)					
Large jet	61	49	58	(12)	9
Regional jet	34	77	76	43	(1)
Jet overall	80	98	97	18	(1)
Turboprop	27	14	--	(13)	(14)
Total destinations served nonstop	96	106	97	10	(9)
Average daily scheduled aircraft departures					
Large jet	357	291	287	(65)	(4)
Regional jet	<u>86</u>	<u>335</u>	<u>196</u>	249	(139)
Jet overall	443	626	484	184	(143)
Turboprop	<u>98</u>	<u>45</u>	<u>--</u>	(54)	(45)
Total aircraft departures	541	671	484	130	(188)
Percent of total					
Large jet	65.9%	43.4%	59.4%		
Regional jet	<u>15.9</u>	<u>49.9</u>	<u>40.6</u>		
Jet overall	81.8%	93.3%	100.0%		
Turboprop	18.2%	6.7%	0.0%		
Average daily scheduled departing seats					
Large jet	48,028	40,387	40,044	(7,641)	(343)
Regional jet	<u>4,445</u>	<u>16,793</u>	<u>11,164</u>	12,349	(5,629)
Jet overall	52,473	57,180	51,208	4,707	(5,972)
Turboprop	<u>3,499</u>	<u>1,523</u>	<u>--</u>	(1,976)	(1,523)
Total departing seats	55,972	58,704	51,208	2,732	(7,496)
Percent of total					
Large jet	85.8%	68.8%	78.2%		
Regional jet	<u>7.9</u>	<u>28.6</u>	<u>21.8</u>		
Jet overall	93.7%	97.4%	100.0%		
Turboprop	6.3%	2.6%	0.0%		
Average seats per departure					
Large jet	135	139	139	4	1
Regional jet	52	50	57	(1)	7
Jet overall	118	91	106	(27)	15
Turboprop	36	34	--	(2)	(34)
Total seats per departure	103	87	106	(16)	18

Notes: Columns may not add to totals shown because of rounding.
Changes were calculated using unrounded numbers.

(a) Some cities are served by more than one airport and some airports are served by more than one airline or aircraft type. Destinations are those with an average of at least four flights per week.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

International Airline Service

Table 19 provides data on nonstop international airline service at Intercontinental and illustrates the increase in service between July 2000 and July 2017 to all regions of the world by both U.S.-flag airlines (mostly United) and foreign-flag airlines. The average number of scheduled international departing seats at Intercontinental increased 88% between July 2000 and July 2017. The average number of scheduled seats on U.S.-flag airlines increased 74% and the number of destinations served nonstop from Intercontinental increased from 41 to 60. This increase is evidence of both the demand for international airline travel to and from the Houston MSA and an increase in connecting service. The average number of scheduled seats on foreign-flag airlines increased 138% and the number of destinations served nonstop from Intercontinental increased from 12 to 20.

In July 2017, airline service to Latin America and the Caribbean accounted for approximately 65% of seat capacity, followed by Europe (14%), Canada (9%), Asia and Oceania (7%), and the Middle East and Africa (5%).

Figure 8 shows the international destinations with daily nonstop (or direct, single-plane) service from Intercontinental as scheduled for July 2017. United, Spirit, and 21 foreign-flag airlines operate flights to 70 international destinations, making Intercontinental one of the few airports with nonstop service to all regions of the world. Notwithstanding the effects of the 2008-2009 global crisis on air travel demand, since 2007, nonstop long-haul international airline service has been added from Intercontinental to Auckland, Beijing, Doha, Dubai, Frankfurt, Istanbul, London, Luanda, Munich, Rio de Janeiro, Santiago, Seoul, Taipei, and Tokyo. United started nonstop service to Sydney in January 2018.*

Approximately half of the increase in airline seat capacity to Latin America and the Caribbean between July 2000 and July 2017 was attributable to United increasing service on existing routes. The remainder was attributable to new service by United, Spirit, VivaAerobus, Volaris, and Interjet. Increases in seat capacity to the Middle East and Africa were attributable largely to new service by Emirates, Qatar Airways, and Turkish Airlines. Increases in seat capacity to Asia and Oceania were attributable largely to new service by Air China, Air New Zealand, ANA, EVA Airways, and Korean Air. Korean Air discontinued its service to Seoul in October 2017.

*In data presented for airline service and passenger numbers in this report, Puerto Rico and other U.S. Territories are considered to be international destinations.

Table 19
INTERNATIONAL AIRLINE SERVICE
 George Bush Intercontinental Airport
 July of years noted

	Number of airports served			Number of airlines			Average daily scheduled departing seats			Increase (decrease)			
	2000	2007	2017	2000	2007	2017	2000	2007	2017	2013-2014	2014-2015	2015-2016	2016-2017
By airline flag													
U.S.	41	63	60	2	1	3	8,855	12,496	15,429	979	1,539	(335)	(120)
Foreign	12	11	20	9	9	20	2,389	2,690	5,694	695	1,260	(25)	(137)
By destination world region													
Europe	4	4	6	5	5	6	2,026	2,904	2,998	390	(6)	(195)	(144)
Middle East and Africa	--	--	4	--	--	4	--	--	1,033	69	178	(361)	51
Latin America and Caribbean (a)	37	56	50	6	5	7	7,657	10,599	13,664	541	2,563	(249)	(196)
Asia and Oceania	1	1	5	1	1	6	285	283	1,492	707	168	327	(97)
Canada	3	3	5	2	2	3	1,275	1,400	1,937	(33)	(104)	119	128
By aircraft type													
Large jet	7	45	60	11	9	22	10,718	12,309	19,498	1,658	3,005	780	116
Regional jet	8	31	14	1	2	4	492	2,877	1,625	17	(206)	(1,140)	(373)
Turboprop	<u>1</u>	--	--	<u>1</u>	--	--	<u>34</u>	--	--	--	--	--	--
Total all destinations	44	63	70	11	10	23	11,244	15,185	21,123	1,675	2,799	(360)	(257)

(a) Mexico, Central America, South America, and the Caribbean.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.



LEGEND

- Destinations with scheduled nonstop or one-stop (direct single-plane) service by one airline.
- Destinations with scheduled nonstop or one-stop (direct single-plane) service by more than one airline.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Figure 8
INTERNATIONAL DESTINATIONS WITH DIRECT PASSENGER AIRLINE SERVICE
 George Bush Intercontinental Airport
 Scheduled Service in July 2017

HAS647 F-0011

Service by Spirit Airlines

Spirit started serving Intercontinental in 2012 and as of July 2017 provides nonstop service to 17 domestic destinations (with one or two flights per day) and three international destinations in Mexico and Central America (typically with three or four flights per week). As of July 2017, Intercontinental ranked as the eighth busiest airport in Spirit's system with an average of 23 scheduled daily departures using A320 family aircraft with an average seating capacity of 176. In July 2017, Intercontinental ranked second in Spirit's system for international service (after Fort Lauderdale-Hollywood).

Enplaned Passengers

Table 20 presents historical data on enplaned passengers, categorized by originating and connecting, domestic and international. Enplaned passenger numbers at Intercontinental reached a high in FY 2008, then decreased 8.2% in FY 2009 as a result of reduced demand during the 2008-2009 recession. Between FY 2009 and FY 2013, passenger numbers decreased largely as a result of reductions in domestic seat capacity by United following its merger with Continental.*

Between FY 2009 and FY 2017, the number of enplaned passengers at Intercontinental increased an average of 0.5% per year, with the increase attributable to an increase in originating passengers (+2.8% per year average) offset by a small decrease in connecting passengers (-1.3% per year average). Increased numbers of international passengers (+4.1% per year average) were offset by a small decrease in numbers of domestic passengers (-0.5% per year average).

According to U.S. DOT data for FY 2017, passengers who started their travel itineraries at Intercontinental (mostly Houston residents) accounted for 56.8% of domestic originating passengers and 68.9% of international originating passengers. The resident-visitor mix of passengers at Intercontinental has been essentially unchanged since FY 2007.

In FY 2017, United accounted for 77.6% of enplaned passengers at Intercontinental, 58.3% of originating passengers, and 96.7% of connecting passengers. Overall, originating passengers accounted for 49.6% of enplaned passengers in FY 2017. Originating passengers accounted for 37.2% of United's enplaned passengers.

*The Continental-United merger was announced in May 2010; formal acquisition of Continental was completed in October 2010; and a joint operating certificate was awarded by the FAA in November 2011.

Table 20
HISTORICAL ENPLANED PASSENGERS BY COMPONENT
 George Bush Intercontinental Airport
 Fiscal Years ended June 30

Fiscal Year	Originating passengers			Connecting passengers			Total enplaned passengers (a)		
	Domestic (b)	International	Total	Domestic	International	Total	Domestic	International	Total
2000	6,048,000	1,001,000	7,049,000	8,286,546	1,676,795	9,963,341	14,334,546	2,677,795	17,012,341
2001	6,243,000	1,071,000	7,314,000	8,726,209	1,845,886	10,572,095	14,969,209	2,916,886	17,886,095
2002	5,496,000	1,040,000	6,536,000	8,511,108	1,764,206	10,275,314	14,007,108	2,804,206	16,811,314
2003	5,637,000	1,068,000	6,705,000	8,234,399	1,724,289	9,958,688	13,871,399	2,792,289	16,663,688
2004	5,934,000	1,184,000	7,118,000	8,731,046	1,844,090	10,575,136	14,665,046	3,028,090	17,693,136
2005	6,345,000	1,336,000	7,681,000	9,405,936	2,111,653	11,517,589	15,750,936	3,447,653	19,198,589
2006	7,064,000	1,423,000	8,487,000	9,996,922	2,191,945	12,188,867	17,060,922	3,614,945	20,675,867
2007	7,326,000	1,477,000	8,803,000	10,364,360	2,319,270	12,683,630	17,690,360	3,796,270	21,486,630
2008	7,786,000	1,697,000	9,483,000	9,847,347	2,309,909	12,157,256	17,633,347	4,006,909	21,640,256
2009	6,659,000	1,585,000	8,244,000	9,362,884	2,264,795	11,627,679	16,021,884	3,849,795	19,871,679
2010	6,591,000	1,635,000	8,226,000	9,478,211	2,429,440	11,907,651	16,069,211	4,064,440	20,133,651
2011	6,351,000	1,711,000	8,062,000	9,482,789	2,645,711	12,128,500	15,833,789	4,356,711	20,190,500
2012	6,404,000	1,689,000	8,093,000	9,453,019	2,629,697	12,082,716	15,857,019	4,318,697	20,175,716
2013	6,611,000	1,758,000	8,369,000	8,753,525	2,633,678	11,387,203	15,364,525	4,391,678	19,756,203
2014	6,836,000	1,950,000	8,786,000	8,543,889	2,775,401	11,319,290	15,379,889	4,725,401	20,105,290
2015	7,225,000	2,200,000	9,425,000	8,737,984	2,795,571	11,533,555	15,962,984	4,995,571	20,958,555
2016	7,623,000	2,476,000	10,099,000	8,368,897	2,961,706	11,330,603	15,991,897	5,437,706	21,429,603
2017	7,835,000	2,432,000	10,267,000	7,564,661	2,872,123	10,436,784	15,399,661	5,304,123	20,703,784
	Average annual percent increase (decrease)								
2000-2007	2.8%	5.7%	3.2%	3.2%	4.7%	3.5%	3.1%	5.1%	3.4%
2007-2017	0.7	5.1	1.6	(3.1)	2.2	(1.9)	(1.4)	3.4	(0.4)
2000-2017	1.5	5.4	2.2	(0.5)	3.2	0.3	0.4	4.1	1.2

Table 20 (page 2 of 2)

HISTORICAL ENPLANED PASSENGERS BY COMPONENT

George Bush Intercontinental Airport

Fiscal Years ended June 30

Year	Originating passengers			Connecting passengers			Total enplaned passengers (a)		
	Domestic (b)	International	Total	Domestic	International	Total	Domestic	International	Total
Annual percent increase (decrease)									
2000-2001	3.2%	7.0%	3.8%	5.3%	10.1%	6.1%	4.4%	8.9%	5.1%
2001-2002	(12.0)	(2.9)	(10.6)	(2.5)	(4.4)	(2.8)	(6.4)	(3.9)	(6.0)
2002-2003	2.6	2.7	2.6	(3.3)	(2.3)	(3.1)	(1.0)	(0.4)	(0.9)
2003-2004	5.3	10.9	6.2	6.0	6.9	6.2	5.7	8.4	6.2
2004-2005	6.9	12.8	7.9	7.7	14.5	8.9	7.4	13.9	8.5
2005-2006	11.3	6.5	10.5	6.3	3.8	5.8	8.3	4.9	7.7
2006-2007	3.7	3.8	3.7	3.7	5.8	4.1	3.7	5.0	3.9
2007-2008	6.3	14.9	7.7	(5.0)	(0.4)	(4.2)	(0.3)	5.5	0.7
2008-2009	(14.5)	(6.6)	(13.1)	(4.9)	(2.0)	(4.4)	(9.1)	(3.9)	(8.2)
2009-2010	(1.0)	3.2	(0.2)	1.2	7.3	2.4	0.3	5.6	1.3
2010-2011	(3.6)	4.6	(2.0)	0.0	8.9	1.9	(1.5)	7.2	0.3
2011-2012	0.8	(1.3)	0.4	(0.3)	(0.6)	(0.4)	0.1	(0.9)	(0.1)
2012-2013	3.2	4.1	3.4	(7.4)	0.2	(5.8)	(3.1)	1.7	(2.1)
2013-2014	3.4	10.9	5.0	(2.4)	5.4	(0.6)	0.1	7.6	1.8
2014-2015	5.7	12.8	7.3	2.3	0.7	1.9	3.8	5.7	4.2
2015-2016	5.5	12.5	7.2	(4.2)	5.9	(1.8)	0.2	8.9	2.2
2016-2017	2.8	(1.8)	1.7	(9.6)	(3.0)	(7.9)	(3.7)	(2.5)	(3.4)
Share of Intercontinental total									
2000			41.4%			58.6%			100.0%
2007			41.0			59.0			100.0
2017			49.0			51.0			100.0

Notes: Rows may not add to totals shown because of rounding. Percentages were calculated using unrounded numbers.

(a) Includes passengers on nonscheduled (charter) flights and nonrevenue passengers. See Table 8 for data for first 6 months.

(b) Includes passengers boarding domestic flights who connected to international destinations at other U.S. airports.

Source: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Domestic Airfares

Table 21 presents data on domestic originating passengers and average airfares for the top 20 domestic originating passenger destinations from Intercontinental. For Intercontinental's top 20 domestic destinations taken together, between FY 2000 and FY 2007, average airfares decreased 17.4% while originating passenger numbers increased 24.0%; between FY 2007 and FY 2017, average airfares for the top 20 destinations increased 14.6% while originating passenger numbers increased 12.4%.

The influence of airfares on passenger numbers is apparent in particular markets. In a market such as Dallas-Fort Worth where average fares increased the most between FY 2007 and FY 2017 (+90.5%), the number of average daily domestic originating passengers decreased the most. Conversely, in markets where airfares increased the least or decreased between FY 2007 and FY 2017 (Fort Lauderdale, -13.5% and Miami, +0.8%), the number of average daily domestic originating passengers increased the most (Fort Lauderdale, +73.0% and Miami, +109.7%). In response to the low fares offered by Spirit on the Houston-Fort Lauderdale route, both United and American lowered their fares to both Fort Lauderdale and Miami.

As shown on Figure 9, between FY 2000 and FY 2017, the average domestic yield (airline fare revenue per passenger-mile) at Intercontinental was between 18% and 30% higher than the average domestic yield for the United States as a whole. In FY 2017, the average domestic yield for United at Intercontinental was 20 cents per passenger-mile, 53% higher than the average yield for the other airlines at Intercontinental.

Following the 2010 merger with Continental, United reduced capacity at its Intercontinental hub and domestic yields for the airport since the merger have consistently been the highest among its connecting hubs, on average 25% higher than the yields for the other hubs. In part, the higher United yields at Intercontinental are attributable to the shorter average trip distance from the airport (1,150 miles) compared with the trip distances from the other hubs (average of 1,420 miles).

Airfare data presented in Table 21 and Figure 9, as reported by the airlines to the U.S. DOT, do not include charges for optional services, such as checked baggage, in-flight meals, entertainment, and ticket changes that have become widespread since 2006. As a result, the average airfares shown understate the amount actually paid by airline passengers for their travel, particularly for 2017. Optional service charges that were previously included in the ticket price vary by airline and are not all separately reported, but they have been estimated by industry analysts to amount to an effective average surcharge on domestic airfares of approximately 5%.

Table 21
PASSENGERS AND AIRFARES TO TOP 20 DOMESTIC DESTINATIONS
 George Bush Intercontinental Airport
 Fiscal Years ended June 30

Rank	Destination	Average daily domestic originating enplaned passengers						Average one-way fare (a)					
		2000	2007	2017	As percent of total 2017	Percent increase (decrease)		2000	2007	2017	Percent increase (decrease)		
						2000-2007	2007-2017				2000-2007	2007-2017	
1	New York (b)	1,021	1,362	1,562	8.0%	33.4%	14.7%	\$303.32	\$188.46	\$251.01	(37.9%)	33.2%	
2	Los Angeles (c)	783	1,188	1,347	6.9	51.7	13.4	207.63	172.16	160.60	(17.1)	(6.7)	
3	Chicago (d)	731	819	973	5.0	12.0	18.8	166.24	147.93	160.78	(11.0)	8.7	
4	Denver	500	791	844	4.3	58.3	6.7	232.91	127.12	148.18	(45.4)	16.6	
5	Washington, DC-Baltimore (e)	683	835	830	4.3	22.1	(0.5)	223.76	182.16	211.65	(18.6)	16.2	
6	Las Vegas	332	627	757	3.9	89.0	20.8	142.96	145.31	131.73	1.6	(9.3)	
7	San Francisco (f)	618	736	750	3.9	19.0	1.9	243.29	182.25	249.52	(25.1)	36.9	
8	Atlanta	515	498	684	3.5	(3.3)	37.2	125.53	149.16	130.87	18.8	(12.3)	
9	Orlando	295	450	548	2.8	52.9	21.7	147.64	132.96	135.38	(9.9)	1.8	
10	Miami	197	219	460	2.4	11.1	109.7	164.62	148.12	146.98	(10.0)	(0.8)	
11	Seattle-Tacoma	217	329	454	2.3	52.0	37.8	212.75	191.18	200.64	(10.1)	5.0	
12	Boston	312	369	423	2.2	18.3	14.9	289.49	185.85	206.54	(35.8)	11.1	
13	Detroit	262	322	391	2.0	22.9	21.3	151.58	177.94	196.91	17.4	10.7	
14	Fort Lauderdale-Hollywood	143	224	387	2.0	56.4	73.0	156.01	141.78	122.62	(9.1)	(13.5)	
15	Dallas Fort Worth (g)	1,006	641	385	2.0	(36.3)	(39.8)	76.19	84.62	161.22	11.1	90.5	
16	Philadelphia	331	423	365	1.9	27.6	(13.6)	249.32	151.12	259.32	(39.4)	71.6	
17	Minneapolis-St. Paul	223	248	345	1.8	11.2	39.2	164.62	148.12	202.50	(10.0)	36.7	
18	New Orleans	386	404	341	1.8	4.6	(15.6)	89.04	99.39	124.44	11.6	25.2	
19	San Diego	185	301	340	1.8	62.1	13.1	188.73	169.06	163.90	(10.4)	(3.1)	
20	Phoenix	225	334	308	1.6	48.0	(7.5)	172.93	147.10	190.29	(14.9)	29.4	
	Average top 20 destinations	8,966	11,119	12,496	64.4%	24.0%	12.4%	\$191.82	\$158.53	\$181.69	(17.4%)	14.6%	
	All other destinations	6,111	7,503	6,919	35.6	22.8	(7.8)	169.27	172.45	234.11	1.9	35.8	
	Average all destinations	15,078	18,623	19,416	100.0%	23.5%	4.3%	\$182.68	\$164.14	\$200.37	(10.1%)	22.1%	

Notes: Columns may not add to totals shown because of rounding. Percentages shown were calculated using unrounded numbers.

(a) Average one-way fares excluding taxes, fees, passenger facility charges, and charges for optional services.

(b) Newark Liberty International, LaGuardia, and John F. Kennedy International airports.

(c) Los Angeles International, Bob Hope, Long Beach, LA/Ontario International, and John Wayne airports.

(d) Chicago O'Hare and Chicago Midway international airports.

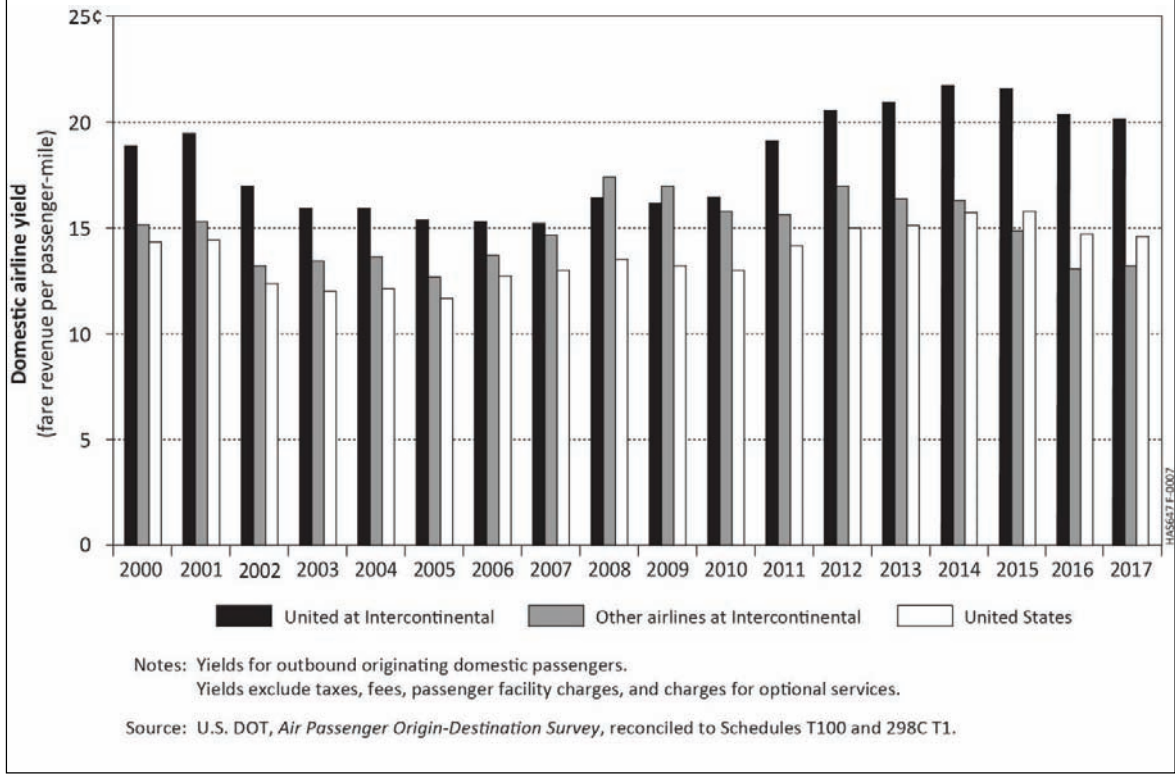
(e) Washington Dulles International, Reagan Washington National, and Baltimore/Washington International Thurgood Marshall airports.

(f) San Francisco, Oakland, and Mineta San Jose international airports.

(g) Dallas/Fort Worth International Airport and Dallas Love Field.

Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Figure 9
TRENDS IN DOMESTIC PASSENGER AIRLINE YIELDS
 George Bush Intercontinental Airport and United States
 Fiscal Years ended June 30



Airline Shares of Domestic Enplaned Passengers

As shown in Table 22, United and United Express together enplaned 80.1% of domestic passengers at Intercontinental in FY 2017, a decrease from 91.2% in FY 2007. The decrease in United's share was largely accounted for by the increase in the shares of domestic passengers enplaned by Spirit.

Table 22
AIRLINE SHARES OF DOMESTIC ENPLANED PASSENGERS
 George Bush Intercontinental Airport
 Fiscal Years ended June 30

Airline	Average daily enplaned passengers			Airline share of total		
	2000	2007	2017	2000	2007	2017
United Airlines						
United	27,854	30,936	22,230	70.9%	63.8%	52.7%
United Express	<u>4,981</u>	<u>13,256</u>	<u>11,583</u>	<u>12.7</u>	<u>27.4</u>	<u>27.5</u>
Subtotal	32,835	44,192	33,813	83.6%	91.2%	80.1%
American Airlines	3,552	2,374	3,054	9.0	4.9	7.2
Spirit Airlines	--	--	2,433	--	--	5.8
Delta Air Lines	2,269	1,645	2,034	5.8	3.4	4.8
Frontier Airlines	--	251	585	--	0.5	1.4
Alaska Airlines	--	--	252	--	--	0.6
Southwest Airlines	557	--	--	1.4	--	--
All other	<u>60</u>	<u>5</u>	<u>20</u>	<u>0.2</u>	<u>0.0</u>	<u>0.0</u>
Total	39,273	48,467	42,191	100.0%	100.0%	100.0%

Notes: The shares of enplaned passengers by airline in FY 2000 were estimated using the OAG Analyser and U.S. DOT, Schedule T100 databases.
 Enplaned passengers on affiliated regional airlines are included for airlines other than United.
 Columns may not add to totals shown because of rounding.
 Percentages were calculated using unrounded numbers.

Source: Houston Airport System records, except as noted.

Airline Shares of International Enplaned Passengers

Passengers enplaning on international flights accounted for 17.7% of all enplaned passengers at Intercontinental in FY 2007 and 25.6% in FY 2017.

As shown in Table 23, United and United Express together enplaned 70.4% of international passengers at Intercontinental in FY 2017, a decrease from 81.6% in FY 2007. The decrease in United's share was almost entirely accounted for by increases in the shares for foreign flag airlines that started Intercontinental service after FY 2007 including Emirates, EVA, Turkish, Qatar, ANA, Interjet, Air New Zealand, and Air China.

Alliances and joint ventures between airlines have become an important part of the airline industry on international routes, and the largest U.S. network airlines are all members of alliances with foreign-flag airlines. Alliances typically involve marketing, code-sharing, and coordination of schedules to facilitate interline passenger transfers. Joint ventures involve closer cooperation, integration of services, and sharing of revenues on designated routes. Joint ventures operate under the grant of antitrust immunity by the governments of the partner airlines. Under such joint ventures, the revenues derived by each airline partner are independent of which airline actually flies the passenger, creating powerful incentives for the airlines to develop seamless passenger services and maximize passenger revenues.

United is a founding member of the Star Alliance. Other Star Alliance members serving Intercontinental as of July 2017 were Air Canada, Air China, Air New Zealand, ANA, EVA, Avianca, Lufthansa, Singapore, and Turkish. United participates in two airline joint ventures providing for the sharing of revenues on routes to and from Intercontinental, one with Lufthansa covering transatlantic routes and one with ANA covering transpacific routes. United has upgraded the baggage-handling facilities at its terminals at Intercontinental to expedite the transfer of baggage between its flights and those of its Star Alliance partners.

Member airlines of the SkyTeam alliance serving Intercontinental as of July 2017 were Aeromexico, Air France, Delta, KLM, and Korean. Member airlines of the Oneworld alliance serving Intercontinental as of July 2017 were American, British, and Qatar.

Table 23
AIRLINE SHARES OF INTERNATIONAL ENPLANED PASSENGERS
George Bush Intercontinental Airport
Fiscal Years ended June 30

Airline	Average daily enplaned passengers			Airline share of total		
	2000	2007	2017	2000	2007	2017
United Airlines (a)						
United	5,279	6,637	8,558	72.2%	63.8%	58.9%
United Express	<u>291</u>	<u>1,845</u>	<u>1,667</u>	<u>4.0</u>	<u>17.7</u>	<u>11.5</u>
Subtotal	5,570	8,482	10,225	76.2%	81.6%	70.4%
Air Canada (a)	163	241	423	2.2	2.3	2.9
Lufthansa German Airlines (a)	159	248	388	2.2	2.4	2.7
Aeromexico	306	257	348	4.2	2.5	2.4
British Airways	282	292	332	3.9	2.8	2.3
Emirates	--	--	283	--	--	1.9
EVA Air (a)	--	--	244	--	--	1.7
Turkish Airlines (a)	--	--	223	--	--	1.5
KLM-Royal Dutch Airlines	185	275	217	2.5	2.6	1.5
Air France	177	338	210	2.4	3.2	1.4
Qatar Airways	--	--	206	--	--	1.4
All Nippon Airways (ANA) (a)	--	--	201	--	--	1.4
Interjet	--	--	194	--	--	1.3
Air New Zealand (a)	--	--	188	--	--	1.3
Spirit Airlines	--	--	161	--	--	1.1
Air China (a)	--	--	152	--	--	1.0
Singapore Airlines (a)	--	--	118	--	--	0.8
Korean Air Lines	--	--	101	--	--	0.7
Avianca (a)	93	89	86	1.3	0.9	0.6
WestJet	--	--	84	--	--	0.6
Volaris	--	--	65	--	--	0.4
VivaAerobus	--	--	55	--	--	0.4
China Airlines	--	68	--	--	0.7	--
Aviacsa	85	44	--	1.2	0.4	--
Cayman Airways	50	20	--	0.7	0.2	--
All other	<u>239</u>	<u>36</u>	<u>29</u>	<u>3.3</u>	<u>0.4</u>	<u>0.2</u>
Total	7,309	10,401	14,532	100.0%	100.0%	100.0%

Notes: The shares of enplaned passengers by airline in FY 2000 were estimated using the OAG Analyser and U.S. DOT, Schedule T100 databases.
Columns may not add to totals shown because of rounding.
Percentages were calculated using unrounded numbers.
In 2017, "All other" included, Atlas Air, Sunwing, American, and Aviation Advantage.

(a) Member of Star Alliance.

Source: Houston Airport System records, except as noted.

Air Cargo

Intercontinental is an important air cargo airport, ranking 17th among U.S. airports in terms of international cargo weight in FY 2016 (see Table 13).

As shown in Table 24, between FY 2007 and FY 2017, the weight of domestic freight at Intercontinental was virtually unchanged, while the weight of international freight increased an average of 2.6% per year, for a combined average increase of 1.3% per year. In FY 2017, 52.6% of freight was international. Of all cargo (freight and mail) enplaned and deplaned in FY 2017, 49.1% was carried by all-cargo airlines and 51.9% was carried by passenger airlines in the belly compartments of passenger aircraft. The small overall increase in domestic air cargo since FY 2000 is attributable to a number of factors, including security restrictions on the carriage of freight and mail on passenger aircraft and the increased use of time-definite ground transportation modes as the relative operating economics of air and truck modes have changed.

Aircraft Operations

Historical aircraft operations (landings and takeoffs) at Intercontinental are shown in Table 25. In FY 2017, shares of operations were air carrier 72.5%, air taxi/commuter 25.0%, general aviation 2.4%, and military less than 0.1%. The number of general aviation aircraft operations decreased between FY 2000 and FY 2009 and has since numbered between 11,100 and 12,200 operations annually, most by corporate jets.

The number of commercial aircraft operations (air carrier and air taxi/commuter) decreased 23.9% between FY 2007 (the peak year) and FY 2017, compared with a decrease of 3.6% in the number of enplaned passengers over the same period, as the average number of seats per aircraft and the average passenger load factor (percentage of seats occupied by passengers) both increased.

HISTORICAL AIRLINE SERVICE AND TRAFFIC AT HOBBY

Hobby is an important airport in Southwest's system. Table 26 shows Southwest service at its 10 busiest airports. As scheduled for July 2017, Hobby ranked seventh, with 23,480 average daily departing seats. As scheduled for July 2017, Hobby was the second busiest international airport in Southwest's system, with 1,853 average daily departing seats to Central American and Caribbean destinations (after Fort Lauderdale with 2,038 average daily departing seats).

Historical airline service and passenger data by airline for merged airlines are accounted for with data for the surviving airline (including AirTran with Southwest). Also, data for affiliated regional airlines are accounted for with data for the mainline airline. Regional airlines operating at Hobby as code-sharing affiliates as of July 2017 were Envoy Air (American Eagle), ExpressJet Airlines (American Eagle and Delta Connection), and Mesa Airlines (American Eagle). AirTran served Hobby from 1998 until the merger with Southwest was completed in 2014.

Table 24
HISTORICAL AIR CARGO WEIGHT
George Bush Intercontinental Airport
Fiscal Years ended June 30
(thousands of pounds)

Fiscal Year	Freight			Mail	Freight and mail		
	Domestic	International	Total		Passenger	All-cargo	Total
2000	346,858	259,116	605,973	198,227	n.a.	n.a.	804,200
2001	327,350	270,954	598,304	213,470	n.a.	n.a.	811,774
2002	323,044	249,298	572,342	140,484	422,898	289,928	712,825
2003	382,779	283,889	666,668	113,490	432,677	347,480	780,158
2004	436,772	321,848	758,620	112,554	443,940	427,234	871,174
2005	438,451	323,667	762,118	110,538	433,452	439,204	872,656
2006	432,810	337,987	770,798	98,574	418,912	450,459	869,371
2007	440,367	376,994	817,361	95,851	441,209	472,002	913,212
2008	446,912	399,306	846,218	77,081	425,693	497,605	923,298
2009	390,145	363,473	753,618	79,561	389,313	443,866	833,179
2010	405,651	400,104	805,756	81,609	453,328	434,037	887,365
2011	428,419	460,288	888,708	74,743	489,154	474,296	963,450
2012	423,363	478,249	901,611	73,324	454,366	520,569	974,935
2013	420,379	477,808	898,187	59,848	413,712	544,323	958,035
2014	398,384	497,007	895,391	60,270	421,362	534,299	955,661
2015	397,382	557,591	954,973	66,208	479,536	541,646	1,021,181
2016	406,422	451,961	858,383	56,697	466,133	448,947	915,080
2017	441,428	489,170	930,598	55,081	501,398	484,281	985,679
	Average annual percent increase (decrease)						
2000-2007	3.5%	5.5%	4.4%	(9.9%)	n.c.	n.c.	1.8%
2007-2017	0.0	2.6	1.3	(5.4)	1.3	0.3	0.8
2000-2017	1.4	3.8	2.6	(7.3)	n.c.	n.c.	1.2
	Annual percent increase (decrease)						
2016-2017	8.6%	8.2%	8.4%	(2.9%)	7.6%	7.9%	7.7%

n.a. = not available, n.c. = not calculated.

Notes: Sum of enplaned and deplaned freight and mail excludes air cargo carried on military and general aviation flights.

Rows may not add to totals shown because of rounding. Percentages were calculated using unrounded numbers.

Source: Houston Airport System records.

Table 25
HISTORICAL AIRCRAFT OPERATIONS
 George Bush Intercontinental Airport
 Fiscal Years ended June 30

Fiscal Year	Air carrier	Air taxi/ commuter	General aviation	Military	Total
2000	357,465	92,729	26,424	406	477,024
2001	320,462	148,900	27,149	366	496,877
2002	261,516	175,421	23,104	222	460,263
2003	287,879	154,119	21,033	153	463,184
2004	276,667	208,822	19,352	220	505,061
2005	272,826	250,941	17,100	195	541,062
2006	265,166	303,535	16,372	199	585,272
2007	283,998	308,512	14,253	241	607,004
2008	288,248	296,821	14,498	224	599,791
2009	263,463	272,709	11,693	241	548,106
2010	252,830	269,283	11,124	198	533,435
2011	272,475	247,517	11,884	278	532,154
2012	292,566	220,780	12,131	202	525,679
2013	273,636	217,893	12,124	285	503,938
2014	275,638	213,931	12,149	314	502,032
2015	308,833	188,956	11,978	367	510,134
2016	344,170	132,836	11,553	630	489,189
2017	335,183	115,773	11,198	136	462,290
	Average annual percent increase (decrease)				
2000-2007	(3.2%)	18.7%	(8.4%)	(7.2%)	3.5%
2007-2017	1.7	(9.3)	(2.4)	(5.6)	(2.7)
2000-2017	(0.4)	1.3	(4.9)	(6.2)	(0.2)
	Annual percent increase (decrease)				
2016-2017	(2.6%)	(12.8%)	(3.1%)	(78.4%)	(5.5%)

Notes: Rows may not add to totals shown because of rounding.
 Percentages were calculated using unrounded numbers.

Source: Houston Airport System records.

Table 26
SOUTHWEST SERVICE AT ITS PRINCIPAL AIRPORTS

City (airport)	July								Increase (decrease)	
	2000	2005	2007	2009	2011	2013	2015	2017	2000-2007	2007-2015
Average daily scheduled aircraft departures										
Chicago (Midway)	125	194	241	226	245	255	261	255	117	15
Baltimore/Washington	102	193	218	213	244	227	219	227	116	2
Las Vegas	148	201	234	232	225	220	213	209	85	(19)
Denver	--	4	44	118	152	165	181	203	44	149
Dallas (Love)	122	103	125	123	117	120	158	173	2	45
Phoenix (Sky Harbor)	168	187	200	176	185	166	165	167	32	(31)
Houston (Hobby)	142	139	144	133	134	149	152	157	2	10
Orlando (International)	59	120	171	161	173	137	123	127	112	(47)
Los Angeles (International)	115	123	122	122	118	110	120	122	7	(4)
Atlanta	135	199	261	239	216	181	122	117	126	(141)
Average daily scheduled departing seats										
Chicago (Midway)	16,427	26,271	32,598	30,716	33,116	37,238	39,072	38,568	16,171	5,922
Baltimore/Washington	13,930	25,712	29,238	28,226	32,607	31,930	32,183	34,147	15,308	3,545
Las Vegas	19,927	27,333	31,847	31,615	30,637	32,074	31,519	31,248	11,919	468
Denver	--	524	6,084	15,981	20,697	23,920	27,036	30,852	6,084	23,065
Dallas (Love)	15,789	13,319	16,462	16,674	15,920	16,299	22,314	25,291	673	7,810
Phoenix (Sky Harbor)	22,669	25,575	27,118	24,008	25,182	23,606	24,312	25,040	4,450	(2,058)
Houston (Hobby)	18,598	18,368	19,101	17,975	18,066	20,530	21,689	23,480	503	3,303
Orlando (International)	7,571	15,825	22,593	21,241	22,631	18,391	18,154	19,015	15,022	(3,961)
Los Angeles (International)	15,541	16,732	16,680	16,655	16,012	15,963	17,464	17,911	1,139	494
Atlanta	14,747	23,815	32,253	29,406	26,520	22,682	17,439	17,461	17,507	(14,883)

Note: Airports shown are the 10 busiest U.S. airports as ranked by departing seats on Southwest for July 2017.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Airline Service

Figure 10 shows the domestic destinations with daily nonstop service from Hobby as scheduled for July 2017.

Table 27 presents data on nonstop airline service from Hobby to the top 20 domestic originating passenger destinations. As scheduled for July 2017, Southwest provided nonstop service to all 20 of the top destinations. Four destinations (Dallas-Fort Worth, New York, Atlanta, and Boston) were served nonstop by one other airline. All of the top 20 Hobby destinations were also served nonstop from Intercontinental.

Table 28 provides data on domestic airline service at Hobby by aircraft type. As scheduled for July 2017, 41 cities were served nonstop, an increase from 31 in July 2007. As scheduled for July 2017, 93.9% of departing seats were provided on large jet aircraft (mostly Southwest B-737).

Effective October 2015, Southwest started international service from the new international terminal at Hobby, the first scheduled international service at Hobby since Intercontinental opened in 1969. Figure 11 shows the ten international destinations with nonstop service as scheduled for July 2017.



LEGEND

- Destinations with scheduled service by only one airline.
- Destinations with scheduled service by more than one airline.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Figure 10
U.S. DESTINATIONS WITH NONSTOP PASSENGER AIRLINE SERVICE
 William P. Hobby Airport
 Scheduled Service in July 2017

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Table 27
AIRLINE SERVICE TO TOP DOMESTIC DESTINATIONS
 William P. Hobby Airport
 July of years noted

Rank (a)	Destination Airport	Airlines providing nonstop service (b) 2017	Average daily scheduled							
			Aircraft departures				Departing seats			
			2000	2007	2016	2017	2000	2007	2016	2017
1	Dallas Fort Worth	AA, WN	48	34	26	25	4,775	3,907	3,001	3,182
	<i>Dallas Fort Worth</i>	AA	17	7	9	7	775	348	567	516
	<i>Love Field</i>	WN	31	27	18	18	4,000	3,558	2,435	2,666
2	New York	B6, WN	3	3	4	3	345	300	579	441
	<i>Kennedy</i>	B6	--	3	1	1	--	300	150	150
	<i>LaGuardia</i>	WN	3	--	3	2	345	--	429	291
	<i>Newark</i>	--	--	--	--	--	--	--	--	--
3	Los Angeles	WN	2	4	6	6	237	548	900	919
	<i>Los Angeles</i>	WN	2	4	5	5	237	548	757	776
	<i>Orange County</i>	WN	--	--	1	1	--	--	143	143
4	Washington DC/Baltimore	WN	2	4	7	7	274	548	1,098	1,011
	<i>Baltimore/Washington</i>	WN	2	4	4	4	274	548	572	605
	<i>Reagan</i>	WN	--	--	4	3	--	--	526	406
5	Chicago (Midway)	WN	2	6	6	7	274	797	936	1,050
6	New Orleans	WN	20	9	9	9	2,585	1,189	1,296	1,293
7	Denver	WN	--	2	6	6	--	274	846	922
8	Atlanta	DL, WN	10	12	11	11	1,301	1,160	1,297	1,349
9	Las Vegas	WN	3	4	5	5	402	544	809	766
10	Orlando	WN	--	5	5	5	--	685	737	765
11	Boston	B6, WN	--	--	3	3	--	--	413	438
12	San Francisco (Oakland)	WN	--	1	2	2	--	137	313	323
13	Phoenix	WN	5	5	5	5	663	648	708	666
14	St. Louis	WN	8	5	4	4	1,130	619	543	575
15	Nashville	WN	6	5	4	4	848	606	542	538
16	Kansas City	WN	1	--	2	3	104	--	262	406
17	Tulsa	WN	5	4	3	3	592	466	383	392
18	Fort Lauderdale	WN	--	2	2	2	--	274	285	344
19	Oklahoma City	WN	4	4	4	4	463	546	520	536
20	Midland/Odessa	WN	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>228</u>	<u>259</u>	<u>383</u>	<u>401</u>
	Total top 20 markets		119	109	115	114	14,221	13,505	15,853	16,316
	Other markets		<u>62</u>	<u>51</u>	<u>44</u>	<u>46</u>	<u>7,233</u>	<u>6,736</u>	<u>6,373</u>	<u>6,770</u>
	Total all markets		181	160	159	161	21,454	20,241	22,225	23,086

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

(a) Top 20 destinations ranked by numbers of domestic originating passengers for the 12 months ended June 2016.

(b) Airlines operating scheduled passenger service.

Legend: AA=American Airlines, B6=JetBlue Airways, DL=Delta Air Lines, WN=Southwest Airlines.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Table 28
DOMESTIC AIRLINE SERVICE BY AIRCRAFT TYPE
 William P. Hobby Airport
 July of years noted

	2000	2007	2017	Increase (decrease)	
				2000-2007	2007-2017
Cities served nonstop (a)					
Large jet	26	30	41	4	11
Regional jet	2	2	2	--	--
Jet overall	27	31	41	4	10
Turboprop	3	--	--	(3)	--
Total destinations served nonstop	28	31	41	3	10
Average daily scheduled aircraft departures					
Large jet	155	144	151	(10)	6
Regional jet	<u>9</u>	<u>15</u>	<u>10</u>	6	(6)
Jet overall	164	160	161	(4)	1
Turboprop	<u>17</u>	<u>--</u>	<u>--</u>	(17)	--
Total aircraft departures	181	160	161	(21)	1
Percent of total					
Large jet	85.5%	90.4%	93.9		
Regional jet	<u>5.0</u>	<u>9.6</u>	<u>6.1</u>		
Jet overall	90.5%	100.0%	100.0%		
Turboprop	9.5%	0.0%	0.0%		
Average daily scheduled departing seats					
Large jet	20,342	19,229	22,364	(1,112)	3,135
Regional jet	<u>448</u>	<u>1,012</u>	<u>723</u>	564	(289)
Jet overall	20,790	20,241	23,086	(549)	2,845
Turboprop	<u>664</u>	<u>--</u>	<u>--</u>	(664)	--
Total departing seats	21,454	20,241	23,086	(1,213)	2,845
Percent of total					
Large jet	94.8%	95.0%	96.9%		
Regional jet	<u>2.1</u>	<u>5.0</u>	<u>3.1</u>		
Jet overall	96.9%	100.0%	100.0%		
Turboprop	3.1%	0.0%	0.0%		
Average seats per departure					
Large jet	132	133	148	2	15
Regional jet	50	66	74	16	8
Jet overall	127	127	144	(0)	17
Turboprop	39	--	--	(39)	--
Total seats per departure	119	127	144	8	17

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

Changes were calculated using unrounded numbers.

(a) Some destinations are served by more than one airport and some airports are served by more than one airline or aircraft type. Destinations are those with an average of at least four flights per week.

Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

Figure 11
INTERNATIONAL DESTINATIONS WITH DIRECT PASSENGER AIRLINE SERVICE
 William P. Hobby Airport
 Scheduled Service in July 2017



Source: OAG Aviation Worldwide Ltd, OAG Analyser database, accessed August 2017.

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Enplaned Passengers

Table 29 presents historical data on enplaned passengers, categorized by originating and connecting, domestic and international. Enplaned passenger numbers at Hobby have increased each year since FY 2009, surpassing the pre-recession (FY 2008) high in FY 2011. Between FY 2009 and FY 2017, the number of enplaned passengers increased an average of 6.1% per year, with the increase attributable to both originating passengers (4.1% per year average increase) and connecting passengers (11.2% per year average increase). In FY 2017, originating passengers accounted for 66.1% of enplaned passengers and connecting passengers accounted for 33.9% (essentially all on Southwest). In addition to the enplaned passenger numbers shown in Table 29, in FY 2017, Southwest carried approximately 224,000 transit passengers (i.e., passengers on through flights who did not deplane at Hobby during the stopover).

According to U.S. DOT data for FY 2017, passengers who began their travel itineraries at Hobby (mostly Houston residents) accounted for 54.4% of originating passengers, an increase from 49.8% in FY 2007.

Table 29
HISTORICAL ENPLANED PASSENGERS BY COMPONENT
 William P. Hobby Airport
 Fiscal Years ended June 30

Fiscal Year	Originating passengers			Connecting passengers			Total enplaned passengers (a)		
	Domestic (b)	International	Total	Domestic	International	Total	Domestic	International	Total
2000	3,416,000	--	3,416,000	1,101,932	--	1,101,932	4,517,932	--	4,517,932
2001	3,405,000	--	3,405,000	1,113,493	--	1,113,493	4,518,493	--	4,518,493
2002	3,052,000	--	3,052,000	1,042,633	--	1,042,633	4,094,633	--	4,094,633
2003	2,907,000	--	2,907,000	991,556	--	991,556	3,898,556	--	3,898,556
2004	3,007,000	--	3,007,000	1,037,560	--	1,037,560	4,044,560	--	4,044,560
2005	3,084,000	--	3,084,000	1,066,726	--	1,066,726	4,150,726	--	4,150,726
2006	3,096,000	--	3,096,000	1,140,218	--	1,140,218	4,236,218	--	4,236,218
2007	3,236,000	--	3,236,000	1,107,757	--	1,107,757	4,343,757	--	4,343,757
2008	3,465,000	--	3,465,000	1,097,171	--	1,097,171	4,562,171	--	4,562,171
2009	3,194,000	--	3,194,000	964,923	--	964,923	4,158,923	--	4,158,923
2010	3,198,000	--	3,198,000	1,199,403	--	1,199,403	4,397,403	--	4,397,403
2011	3,442,000	--	3,442,000	1,297,183	--	1,297,183	4,739,183	--	4,739,183
2012	3,737,000	--	3,737,000	1,391,109	--	1,391,109	5,128,109	--	5,128,109
2013	3,785,000	--	3,785,000	1,591,588	--	1,591,588	5,376,588	--	5,376,588
2014	3,893,000	--	3,893,000	1,942,891	--	1,942,891	5,835,891	--	5,835,891
2015	4,027,000	1,000	4,028,000	1,916,358	1,055	1,917,413	5,943,358	2,055	5,945,413
2016	4,204,000	106,000	4,310,000	1,912,898	159,871	2,072,769	6,116,898	265,871	6,382,769
2017	4,229,000	172,000	4,401,000	1,990,751	268,506	2,259,257	6,219,751	440,506	6,660,257
	Average annual percent increase (decrease)								
2000-2007	(0.8%)	n.c.	(0.8%)	0.1%	n.c.	0.1%	(0.6%)	n.c.	(0.6%)
2007-2017	2.7	n.c.	3.1	6.0	n.c.	7.4	3.7	n.c.	4.4
2000-2017	1.3	n.c.	1.5	3.5	n.c.	4.3	1.9	n.c.	2.3

Table 29 (page 2 of 2)

HISTORICAL ENPLANED PASSENGERS BY COMPONENT

William P. Hobby Airport
Fiscal Years ended June 30

Fiscal Year	Originating passengers			Connecting passengers			Total enplaned passengers (a)		
	Domestic (b)	International	Total	Domestic	International	Total	Domestic	International	Total
Annual percent increase (decrease)									
2000-2001			(0.3%)			1.0%			0.0%
2001-2002			(10.4)			(6.4)			(9.4)
2002-2003			(4.8)			(4.9)			(4.8)
2003-2004			3.4			4.6			3.7
2004-2005			2.6			2.8			2.6
2005-2006			0.4			6.9			2.1
2006-2007			4.5			(2.8)			2.5
2007-2008			7.1			(1.0)			5.0
2008-2009			(7.8)			(12.1)			(8.8)
2009-2010			0.1			24.3			5.7
2010-2011			7.6			8.2			7.8
2011-2012			8.6			7.2			8.2
2012-2013			1.3			14.4			4.8
2013-2014			2.9			22.1			8.5
2014-2015			3.5			(1.3)			1.9
2015-2016			7.0			8.1			7.4
2016-2017			3.5			6.1			4.3
Share of Hobby total									
2000			75.6%			24.4%			100.0%
2007			74.5			25.5			100.0
2017			67.0			33.0			100.0

n.c. = not calculated.

Notes: Rows may not add to totals shown because of rounding. Percentages were calculated using unrounded numbers.

(a) Includes passengers on nonscheduled (charter) flights and nonrevenue passengers. See Table 8 for data for first 6 months.

(b) Includes passengers boarding domestic flights who connected to international destinations at other U.S. airports.

Source: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Domestic Airfares

Table 30 presents data on domestic originating passengers and average airfares for the top 20 domestic originating passenger destinations from Hobby. For Hobby's top 20 domestic destinations (in FY 2017) taken together, average airfares increased 8.4% between FY 2000 and FY 2007, while originating passenger numbers increased 1.1%. Between FY 2007 and FY 2017, average airfares increased 36.0%, while passenger numbers increased 45.0% as Southwest, in particular, added service at Hobby.

Recent increases in airfares at Hobby are attributable in part to increased trip distances. Between FY 2007 and FY 2017, the average trip distance flown from Hobby on Southwest increased 31.9%, from 708 miles to 933 miles, as the airline reduced service to nearby cities such as Dallas, St. Louis, and Tulsa, and increased service to distant cities such as Boston, Los Angeles, Oakland, and Washington DC. (See Table 27.)

The influence of airfare competition on passenger numbers is apparent in the Hobby-Boston market, where JetBlue and Southwest started service within a month of one another in June-July 2013. Thereafter, airfares were reduced by 8.1% and passenger numbers increased tenfold. Some of the increase in Hobby-Boston traffic is attributable to the lack of nonstop competition for United in the Intercontinental-Boston market.

In FY 2011 through FY 2013, when no nonstop Hobby-Boston service was provided, Hobby accounted for 16% of Houston-Boston originating passengers (and Intercontinental for 84%). Since then, with nonstop service being provided Hobby-Boston by both JetBlue and Southwest, Hobby has accounted for between 41% and 43% of Houston-Boston originating passengers.

As noted in the earlier discussion of Table 21, the reported airfare data presented in Table 30 do not include charges for optional services, such as those for checked baggage and in-flight meals.

As shown on Figure 12, in FY 2016, the average domestic yield (airline fare revenue per passenger-mile) at Hobby (17 cents) was higher than that for the U.S. airline industry as a whole (15 cents). Since FY 2002, the average domestic yield at Hobby has been approximately 15% to 25% higher than the U.S. average.

Table 30
PASSENGERS AND AIRFARES TO TOP 20 DOMESTIC DESTINATIONS
 William P. Hobby Airport
 Fiscal Years ended June 30

Rank	City market	Average daily domestic originating enplaned passengers						Average one-way fare (a)					
		2000	2007	2017	As percent of total		Percent increase (decrease)		2000	2007	2017	Percent increase (decrease)	
					2017	2000-2007	2007-2017	2000-2007				2007-2017	
1	Dallas Fort Worth (b)	1,803	1,487	946	8.5%	(17.5%)	(36.4%)	\$ 70.07	\$ 85.05	\$159.82	21.4%	87.9%	
2	Los Angeles (c)	270	319	645	5.8	18.3	102.0	148.16	140.96	143.34	(4.9)	1.7	
3	Washington, DC-Baltimore (d)	227	288	639	5.7	26.9	121.8	143.58	130.17	157.34	(9.3)	20.9	
4	Chicago (e)	226	308	623	5.6	36.5	102.6	129.94	130.29	125.48	0.3	(3.7)	
5	Denver	22	128	544	4.9	474.5	325.6	193.29	93.94	135.21	(51.4)	43.9	
6	Atlanta	291	328	522	4.7	12.8	59.3	116.66	123.99	130.12	6.3	4.9	
7	New Orleans	708	461	478	4.3	(34.9)	3.8	73.38	91.39	128.49	24.5	40.6	
8	New York (f)	190	363	459	4.1	91.5	26.5	199.07	112.66	164.86	(43.4)	46.3	
9	Las Vegas	269	317	394	3.5	17.9	24.3	102.07	113.48	147.71	11.2	30.2	
10	San Francisco (g)	137	147	349	3.1	7.8	137.2	147.48	141.33	191.59	(4.2)	35.6	
11	Orlando	144	179	337	3.0	24.1	87.9	121.91	125.88	141.61	3.3	12.5	
12	Boston	31	22	336	3.0	(29.0)	1,404.5	164.50	147.36	130.01	(10.4)	(11.8)	
13	Phoenix	151	191	258	2.3	26.4	35.4	134.48	122.70	179.94	(8.8)	46.6	
14	Nashville	188	191	248	2.2	1.8	29.5	102.45	121.05	167.05	18.2	38.0	
15	St. Louis	236	219	234	2.1	(6.9)	6.5	105.61	127.36	176.22	20.6	38.4	
16	Kansas City	126	104	210	1.9	(17.2)	101.1	123.15	137.33	151.61	11.5	10.4	
17	Fort Lauderdale	62	89	189	1.7	43.5	113.8	129.59	123.80	122.65	(4.5)	(0.9)	
18	San Diego	80	73	180	1.6	(9.1)	148.1	133.33	137.83	166.92	3.4	21.1	
19	Tampa	80	112	179	1.6	39.0	60.6	127.03	115.88	150.73	(8.8)	30.1	
20	Midland-Odessa	<u>148</u>	<u>153</u>	<u>176</u>	<u>1.6</u>	3.3	15.1	90.82	103.94	197.18	14.4	89.7	
	Average top 20 destinations	5,387	5,479	7,947	71.1%	1.7%	45.0%	101.87	110.41	150.17	8.4%	36.0%	
	All other destinations	<u>3,575</u>	<u>2,998</u>	<u>3,235</u>	<u>28.9</u>	(16.1)	7.9	105.57	114.27	176.55	8.2	54.5	
	Average all destinations	8,962	8,477	11,182	100.0%	(5.4%)	31.9%	\$103.29	\$112.00	\$157.80	8.4%	40.9%	

Notes: Columns may not add to totals shown because of rounding. Percentages shown were calculated using unrounded numbers.

(a) Average one-way fares excluding taxes, fees, passenger facility charges, and charges for optional services.

(b) Dallas Fort Worth International Airport and Dallas Love Field.

(c) Los Angeles International, Bob Hope, Long Beach, LA/Ontario International, and John Wayne airports.

(d) Washington Dulles International, Reagan Washington National, and Baltimore/Washington International Thurgood Marshall airports.

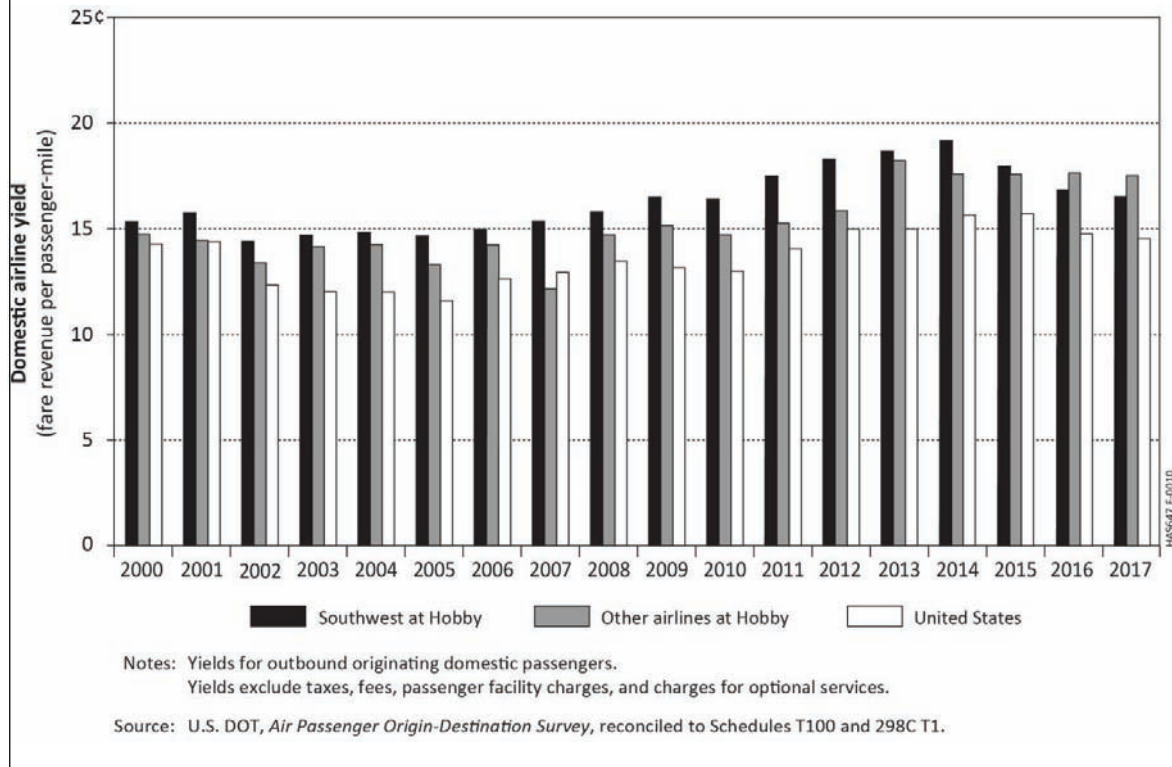
(e) Chicago O'Hare and Chicago Midway international airports.

(f) Newark Liberty International, LaGuardia, and John F. Kennedy International airports.

(g) San Francisco, Oakland, and Mineta San Jose International airports.

Source: U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Figure 12
TRENDS IN DOMESTIC PASSENGER AIRLINE YIELDS
 William P. Hobby Airport and United States
 Fiscal Years ended June 30



Airline Shares of Enplaned Passengers

As shown in Table 31, Southwest enplaned 93.0% of passengers at Hobby in FY 2017, compared with 92.4% in FY 2007, as American and Delta added service, mainly by increasing the size of aircraft serving Hobby.

Aircraft Operations

Historical aircraft operations (landings and takeoffs) at Hobby are shown in Table 32. In FY 2017, the shares of aircraft operations were: air carrier 58.6%, air taxi/commuter 12.2%, general aviation 28.9%, and military 0.3%.

The higher numbers of military operations between 2010 and 2016 were attributable to the misreporting of some general aviation operations as military. Adjusting for this misreporting, the number of general aviation operations decreased steadily from FY 2000 through FY 2012 and were then stable at approximately 56,000 in FY 2012 through FY 2015 before increasing in FY 2016 and FY 2017.

Table 31
AIRLINE SHARES OF TOTAL ENPLANED PASSENGERS

William P. Hobby Airport
 Fiscal Years ended June 30

Airline	Average daily enplaned passengers			Airline share of total		
	2000	2007	2017	2000	2007	2017
Southwest Airlines	10,647	10,995	16,969	86.0%	92.4%	93.0%
Delta Air Lines	706	374	611	5.7	3.1	3.3
American Airlines	890	307	402	7.2	2.6	2.2
JetBlue Airways	--	214	258	--	1.8	1.4
United Airlines	132	--	--	1.1	--	--
All other	<u>3</u>	<u>10</u>	<u>7</u>	<u>0.0</u>	<u>0.1</u>	<u>0.0</u>
Total	12,378	11,901	18,247	100.0%	100.0%	100.0%

Notes: The shares of enplaned passengers by airline in FY 2000 were estimated using the OAG Analyser and U.S. DOT, Schedule T100 databases. Columns may not add to totals shown because of rounding. Percentages were calculated using unrounded numbers.

Source: Houston Airport System records, except as noted.

KEY FACTORS AFFECTING FUTURE AIRLINE TRAFFIC

In addition to the demographics and economy of the Houston MSA, as discussed earlier, key factors that will affect future airline traffic at Intercontinental and Hobby 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 the airports

Table 32
HISTORICAL AIRCRAFT OPERATIONS
 William P. Hobby Airport
 Fiscal Years ended June 30

Fiscal Year	Air carrier	Air taxi/ commuter	General aviation	Military	Total
2000	123,773	22,044	111,578	86	257,481
2001	122,106	30,681	97,629	1,148	251,564
2002	113,909	39,745	92,627	305	246,586
2003	110,903	42,919	89,955	405	244,182
2004	110,647	44,640	88,240	418	243,945
2005	109,284	48,863	85,322	265	243,734
2006	102,883	52,189	84,987	371	240,430
2007	107,905	47,943	82,630	265	238,743
2008	110,775	35,691	83,480	566	230,512
2009	103,190	29,903	74,063	837	207,993
2010	101,666	28,226	70,989	1,105	201,986
2011	100,462	39,920	59,802	2,970	203,154
2012	106,347	33,203	54,056	2,471	196,077
2013	109,368	35,230	53,132	2,728	200,458
2014	114,679	35,414	53,479	2,372	205,944
2015	113,665	30,053	54,493	2,529	200,740
2016	117,012	26,488	54,340	5,527	203,367
2017	119,561	24,949	58,929	634	204,070
Average annual percent increase (decrease)					
2000-2007	(1.9%)	11.7%	(4.2%)	17.4%	(1.1%)
2007-2017	1.0	(6.3)	(3.3)	9.1	(1.6)
2000-2017	(0.2)	0.7	(3.7)	12.5	(1.4)
Annual percent increase (decrease)					
2016-2017	2.2%	(5.8%)	8.4%	(88.5%)	0.3%

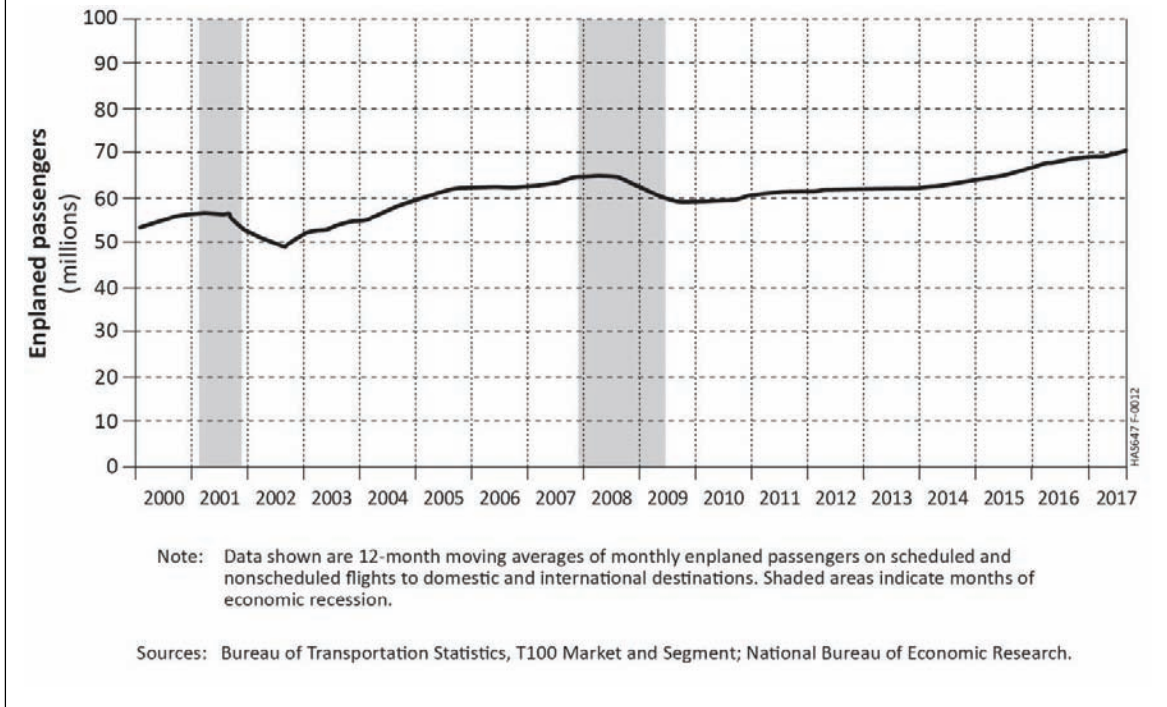
Notes: Rows may not add to totals shown because of rounding.
 Percentage were calculated using unrounded numbers.

Source: Houston Airport System records.

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 13, recessions in the U.S. economy in 2001 and 2008-2009 and associated high unemployment reduced discretionary income and resulted in reduced airline travel. Sustained future increases in passenger traffic at the HAS airports will depend on national economic growth.

Figure 13
HISTORICAL ENPLANED PASSENGERS ON U.S. AIRLINES



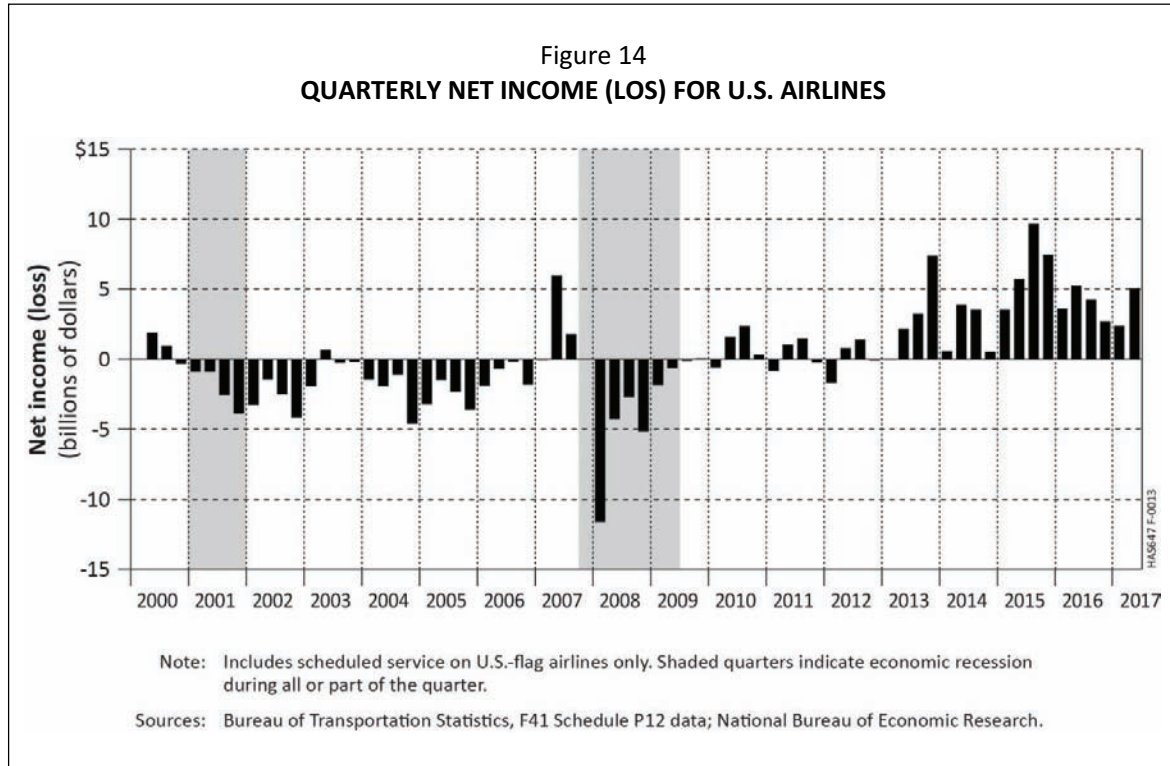
With the globalization of business and the increased importance of international trade and tourism, international economics, trade balances, currency exchange rates, government policies, and political relationships all influence passenger traffic at major U.S. airports.

Concerns about hostilities, terrorist attacks, and other perceived 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 has issued various orders and proclamations seeking to restrict travel to the United States from certain countries, mainly in the Middle East and Africa, that are deemed by the administration not to meet standards for screening visa applicants. Such proposed travel restrictions are being challenged in court and have to date not been fully implemented. Depending on the form of restrictions eventually adopted, increased scrutiny by U.S. Customs and Border Protection could prevent or discourage some travel.

Sustained future increases in international passenger traffic at the HAS airports will depend 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 the HAS airports will depend partly on the profitability of the U.S. airline industry and the associated ability of the industry and individual airlines, particularly United and Southwest, to make the necessary investments to provide service. Figure 14 shows historical net income for U.S. airlines.



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, either under Chapter 11 bankruptcy protection or the possibility of such. Between 2002 and 2005, Delta, Northwest, United, and US Airways all filed for bankruptcy protection 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, as oil and aviation fuel prices increased to unprecedented levels, the industry experienced a profitability crisis. 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 and 2017. 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 is expected by airline industry analysts to contribute to continued industry profitability. However, any resumption of financial losses could cause 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, present business opportunities for the remaining airlines, and change airline travel patterns nationwide.

Airline Service and Routes

Intercontinental and Hobby accommodate travel demand to and from the Houston MSA and serve as connecting hubs. The number of origin and destination passengers at the two airports depends 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. The number of connecting passengers, on the other hand, depends entirely on the airline fares and service provided at the airports.

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 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, Intercontinental serves as a primary connecting hub and international gateway for United, while Hobby serves as a connecting airport and Latin American gateway for Southwest. As a result, much of the connecting passenger traffic at the two airports results from the route networks and flight schedules of United and, to a lesser extent, Southwest, rather than the economy of the Houston MSA. If United were to reduce connecting service at Intercontinental (or Southwest were to reduce connecting service at Hobby), such service would not necessarily be replaced by other airlines, although reductions in service by any airline would create business opportunities for others. Hypothetical reductions in passenger traffic as a result of reduced connecting airline service at the airports are discussed in the later section “Stress Test Forecasts of Enplaned Passengers.”

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 the HAS airports, will depend, in part, on the level of airfares.

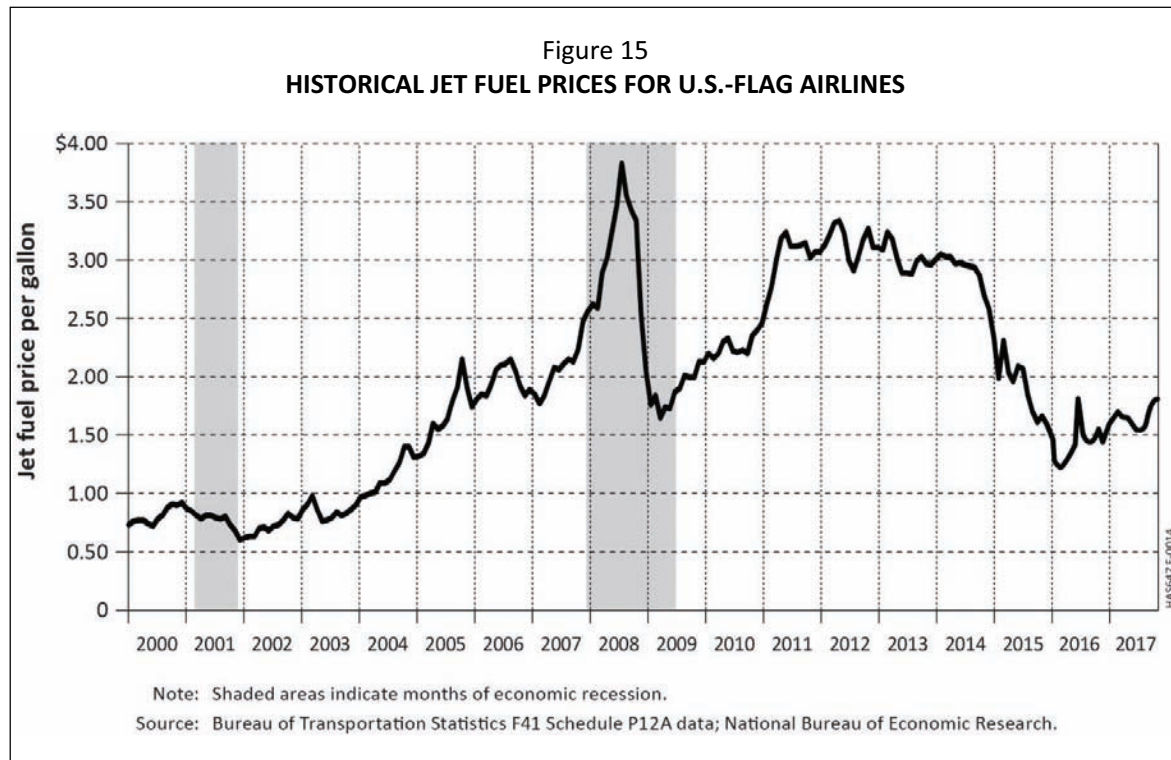
Overcapacity in the industry, the ability of consumers to compare airfares and book flights easily via the Internet, and other competitive factors combined to reduce airfares between 2000 and 2005. During that period, the average domestic yield for U.S.-flag airlines decreased from 16.1 cents to 13.8 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 16.7 cents per passenger-mile in 2016.

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. Fuel prices are particularly sensitive to worldwide political instability and economic uncertainty. Figure 15 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.

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-2017 was still approximately 60% 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 low 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 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 at 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 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, it can be expected that future demand for airline travel at the HAS airports 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 have decreased as a result of reduced numbers of aircraft operations (down approximately 20% between 2007 and 2016) but, as airline travel increases in the future, flight delays and restrictions can be expected.

Capacity of the Airports

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 the HAS airports will depend on the capacity of the airports themselves. At both Intercontinental and Hobby, it is expected that existing and planned terminal and airfield facilities will have the capacity to accommodate growth in airline traffic well beyond that forecast for the period covered in this report.

AIRLINE TRAFFIC FORECASTS

Forecasts of airline traffic through FY 2022 were developed on the basis of the economic outlook for the Houston MSA, trends in historical airline traffic, published future flight schedules, and key factors likely to affect future traffic, as discussed earlier in this report. Forecasts for Intercontinental and Hobby documented in the FAA's *Terminal Area Forecast (TAF)*, issued in January 2017, were also reviewed.

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

The airline traffic forecasts for both airports were developed on the basis of 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. Oil and other energy prices will stabilize, and following slow growth in FY 2018, the economy of the Houston MSA will recover in FY 2019 and thereafter grow at a faster rate than the U.S. economy as a whole.
3. Airlines will add service to meet travel demand at the airports and competition among airlines will ensure competitive airfares for flights from the airports.
4. A generally stable international political environment and safety and security precautions will ensure airline traveler confidence in aviation without imposing unreasonable inconveniences.
5. There will be no major disruption of airline service or airline travel behavior as a result of international hostilities or terrorist acts or threats.

Forecast Passengers at Intercontinental

For FY 2018, the number of enplaned passengers at Intercontinental is forecast to be reduced slightly, to 20.5 million, as a result of expected slow economic growth in the Houston MSA and the temporary closing of the airport and other disruptions to travel caused by the Harvey flooding. For FY 2019, the number of passengers is then forecast to increase to 21.5 million (for an average increase of 1.9% per year over the two years FY 2017 to FY 2019).

Thereafter, between FY 2019 and FY 2022, it was assumed that:

- Intercontinental will continue to be a connecting hub and international gateway airport for United and the airline will provide service generally consistent with current levels.
- Future shares of domestic passengers enplaned by United and other airlines will be generally consistent with FY 2017 shares.
- No change will occur in the competitive position of Intercontinental as a gateway for international passengers relative to competing U.S. airports.

Overall, between FY 2017 and FY 2022, the number of enplaned passengers at Intercontinental is forecast to increase an average of 2.1% per year, lower than the average increase for the airport forecast by the FAA in the TAF (2.7% per year) and

consistent with the “slow growth” forecast adopted for the Intercontinental master plan (2.0% per year). Between FY 2017 and FY 2022, the number of enplaned domestic passengers is forecast to increase an average of 2.0% per year and the number of enplaned international passengers is forecast to increase an average of 2.5% per year. Originating passengers are forecast to account for approximately the same share of enplaned passengers (49%) through the forecast period.

Figure 16 presents the enplaned passenger forecasts graphically for the base case and for a stress test, as described later. Table 33 presents historical and forecast total enplaned, originating, and connecting passengers at Intercontinental, along with domestic and international subtotals.

Forecast Landed Weight at Intercontinental

Forecasts of landed weight at Intercontinental (shown in Exhibit E-2) were derived from the passenger forecasts assuming generally unchanged average aircraft seat capacities and passenger load factors, resulting in a forecast rate of increase in passenger airline landed weight averaging the same as for enplaned passenger numbers.

Forecast Passengers at Hobby

As with Intercontinental, it was forecast that the number of enplaned passengers will be reduced slightly in FY 2018 to reflect expected slow economic growth in the Houston MSA and the disruptions caused by the Harvey flooding, and then increase strongly in FY 2019. (The forecast increase over the two years FY 2017 to FY 2019 averages 2.1% per year.)

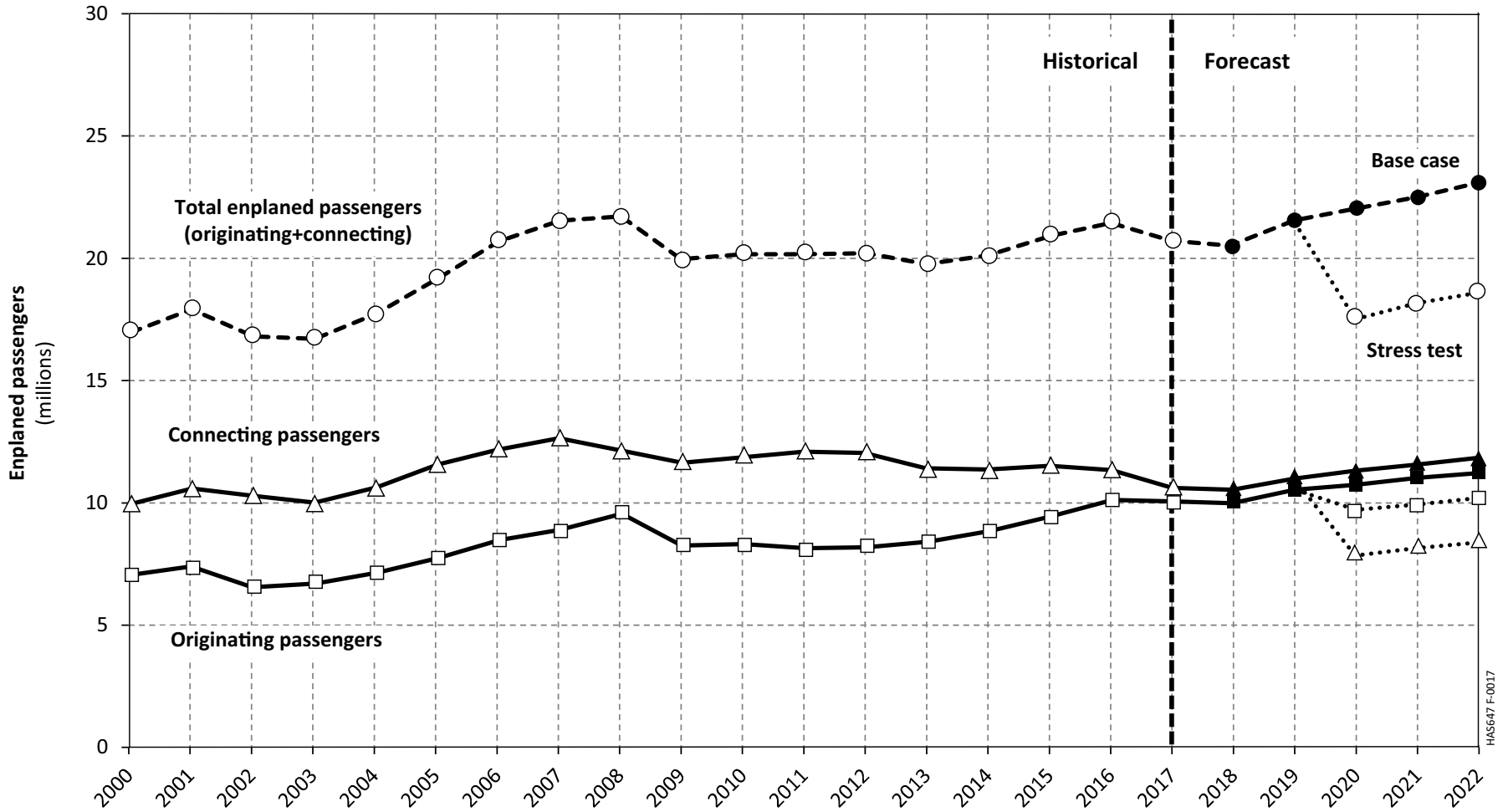
Thereafter, between FY 2019 and FY 2022, it was assumed that:

- Southwest will continue to develop Hobby as a connecting airport and Latin American gateway and the airline will increase service.
- Future shares of domestic passengers enplaned by Southwest and other airlines will be generally consistent with FY 2017 shares.

Between FY 2017 and FY 2022, the number of enplaned passengers at Hobby is forecast to increase an average of 2.2% per year, consistent with the average increase forecast by the FAA in the TAF (2.4% per year) and the “low growth” forecast adopted for the Hobby master plan (2.2% per year). Between FY 2017 and FY 2022, the number of enplaned domestic passengers is forecast to increase an average of 2.0% per year and the number of enplaned international passengers is forecast to increase an average of 4.5% per year. Originating passengers are forecast to account for approximately the same share of enplaned passengers (67%) through the forecast period.

Figure 16
BASE CASE AND STRESS TEST FORECASTS OF ENPLANED PASSENGERS
 George Bush Intercontinental Airport
 For Fiscal Years ending June 30

The forecasts presented in this figure were prepared using the information and assumptions described in the accompanying text. Inevitably, some of the 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.



Sources: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.

Forecast: LeighFisher, December 2017.

Table 33

ENPLANED PASSENGERS
George Bush Intercontinental Airport
For Fiscal Years ending June 30
(passengers in thousands)

The forecasts presented in this table were prepared using the information and assumptions described in the accompanying text.
Inevitably, some of the 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.

Intercontinental	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Enplaned passengers										
Domestic	15,365	15,380	15,963	15,992	15,400	15,330	16,080	16,390	16,700	17,010
Annual percent change	-3.1%	0.1%	3.8%	0.2%	-3.7%	-0.5%	4.9%	1.9%	1.9%	1.9%
International	4,392	4,725	4,996	5,438	5,304	5,170	5,420	5,610	5,800	5,990
Annual percent change	1.7%	7.6%	5.7%	8.9%	-2.5%	-2.5%	4.8%	3.5%	3.4%	3.3%
Total enplaned	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Annual percent change	-2.1%	1.8%	4.2%	2.2%	-3.4%	-1.0%	4.9%	2.3%	2.3%	2.2%
International share of total	22.2%	23.5%	23.8%	25.4%	25.6%	25.2%	25.2%	25.5%	25.8%	26.0%
Originating passengers										
Domestic	6,611	6,836	7,225	7,623	7,835	7,650	8,000	8,160	8,320	8,480
Annual percent change	3.2%	3.4%	5.7%	5.5%	2.8%	-2.4%	4.6%	2.0%	2.0%	1.9%
International	1,758	1,950	2,200	2,476	2,432	2,350	2,480	2,560	2,640	2,720
Annual percent change	4.1%	10.9%	12.8%	12.5%	-1.8%	-3.4%	5.5%	3.2%	3.1%	3.0%
Total enplaned	8,369	8,786	9,425	10,099	10,267	10,000	10,480	10,720	10,960	11,200
Annual percent change	3.4%	5.0%	7.3%	7.2%	1.7%	-2.6%	4.8%	2.3%	2.2%	2.2%
International share of total	8.9%	9.7%	10.5%	11.6%	11.7%	11.5%	11.5%	11.6%	11.7%	11.8%
Connecting passengers										
Domestic	8,754	8,544	8,738	8,369	7,565	7,680	8,080	8,230	8,380	8,530
Annual percent change	-7.4%	-2.4%	2.3%	-4.2%	-9.6%	1.5%	5.2%	1.9%	1.8%	1.8%
International	2,634	2,775	2,796	2,962	2,872	2,820	2,940	3,050	3,160	3,270
Annual percent change	0.2%	5.4%	0.7%	5.9%	-3.0%	-1.8%	4.3%	3.7%	3.6%	3.5%
Total enplaned	11,387	11,319	11,534	11,331	10,437	10,500	11,020	11,280	11,540	11,800
Annual percent change	-5.8%	-0.6%	1.9%	-1.8%	-7.9%	0.6%	5.0%	2.4%	2.3%	2.3%
International share of total	13.3%	13.8%	13.3%	13.8%	13.9%	13.8%	13.7%	13.9%	14.0%	14.2%
Percent originating										
Domestic	43.0%	44.4%	45.3%	47.7%	50.9%	49.9%	49.8%	49.8%	49.8%	49.9%
International	40.0%	41.3%	44.0%	45.5%	45.9%	45.5%	45.8%	45.6%	45.5%	45.4%
Total	42.4%	43.7%	45.0%	47.1%	49.6%	48.8%	48.7%	48.7%	48.7%	48.7%
Percent United										
Domestic	85.7%	83.7%	82.0%	80.0%	80.1%	79.4%	79.4%	79.4%	79.4%	79.4%
International	78.1%	75.8%	73.9%	70.9%	70.4%	71.2%	71.2%	71.3%	71.3%	71.4%
Total	84.0%	81.9%	80.1%	77.7%	77.6%	77.3%	77.3%	77.3%	77.3%	77.3%

(a) Source: Houston Airport System records.
Forecast: LeighFisher, December 2017.

Originating passengers are forecast to account for approximately the same share of enplaned passengers (67%) through the forecast period.

Figure 17 presents the enplaned passenger forecasts graphically for the base case and for a stress test, described below. Table 34 presents historical and forecast total enplaned, originating, and connecting passengers at Hobby, along with domestic and international subtotals.

Forecast Landed Weight at Hobby

Forecasts of landed weight at Hobby (shown in Exhibit E-4) were derived from the passenger forecasts assuming generally unchanged average aircraft seat capacities and passenger load factors, resulting in a forecast rate of increase in passenger airline landed weight the same as for enplaned passenger numbers.

Stress Test Forecasts of Enplaned Passengers

Stress test forecasts of enplaned passengers were developed to provide the basis for projecting HAS financial results under hypothetical reductions in passenger numbers, such as could occur under conditions of weak economic growth or recession, restricted seat capacity, and high airfares. Hypothetical reductions in connecting airline service, such as could result from changes in airline network strategies, were also considered. For both airports, relative to the base case forecast, originating passenger numbers would be 10% lower and connecting passenger numbers would be 30% lower in FY 2020. Passenger numbers would thereafter increase at the same rate as for the base case forecasts.

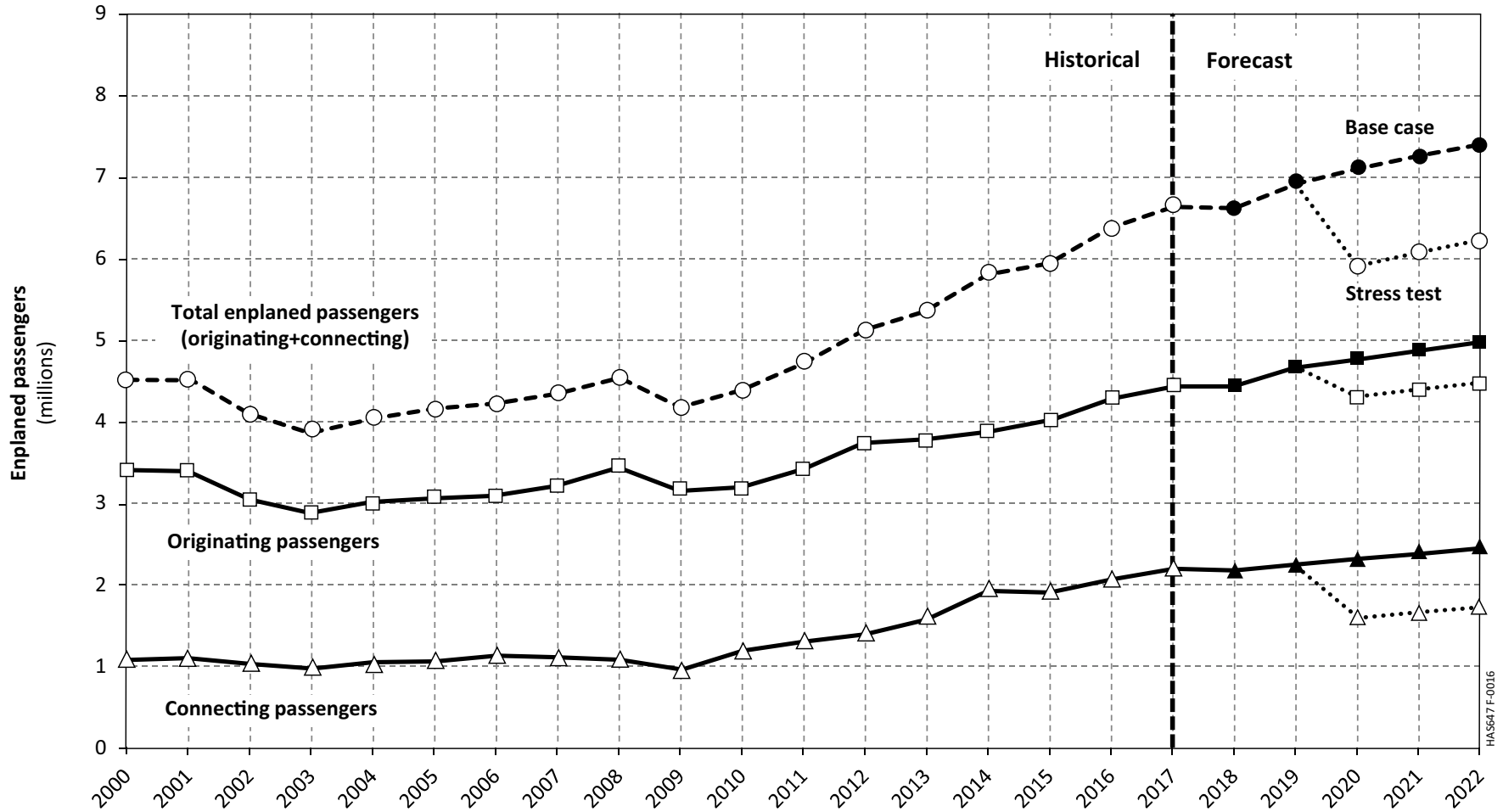
For Intercontinental, the number of enplaned passengers for the stress test forecast in FY 2022 is 18.6 million, compared with 23.0 million for the base case forecast. Originating passengers account for approximately 55% of the FY 2022 total in the stress test forecast, compared with 49% in the base case forecast.

For Hobby, the number of enplaned passengers for the stress test forecast in FY 2022 is 6.2 million, compared with 7.4 million for the base case forecast. Originating passengers account for approximately 72% of the FY 2022 total in the stress test forecast, compared with 67% in the base case forecast.

Figures 16 and 17 depict the stress test forecasts graphically for Intercontinental and Hobby, respectively.

Figure 17
BASE CASE AND STRESS TEST FORECASTS OF ENPLANED PASSENGERS
 William P. Hobby Airport
 For Fiscal Years ending June 30

The forecasts presented in this figure were prepared using the information and assumptions described in the accompanying text. Inevitably, some of the 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.



Sources: LeighFisher estimates based on analysis of Houston Airport System traffic reports and data from the U.S. DOT, *Air Passenger Origin-Destination Survey*, reconciled to Schedules T100 and 298C T1.
 Forecast: LeighFisher, December 2017.

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Table 34

ENPLANED PASSENGERS
William P. Hobby Airport
For Fiscal Years ending June 30
(passengers in thousands)

The forecasts presented in this table were prepared using the information and assumptions described in the accompanying text.
Inevitably, some of the 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.

Hobby	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Enplaned passengers										
Domestic	5,377	5,836	5,943	6,117	6,220	6,160	6,450	6,590	6,730	6,870
Annual percent change	4.8%	8.5%	1.8%	2.9%	1.7%	-1.0%	4.7%	2.2%	2.1%	2.1%
International	-	-	2	266	441	460	490	510	530	550
Annual percent change					65.7%	4.4%	6.5%	4.1%	3.9%	3.8%
Total enplaned	5,377	5,836	5,945	6,383	6,660	6,620	6,940	7,100	7,260	7,420
Annual percent change	4.8%	8.5%	1.9%	7.4%	4.3%	-0.6%	4.8%	2.3%	2.3%	2.2%
International share of total	0.0%	0.0%	0.0%	4.2%	6.6%	6.9%	7.1%	7.2%	7.3%	7.4%
Originating passengers										
Domestic	3,785	3,893	4,027	4,204	4,229	4,250	4,460	4,550	4,640	4,730
Annual percent change	1.3%	2.9%	3.4%	4.4%	0.6%	0.5%	4.9%	2.0%	2.0%	1.9%
International	-	-	1	106	172	200	220	230	240	250
Annual percent change					62.3%	16.3%	10.0%	4.5%	4.3%	4.2%
Total enplaned	3,785	3,893	4,028	4,310	4,401	4,450	4,680	4,780	4,880	4,980
Annual percent change	1.3%	2.9%	3.5%	7.0%	2.1%	1.1%	5.2%	2.1%	2.1%	2.0%
International share of total	0.0%	0.0%	0.0%	1.7%	2.6%	3.0%	3.2%	3.2%	3.3%	3.4%
Connecting passengers										
Domestic	1,592	1,943	1,916	1,913	1,991	1,910	1,990	2,040	2,090	2,140
Annual percent change	14.4%	22.1%	-1.4%	-0.2%	4.1%	-4.1%	4.2%	2.5%	2.5%	2.4%
International	-	-	1	160	269	260	270	280	290	300
Annual percent change					68.0%	-3.2%	3.8%	3.7%	3.6%	3.4%
Total enplaned	1,592	1,943	1,917	2,073	2,259	2,170	2,260	2,320	2,380	2,440
Annual percent change	14.4%	22.1%	-1.3%	8.1%	9.0%	-4.0%	4.1%	2.7%	2.6%	2.5%
International share of total	0.0%	0.0%	0.0%	2.5%	4.0%	3.9%	3.9%	3.9%	4.0%	4.0%
Percent originating										
Domestic	70.4%	66.7%	67.8%	68.7%	68.0%	69.0%	69.1%	69.0%	68.9%	68.9%
International				39.9%	39.0%	43.5%	44.9%	45.1%	45.3%	45.5%
Total	70.4%	66.7%	67.7%	67.5%	66.1%	67.2%	67.4%	67.3%	67.2%	67.1%
Percent Southwest										
Domestic	92.9%	92.5%	92.0%	92.5%	92.5%	92.7%	92.7%	92.7%	92.7%	92.7%
International				100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total	92.9%	92.5%	92.0%	92.8%	93.0%	93.2%	93.2%	93.2%	93.3%	93.3%

(a) Source: Houston Airport System records.
Forecast: LeighFisher, December 2017.

FINANCIAL ANALYSIS

FRAMEWORK FOR AIRPORT FINANCIAL OPERATIONS

The City owns and operates the Houston Airport System, comprising Intercontinental, Hobby, and Ellington, as an enterprise fund of the City. The acronym HAS is commonly used to refer to the City department that manages the Airport System. HAS employs approximately 1,200 people under the direction of a Director of Aviation, who is appointed by the Mayor, subject to confirmation by the City Council. In addition to HAS employees, 250 Houston Police Department and 180 Houston Fire Department employees are assigned to Intercontinental and Hobby.

Bond Ordinance

The financial operations of the Airport System are governed, in large part, by City ordinances authorizing the issuance of outstanding Bonds and other obligations. After a series of amendments to those ordinances became effective in 2012, the City authorized the preparation of a comprehensive Master Bond Ordinance (adopted in November 2016) to govern the issuance of future Bonds. In the Rate Covenant (Section 3.03(a)) of the Master Bond Ordinance, the City covenants that it will impose and collect rentals, rates, fees, and charges for use of the Airport System as required to ensure that, in each Fiscal Year, Net Revenues (Gross Revenues less Operation and Maintenance (O&M) Expenses) are at least sufficient to cover the greater of (1) 125% of the Debt Service Requirements of Outstanding Senior Lien Obligations plus 110% of the Debt Service Requirements of Outstanding Subordinate Lien Bonds plus 100% of the Debt Service Requirements of Outstanding Inferior Lien Bonds or (2) all amounts required to be deposited into the interest, sinking, and reserve funds. The Master Bond Ordinance provides conditions for the issuance of Additional Bonds on a parity with Outstanding Bonds, and prescribes the application of Gross Revenues to the funds and accounts established under the Bond Ordinance, as described in Exhibit G and the later section "Application of Revenues."

Airline Agreements

At both Intercontinental and Hobby, most landing fees and terminal rentals are paid by the airlines pursuant to use and lease agreements or special facilities lease agreements under which the airline payments are set according to cost-recovery principles. The agreements generally require the signatory airlines to pay landing fees, terminal building rentals, and other charges to enable the City to recover capital and operating costs allocable to the facilities used or occupied by the airlines. Airlines that are not signatory to use and lease agreements operate at the airports under licenses or other arrangements on a month-to-month basis.

At Intercontinental, costs are accounted for separately for the airfield; each of the Terminal A, B, C, D, and E buildings; the aircraft parking aprons at each terminal; the Central FIS building; and the Skyway APM system. For each of the terminal building cost centers, costs are further allocated to airline facilities (holdrooms, operations, and

other space used or occupied by the airlines) and nonairline facilities (public circulation, restroom, concession, and other space not used or occupied by the airlines). Costs to be recovered through rentals, fees, or charges for each airline cost center comprise the airline rate base requirement for such cost center.

Costs generally included in each airline rate base requirement are: (1) direct O&M expenses; (2) allocated systemwide, overhead, and other indirect O&M expenses; (3) level annual amortization of investments in capital improvements (net of amortized amounts contributed from PFC revenues); (4) interest on land (applicable to the airfield rate base); (5) allocated costs of airport-wide systems, such as the Subway inter-terminal train, roadways, and central utility plants; (6) any allocated required replenishment of the Renewal and Replacement Fund; and (7) reallocated costs for HAS operations and administration space.

Historically (since Intercontinental opened in 1969), the rate base requirement for each terminal has been recovered according to a compensatory rate-making methodology whereby rental rates are calculated by dividing the rate base requirement by airline rentable space so that airlines pay only for the space they rent. Costs attributable to public circulation and other nonairline facilities are the responsibility of HAS and paid from concession and other nonairline revenues (parking, rental car, and other revenues generated outside the terminal buildings). HAS also bears responsibility for the costs of vacant airline rentable space.

In 2001, with the financing of Terminal E with special facilities revenue bonds, HAS began transitioning most of the terminals leased to United from the historical compensatory rate-making arrangements to net lease business arrangements, whereby United generally assumes responsibility for all operating expenses and capital recovery costs, including those for public and other nonairline space and, in return, retains concession revenues generated inside the terminal buildings (food and beverage, retail, duty free, advertising, and other services). Under the net lease arrangements, United pays ground rentals and makes other payments to HAS to cover certain capital charges for facilities financed by HAS as well as certain allocated indirect expenses.

Use and lease provisions now in effect at the terminals are as summarized in Table 35. Compensatory arrangements are in effect for Terminal A, Terminal D, and parts of Terminal B (pending redevelopment of the entire terminal by United). Net lease arrangements with United are in effect for Terminal C, Terminal E, and the redeveloped areas of Terminal B. When the planned redevelopment of Terminal B is completed, net lease arrangements will be in effect for all United terminals (Terminals B, C, and E).

Table 35
TERMINAL USE AND LEASE PROVISIONS
 George Bush Intercontinental Airport
 December 2017

Terminal	Main airline users <i>(a)</i>	Enplaned passengers <i>(b)</i>	Term	Rate-making provisions	Gate use provisions
Terminal A	U.S.-flag airlines other than United mainline, Air Canada, and WestJet	18.1%	Month-to-month	Standard compensatory provisions	Preferential use (Air Canada American, Delta, Spirit, and United Express); Common use (other airlines)
Terminal B	United Express	18.1%	2041	Standard provisions transitioning to net lease provisions as phases of redevelopment occur; Net lease provisions for new B-South concourse effective 2013	Exclusive use
Terminal C	United mainline	30.1%	2037	Net lease provisions for C-South concourse and central terminal effective 2016 and for new C-North concourse effective 2017	Exclusive use
Terminal D	Foreign-flag airlines	6.5%	Month-to-month	Standard provisions (with charges assessed per use)	Common use
Terminal E	United mainline	27.2%	2030	Net lease provisions effective 2003	Exclusive use

(a) See Table 1 for details of airline use.

(b) Share of FY 2017 enplaned passengers.

Exhibit E-2 shows estimates of annual concession revenues retained by United and O&M expenses paid directly by United in Terminals B, C, and E as rate-making transitions from compensatory to net-lease arrangements.

Airline use fees for the Skyway APM system at Intercontinental are set to recover 100% of the system's operating expenses and capital costs net of those paid from PFC revenues. As approved under PFC Application #1, all APM capital costs other than those for the APM maintenance facility are paid from PFC revenues.

Landing fees at Intercontinental are set according to a cost-center residual rate-making methodology under which the airfield rate base requirement is calculated net of fuel flowage fees paid by the operators of general aviation aircraft (currently assessed at \$0.06 per gallon). The landing fee rate is then calculated by dividing the net rate base requirement by the landed weight of all airline aircraft. The methodology results in 100% recovery of airfield costs from the combination of airline landing fees and general aviation fuel flowage fees. Landing fee rates are assessed at the same rate per unit of landed weight for airlines signatory to use and lease agreements and nonsignatory airlines.

Specific provisions of the use, lease, and special facilities agreements in effect at Intercontinental are summarized in the following paragraphs. Airline revenues were forecast on the assumption that United and other airlines will pay rentals, fees, and charges in accordance with the provisions of such agreements, to include the recovery of the capital costs of the CIP.

Terminal A Use and Lease Agreement. The Terminal A agreement, which expired in 2005 and continues in effect on a month-to-month basis, provides for the calculation of rentals generally according to the historical rate-making methodology. Terminal space is leased on a preferential-use basis or managed by HAS on a common-use basis. The agreement incorporates facility management provisions designed to promote the efficient and flexible use of terminal space.

Terminal B Improvement Projects and Special Facilities Lease Agreement. Effective November 2011, in connection with the planned three-phase redevelopment of Terminal B, the City and United entered into a 30-year special facilities lease agreement, extending to November 2041, under which United leases all of Terminal B and is granted rights to redevelop the terminal in phases. United's redevelopment is to be financed from the proceeds of special facilities revenue bonds and United will lease the redeveloped facilities under net lease arrangements similar to those in effect for Terminal E but providing for the payment of some inside concession revenues to HAS. HAS will pay the costs of replacing aircraft parking aprons and aircraft fueling systems, and for relocating or improving other facilities as needed to enable terminal redevelopment. Such HAS costs are expected to be paid from PFC revenues and Airports Improvement Fund (AIF) moneys.

Phase I of development under the special facilities lease agreement, the B-South concourse for United Express regional jet operations, opened in May 2013, replacing the two original flight stations. United's share of funding for the Phase I project was provided from the proceeds of special facilities revenue bonds issued in 2011.

Phase II of development, the new C-North concourse for United mainline operations (located on the Terminal B leasehold), opened in May 2017. United's share of funding for the Phase II project was provided from the proceeds of special facilities revenue bonds issued in 2015.

An amendment to the Terminal B lease agreement was executed in April 2015 to provide for modifications to United's leasehold to allow construction of the new C-North concourse and other ITRP projects to proceed as contemplated in the ITRP Memorandum of Agreement (ITRP MoA) (discussed later). The lease agreement amendment provides for payment of a fee to United in consideration of the early termination of its lease of the original C-North concourse premises and moving expenses (included on Exhibit A with the costs of the new C-North concourse). The lease termination payment is to be funded from the proceeds of the proposed 2018A (New Money) Bonds.

Phase III provides for the future construction of two additional north international concourses to replace the last two original flight stations, construction of a new FIS facility, and redevelopment of the Terminal B central building. United has the right to proceed with financing and development of the Phase III projects (but is not required to complete their construction) until December 2024. For purposes of this report, Phase III development was assumed to occur after the forecast period, and United's leasing of space in Terminal B, other than the south concourse, was assumed to continue under historical compensatory rate-making arrangements.

Terminal C Use and Lease Agreement. United's Terminal C agreement was amended effective April 2015 to provide for the leasing of Terminal C-South premises under net lease arrangements similar to those in effect for the B-South concourse, replacing the long-standing compensatory arrangements. The new arrangements became effective as of the beginning of FY 2016. Terminal C-South is defined to encompass the C-South concourse, the central terminal building, and the portion of the C-North concourse accommodating three gates adjacent to the new C-North concourse (i.e., all Terminal C facilities other than those to be redeveloped as part of ITRP). As amended, the agreement extends to December 2037.

Terminal D Central FIS International Facilities Agreement. Terminal D and the Central FIS building are operated on a common-use basis under an agreement that expires in June 2020 but may be cancelled at any time with 30 days' notice. Use charges are set generally in accordance with the historical compensatory rate-making methodology. Separate charges are calculated for the use of aircraft parking positions and loading bridges (assessed per enplaned and deplaned passenger); sterile corridors and related facilities (assessed per deplaned passenger); FIS inspection and

baggage claim facilities (assessed per deplaned passenger); holdroom, check-in, and baggage makeup space (assessed per enplaned passenger); and airline operations, office, and club space (assessed per square foot). The per-passenger FIS charge is calculated to recover 100% of the costs of the Central FIS building net of those paid from PFC revenues.

Terminal E Special Facilities Lease Agreement. In connection with the financing of Terminal E with the proceeds of special facilities revenue bonds in 2001, the City and United entered into a 30-year net lease agreement extending to January 2030 (with an option for United to extend for 5 years, subject to certain conditions). The agreement encompasses all Terminal E premises and United's check-in facilities in the Central FIS building. United net leases the Terminal E premises on an exclusive-use basis and retains all inside terminal concession revenues.

IAH Terminal Redevelopment Program Memorandum of Agreement. In June 2014, HAS and United executed the ITRP MoA providing for the planning, design, and implementation of ITRP to include construction of the new C-North concourse, phased redevelopment of MLIT to replace the original C-North concourse and Terminal D, expansion of the Central FIS building, and other ITRP elements.

The ITRP MoA documents United's acknowledgment of HAS's intention to increase the PFC at Intercontinental from \$3.00 to \$4.50 (which became effective March 2015) and to use PFC revenues to pay eligible costs of ITRP projects. The ITRP MoA further documents HAS's intention to fund the costs of MLIT from Bond proceeds and PFC revenues with the goals of maintaining (1) Bond debt service coverage of at least 150%, and (2) foreign-flag airline payments per enplaned passenger for use of MLIT no more than 50% higher than the payments per enplaned passenger now applicable at Terminal D (excluding payments for exclusive-use space, such as offices and clubs and as adjusted for inflation). As available, PFC revenues are to be applied to offset the airline rate base requirement and to offset costs in nonairline cost centers to achieve the two goals. Such planned use of PFC revenues is shown in Exhibit F-1.

The ITRP MoA provides for MLIT to be operated as a common-use terminal in accordance with HAS policies on gate access and assignment now in effect for Terminal D (except that United is to be provided with preferential-use rights to six gates outside the peak period for international operations, subject to minimum gate use and other conditions). The ITRP MoA provides for continuation of the rate-making methodology in effect for Terminal D (with minor modifications to the methodology as appropriate to rationalize charges for use of the new terminal for domestic and international operations).

Hobby Use and Lease Agreements. Effective February 2013, the City entered into a 25-year agreement with Southwest to govern the use and lease of the existing domestic terminal and the new international terminal (opened in October 2015) at Hobby. Southwest has preferential-use rights to 21 of the 25 gates at the Central (domestic) Concourse and four of the five gates at the West (international) Concourse.

Southwest also has access to the three common-use gates at the two concourses. The compensatory rate-making provisions of the agreement are generally similar to those in effect at Intercontinental, with separate cost centers defined for (1) the Central Terminal and Central Concourse; (2) the Central Concourse apron; (3) the West Terminal; (4) the West Concourse (excluding the FIS facilities); (5) the FIS facilities; and (6) the West Concourse apron.

As at Intercontinental, the rate base requirement for each cost center includes allocated direct and indirect O&M expenses, amortization of capital investments (net of amortized amounts contributed from PFC revenues), interest on land, any required replenishment of the Renewal and Replacement Fund, and reallocated costs for HAS space. In addition, the rate base requirements for the international terminal and the FIS facilities at Hobby include amortization of investments made by Southwest. (Southwest then receives credit for such amortization.) Following HAS's financing of Southwest's investment in the international terminal and FIS facilities at Hobby with proceeds of the proposed 2018A (New Money) Bonds, no such amortization of Southwest's investment (or related credit) will apply.

Separate rentals and charges are assessed for the Central Terminal and Central Concourse (per square foot of rented space); the Central Concourse apron (per square foot of pavement); check-in and office facilities at the West Terminal (per square foot of rented space); West Concourse and apron at the West Terminal (per deplaned passenger); and the FIS facilities (per deplaned passenger).

Unlike the terminal building rate-making methodology in effect at Intercontinental, terminal building rental rates at Hobby are calculated over all usable space (without distinction between airline and nonairline space). Airline rentals are then calculated by multiplying the calculated rental rate by the square footage of airline rented space. Costs allocated to the concession facilities are the responsibility of HAS and paid from concession and other nonairline revenues. HAS retains all inside concession revenues except for a concession credit that applies to the extent that the annual number of enplaned passengers exceeds the number enplaned in FY 2015 (subject to an agreed-upon maximum amount).

Airlines not wishing to enter into a long-term (25-year) use and lease agreement for the use of Hobby facilities may enter into a short-term (5-year) use and lease agreement (automatically renewable for 5-year extensions unless terminated) that provides for the payment of rentals, fees, and charges at the same rates as those that apply to Southwest, except that the concession credit does not apply. American and Delta have each entered into 5-year agreements and each airline has preferential-use rights to one gate and associated facilities. Airlines not signatory to either a long-term or short-term use agreement (currently including JetBlue) operate from the common-use gates and pay common-use charges set by City ordinance.

Landing fees at Hobby are calculated using generally the same formula as that used at Intercontinental to recover all costs allocated to the Airfield cost center net of general

aviation fuel flowage fees (currently assessed at \$0.06 per gallon) and a 25% landing fee premium payable by nonsignatory airlines.

SOURCES OF FUNDS

The Capital Improvement Program for Intercontinental, Hobby, and Ellington (as well as systemwide projects) is expected to be funded from the sources described in the following sections. Exhibit A summarizes the estimated funding sources for the completed and near-term CIP projects expected to be funded through approximately 2019 and implemented through approximately 2021. Such projects include planning, design, and enabling projects for the IAH International Terminal Redevelopment Program.

Federal Grants-in-Aid

HAS is eligible to receive federal grants-in-aid under the FAA's Airport Improvement Program (AIP) for up to 75% of the costs of airfield and other approved projects at Intercontinental and Hobby and up to 90% of such costs at Ellington. Certain of these grants are entitlement grants, the annual amount of which is calculated on the basis of the number of enplaned passengers (at Intercontinental and Hobby) and the amount of landed weight of all-cargo aircraft (at Intercontinental). Other, discretionary, grants are awarded on the basis of the FAA's determination of the priorities for projects at the HAS airports and at other airports.

Over the 10 years FY 2006 through FY 2015, HAS received an average of \$15.2 million per year in entitlement grants (\$12.7 million for Intercontinental, \$1.5 million for Hobby, and \$1.0 million for Ellington) and an average of \$16.5 million per year in discretionary grants (\$14.4 million for Intercontinental, \$1.0 million for Hobby, and \$1.1 million for Ellington), for a total of \$31.8 million per year for the Airport System. Under the AIP, entitlement grants are reduced for large-hub airports at which a PFC higher than \$3.00 is imposed. With the increase in the PFC from \$3.00 to \$4.50 at Intercontinental and Hobby effective April 2015 (discussed in the later section "Passenger Facility Charge Revenues," entitlement grants awarded for the Airport System were reduced by 50%, to approximately \$7.5 million per year, beginning in the Federal Fiscal Year ending September 30, 2016.

In the funding plan shown in Exhibit A, AIP entitlement and discretionary grants totaling \$157.6 million, an average of \$26.2 million per year, were assumed to be received in FY 2016 through FY 2021 for airfield and noise mitigation projects at the three HAS airports.

It was also assumed in the funding plan that TSA grants totaling \$113.6 million will be received for explosives detection system machines for in-line baggage screening and surveillance systems at Intercontinental and Hobby.

Rental Car Customer Facility Charge and Other Funds

The City imposes a customer facility charge (CFC) on rental car customers at Intercontinental. The CFC has been in effect since 2001 and variously set, at cost-recovery rates, between \$3.00 and \$4.25 per rental car transaction-day (the CFC was reset to \$4.00 per transaction-day effective April 2017). CFC revenues are pledged to the payment of debt service on the 2001 special facilities revenue bonds issued to finance the consolidated rental car center. The 2001 bonds were partially refunded by bonds issued in 2014. Surplus CFC revenues available after all requirements of the trust indenture under which the bonds were issued have been met are deposited into a facility improvement fund and are available to pay for capital investments in rental car facilities. In the funding plan shown in Exhibit A, moneys generated from CFC revenues were assumed to pay all costs for consolidated rental car center projects at Intercontinental (\$1.6 million for the near-term rehabilitation of the existing center). The City also imposes a transportation charge, currently set at \$4.60 per rental car transaction, to cover the costs of the shuttle buses.

It is expected that the City will in the future impose a CFC on rental car customers at Hobby as required to support the financing of the planned consolidated rental car center at Hobby.

As shown in Exhibit A, \$87.9 million of other tenant and third party funds have been or are assumed to be used to pay the costs of projects at Intercontinental, including \$60.0 million for improvements to the Marriott Hotel.

Airports Improvement Fund

Amounts accumulated in the Airports Improvement Fund may be used to pay for capital improvements and any other lawful Airport System purposes. As shown in Exhibit A, AIF moneys estimated to be used to fund CIP projects total \$664.3 million, of which \$392.7 million is estimated to be required in FY 2018 through FY 2022.

As of September 30, 2017, AIF amounts appropriated for CIP projects totaled \$207.8 million and the unappropriated balance in the AIF available for CIP projects and other purposes was \$106.1 million, for a total of \$313.9 million in available AIF funding. As shown in Exhibit G, \$306.7 million is forecast to be deposited into the AIF in FY 2018 through FY 2022.

Passenger Facility Charge Revenues

As authorized by the FAA, the City imposes a PFC per eligible enplaned passenger at both Intercontinental (approved through December 2027) and Hobby (approved through August 2038).

At Intercontinental, the PFC was imposed at \$3.00 effective December 2008 and increased to \$4.50 effective March 2015. Through June 2017, cumulative PFC revenues at Intercontinental, including investment earnings, totaled \$499.1 million, of

which \$376.0 million has been expended for approved project costs, \$89.3 million to fund “pay-as-you-go” projects and \$286.7 million to pay Bond debt service.

At Hobby, the PFC was imposed at \$3.00 effective November 2006 and increased to \$4.50 effective March 2015. Through June 2017, cumulative PFC revenues at Hobby, including investment earnings, totaled \$160.4 million, of which \$137.5 million has been expended for approved project costs, \$84.8 million to fund “pay-as-you-go” projects and \$52.7 million to pay Bond debt service.

Exhibits F, F-1, and F-2 present historical and forecast sources and uses of PFC revenues by year for the Airport System, Intercontinental, and Hobby, respectively, assuming continued imposition of a \$4.50 PFC.

Use of PFC Revenues at Intercontinental. Since FY 2011, HAS has used approximately 65% of the PFC revenues derived from the \$3.00 PFC at Intercontinental to pay Bond debt service attributable to the Skyway APM system, Central FIS building, B-South concourse apron, and airfield projects. HAS intends to continue such uses of PFC revenues to pay debt service, thereby reducing airline rate base requirements. HAS intends to use the remaining approximately 35% of PFC revenues from the \$3.00 PFC and all PFC revenues derived from imposition of the additional \$1.50 PFC to pay Bond debt service attributable to MLIT, expansion of the Central FIS building, and other PFC-eligible ITRP projects.

As available, PFC revenues will be applied to offset PFC-eligible Bond debt service requirements attributable to airline and nonairline cost centers to balance the goals (as documented in the ITRP MoA) of maintaining affordable airline costs at MLIT while generating airline revenues to achieve Bond debt service coverage of at least 150%.

As shown in Exhibit F-1, HAS also has used or intends to use PFC revenues on a pay-as-you-go basis for the costs of aprons for the new C-North concourse (\$80.4 million) and for ITRP planning and design costs (\$120.0 million).

HAS is in the process of preparing an application to the FAA to use PFC revenues for ITRP projects.

Use of PFC Revenues at Hobby. Since FY 2014, HAS has used approximately 70% of the PFC revenues derived from the \$3.00 PFC at Hobby to pay Bond debt service attributable to the Central Concourse and various airfield projects. HAS intends to continue such uses of PFC revenues to pay debt service, thereby reducing airline rate base requirements. HAS intends to use the remaining approximately 30% of PFC revenues from the \$3.00 PFC and all PFC revenues derived from the additional \$1.50 PFC to pay PFC-eligible Bond debt service attributable to the FIS facilities at the new West Concourse, thereby reducing required FIS charges. In April 2016, HAS received approval from the FAA for such use of PFC revenues. HAS also intends to use PFC Fund balances and future PFC revenues for Hobby airfield projects on a pay-as-you-go basis, as shown in Exhibit F-2.

Interim Financing

The City provides interim financing for CIP costs from the proceeds of Airport System Senior Lien Notes issued as commercial paper (CP Notes). The City has authorized the issuance of \$150 million of such CP Notes and expects to authorize up to an additional \$250 million to provide a total of up to \$400 million of interim financing capacity.

The City has also authorized the issuance of up to \$450 million of Airport System Inferior Lien Revenue Bonds to provide an appropriation facility for future CIP projects, but does not intend to issue bonds against this authority.

Revenue Bonds

The costs of CIP projects not met from the funding sources discussed in the preceding sections, are expected to be funded from the proceeds of Airport System Revenue Bonds. Following the issuance of the proposed 2018AB Bonds, the City plans to issue Bonds in several future series.

Exhibit B presents the estimated sources and uses for the proposed 2018AB Bonds and the planned 2019 Bonds. Financing assumptions, as provided by Hilltop Securities Inc., the City's independent registered municipal advisor, are shown in Exhibit B. For the purposes of this report, the planned 2019 Bonds were assumed to be issued as Airport System Subordinate Lien Bonds on a parity with the 2018AB Bonds and other outstanding Subordinate Lien Bonds.

The estimated source of Bond funds is the proceeds from the sale of the Bonds (after any original issue premium or discount). Investment earnings on any amounts in the Construction Fund and Capitalized Interest Account during construction would also be available.

The estimated uses of Bond funds are to: (1) refund CP Notes issued to interim finance project costs, (2) finance or refinance project costs; (3) make escrow deposits to refund outstanding Bonds; (4) make deposits to the Capitalized Interest Account to pay Bond interest during construction; (5) make deposits to meet the Reserve Fund Requirement for the Bonds; and (6) pay the underwriters' discount, financing, legal, and other Bond issuance costs.

The proposed 2018B (2007B Refunding) Bonds are to be issued to refund outstanding Airport System Subordinate Lien Revenue Refunding Bonds Series 2007B to achieve debt service savings.

The City may issue additional Refunding Bonds during the forecast period to achieve debt service savings. However, no such issuance of Refunding Bonds was assumed for this report.

DEBT SERVICE REQUIREMENTS

Revenue Bonds

Exhibit C-1 presents the Bond debt service requirements of outstanding Bonds, the proposed 2018AB Bonds, and planned 2019 Bonds. Debt service requirements are allocated to airport cost centers in accordance with the provisions of the Airline Agreements. The interest rates assumed for variable-rate Bonds, as estimated by Hilltop Securities in accordance with the requirements of the Bond Ordinance, were 5.85% for the 2000P-1 and P-2 Bonds; 5.30% for the 2002C, 2002D-1, and 2002D-2 Bonds; and 5.25% for the 2010 Bonds.

The estimated costs of commitment fees and interest for CP Notes to be issued for CIP projects are shown on Exhibit C-1 as a Senior Lien obligation. The fees and interest costs were estimated assuming that \$300 million of CP Notes will be outstanding in FY 2020 through FY 2022 with interest and dealer fees at 0.85%. Estimated commitment fees associated with maintaining the \$450 million appropriation facility are shown in Exhibit C-1 as an Inferior Lien obligation.

Special Facilities Revenue Bonds

Exhibit C-2 presents the debt service requirements of special facilities revenue bonds issued by the City to finance terminal facilities for United at Intercontinental. Included are bonds assumed to be issued in 2018 to fund projects in Terminals B, C, and E. Under the provisions of special facilities lease agreements, United is obligated to pay, directly to the trustee for the bonds, amounts equal to the debt service requirements of all such bonds. None of the debt service requirements of special facilities revenue bonds are secured by or payable from Net Revenues, except for payments made under a sublease with United whereby HAS assumed the obligation to pay debt service on the 1997A special facilities revenue bonds issued to pay certain of the costs of the Skyway APM system. Such debt service obligation is not included in Exhibit C-2, but rather shown in Exhibit C-1 as payable on the same basis as any Inferior Lien obligations. (The final payment on the 1997A special facilities revenue bonds was made in July 2017.) Debt service on United's terminal special facilities revenue bonds is not considered further in this report except as a component of the calculation of average "all-in" airline payments at Intercontinental (shown in Exhibit E-2).

As discussed in the earlier section "Rental Car Facility Charge and Other Funds," special facilities revenue bonds were issued by the City to fund construction of the consolidated rental car center at Intercontinental. Such special facilities revenues bonds are secured by CFC revenues. CFC revenues are not included in Net Revenues, are not pledged to the payment of debt service on Bonds, and are not considered further in this report.

OPERATION AND MAINTENANCE EXPENSES

Exhibits D, D-1, D-2, and D-3 present Operation and Maintenance Expenses by type for the Airport System, Intercontinental, Hobby, and Ellington, respectively. Data for FY 2013 through FY 2017 are from the year-end airline rates and charges reconciliation reports (as reconciled to the City's audited financial statements). Data for FY 2018 are from the airline rates and charges budget presentation.

O&M Expense Forecast Assumptions

The line items of direct O&M Expenses were forecast, using the FY 2018 budgeted amounts as the base, by taking into account increases in unit costs as a result of inflation, forecast aircraft and passenger activity, and planned facility development. To account for all of these factors, personnel expenses were forecast to increase 4.0% per year and other direct expenses were forecast to increase 3.0% per year.

Changes to O&M Expenses incurred by HAS as a result of the implementation of the net lease business arrangements at United's terminals at Intercontinental are reflected in Exhibit D-1. O&M Expenses incurred directly by United at its net-leased terminals are not shown in Exhibit D-1, but are shown in Exhibit E-2 as a component of the calculation of average "all-in" airline payments.

Allocation of O&M Expenses to Cost Centers

Direct O&M Expenses are recorded separately for each of the three airports and for HAS department administration functions. For each airport, systems, administration, overhead, and other indirect expenses are allocated to primary cost centers (airfield, terminal buildings, aprons, and Skyway APM) and sub-cost centers (airline and nonairline) according to a multi-step process. Expenses for indirect functions, such as fire protection and systems (e.g., central utility plants, roadways, and the Subway inter-terminal train) are allocated to cost centers according to fixed percentages, square footage of building space, passenger numbers, or other formula. Department administration expenses are allocated to cost centers 50%-50% according to each cost center's share of direct expenses and revenues. Expenses allocated to each primary cost center are further allocated to airline and nonairline sub-cost centers by the square footage of usable building space or other formula.

REVENUES

Exhibits E, E-1, and E-3 present Gross Revenues for the Airport System, Intercontinental, and Hobby, respectively. Data for FY 2013 through FY 2017 are from the year-end airline rates and charges reconciliation reports (as reconciled to the City's audited financial statements). Table 36 shows the distribution of revenues by airport and major category in FY 2017.

Table 36
SUMMARY OF AIRPORT SYSTEM REVENUES
Houston Airport System Airports
FY 2017
(dollars in thousands)

	Intercontinental		Hobby		Airport System	
Airline revenues						
Landing fees	\$ 75,506	19.1%	\$13,920	15.0%	\$ 89,426	18.3%
Terminal rentals and use fees	<u>147,477</u>	<u>37.8</u>	<u>24,401</u>	<u>26.2</u>	<u>171,878</u>	<u>35.1</u>
Subtotal airline revenues	\$222,983	56.5%	\$38,320	41.2%	\$261,303	53.3%
Nonairline revenues						
Terminal concessions	\$ 28,846	7.3%	\$10,801	11.6%	\$39,647	8.1%
Parking and ground transportation	103,738	26.3	34,314	36.9	138,052	28.2
Other nonairline revenues	<u>39,417</u>	<u>10.0</u>	<u>9,598</u>	<u>10.3</u>	<u>50,822 (a)</u>	<u>10.4</u>
Subtotal nonairline revenues	<u>\$172,001</u>	<u>43.5%</u>	<u>\$54,713</u>	<u>58.8%</u>	<u>\$228,520</u>	<u>46.7%</u>
Total	\$394,984	100.0%	\$93,034	100.0%	\$489,823	100.0%
Share of Airport System revenues	80.6%		18.2%		100.0%	

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

(a) Airport System total includes \$1.806 million of Ellington revenues.

Source: Houston Airport System records.

Individual components of airline revenues were calculated using the cost-recovery provisions of the various airline agreements (as described in the earlier section “Airline Agreements”) using budgeted costs for FY 2018 as the base. Individual components of nonairline revenues were forecast, using actual FY 2017 results as the base, taking into account allowances for unit price inflation at 3.0% per year, forecast airline traffic activity (as described in the earlier section “Airline Traffic Forecasts”), planned facility development, and the provisions of leases and agreements with users and tenants of the airports. Specific assumptions underlying individual components of revenues are described in the following sections.

AIRLINE REVENUES

Airline revenues are shown in Exhibits E-1 and E-2 for Intercontinental and in Exhibits E-3 and E-4 for Hobby. The various airline rentals, fees, and charges were calculated according to the cost-recovery provisions of the airline agreements, which specify the formulas by which O&M Expenses, amortization charges, and other requirements are allocated to the three HAS airports, to cost centers at each airport, and to sub-cost centers defining the airline rate base requirements. The rate base requirement for each sub-cost center is then divided by the applicable units of activity or space to determine landing fee rates, building rental rates, per passenger rates or other charges. Airline rentals, fees, and charges are calculated each year using budget estimates and recalculated using actual results after the end of the year.

Allocated Airline Rate Base Requirements

O&M Expenses allocated to the airline rate base requirements were calculated as described in the earlier section "Operation and Maintenance Expenses."

Amortization charges were calculated assuming interest rates, useful lives, and allocation formulas as specified in the airline agreements. Amortization charges for historical capital investments (and interest on land) are as already in effect. Amortization charges for future investments to be made from Bond proceeds were calculated using the assumed Bond interest rates documented in the earlier section "Revenue Bonds." Amortization charges for future investments to be made from the AIF, which are generally calculated using the long-term Bond interest rate prevailing at the time the asset is placed in service, were calculated using an interest rate of 4.0%.

Assumed useful lives for both Bond-funded and AIF-funded investments are generally 5 years for vehicles and information technology equipment, 15 years for equipment such as loading bridges and baggage conveyors, 20 years for renovated facilities and rehabilitated pavement, and 25 years for new facilities and equipment.

Certain amortization charges are included directly in the rate base requirements for a cost center. Others are allocated among cost centers on the basis of the square footage terminal building space, the square footage of apron pavement, numbers of passengers, or other formula.

Airline Payments per Enplaned Passenger

Exhibits E-2 and E-4 summarize payments made by the passenger airlines serving Intercontinental and Hobby, respectively, and the average of such payments per enplaned passenger. To provide a meaningful "all-in" average, the exhibits show payments made to HAS and, for Intercontinental, debt service on special facilities revenue bonds issued for terminal projects and estimates of terminal O&M expenses paid directly by United.

NONAIRLINE REVENUES

Exhibits E, E-1, and E-3 present nonairline revenues grouped by terminal concessions, parking and ground transportation, and other. Assumptions underlying the forecasts of the line items of revenues are described in the following sections. Terminal concession revenues are determined largely by numbers of enplaned passengers (originating and connecting). Parking and ground transportation revenues are determined largely by numbers of originating passengers.

TERMINAL CONCESSION REVENUES

At Intercontinental, space for concession outlets is provided at the terminals as summarized in Table 37. Historical revenues generated from such concessions were derived from HAS concession reports detailing sales and revenues received by HAS

by outlet. Accrual-to-cash adjustments are shown to reconcile the total of such reported revenues to concession revenues recorded in HAS financial statements.

Table 37
TERMINAL CONCESSION FACILITIES
 George Bush Intercontinental Airport
 July 2017

	Outlet space (square feet)		
	Food and beverage	Retail, news, gift, and duty free	Total
Terminal A	26,600	7,500	34,100
Terminal B	20,400	12,600	33,000
Terminal C	40,200	34,200	74,400
Terminal D	16,600	6,000	22,600
Terminal E	26,300	22,600	48,900
Central FIS	<u>4,200</u>	<u>3,700</u>	<u>7,900</u>
	134,300	86,600	220,900

Note: Space for concessions managed by OTG on behalf of United in its net-leased premises is included. Office and storage space is excluded.

Source: HAS concession reports, July 2017.

Under the net lease provisions of the agreements with United, revenues generated from concessions at certain terminals are retained by United. Net lease arrangements are in effect for an aggregate 137,400 square feet of concession space at Terminal E (effective since its opening in 2003-2004), the B-South concourse (effective FY 2014), Terminal C-South (effective FY 2016), and the new C-North concourse (effective May 2017). Effective April 2016, the concessions in these terminal areas are operated on behalf of United by OTG (previously operated by Westfield).

Concessions at other terminal areas at Intercontinental (Terminal A, the north flight stations and central building at Terminal B, Terminal D, and the Central FIS building), together accounting for 83,500 square feet of outlets, are operated by various joint-venture concessionaires (or OTG in the case of the Central FIS building) on behalf of HAS. HAS retains net concession revenues from such concessions.

As discussed in the following sections, effective at the beginning of FY 2016, HAS entered into new 10-year concession agreements at Intercontinental. Under the new agreements, concession outlets were redeveloped during FY 2016 and FY 2017 and concession sales were affected by the closure of outlets during construction and the subsequent opening of new outlets. Higher percentage rents payable under the new agreements now apply. Concession revenues to HAS were reduced in FY 2016 and

will again be reduced in FY 2018 as some revenues from Terminal C previously received by HAS will be retained by United under the net lease arrangements.

Concession revenues per enplaned passenger beginning in FY 2018 were forecast to increase with price inflation and enplaned passenger numbers, with additional increases to reflect improved concession offerings and increased percentage rents at the new C-North concourse. (All such new C-North revenues will be retained by United under the net lease arrangements.) Approximately 50,000 square feet of concession outlets will be provided at MLIT, compared with the 22,600 square feet currently provided at Terminal D.

With completion of MLIT and other ITRP projects, an estimated total of 248,000 square feet of concession space will be provided, an increase from the current 220,900 square feet. Of the future total, 111,000 square feet will be in terminals where concession revenues will be retained by HAS, and 137,000 square feet will be in terminals where concession revenues will be retained by United.

At Hobby, concession outlets are provided in 31,100 square feet of space in the Central Terminal and Central Concourse and in 14,900 square feet of space in the West Terminal and West Concourse. The concessions are operated by various concessionaires on behalf of HAS, which retains net concession revenues. Concession revenues at Hobby increased in FY 2016 when flights began operating from the West Concourse. Revenues were forecast to increase with price inflation and enplaned passenger numbers. No increase in the percentage concession rental rate was assumed under new concession agreements expected to become effective in FY 2021.

Food and Beverage

In FY 2017, gross revenues (i.e., sales) from food and beverage concessions at Intercontinental (for all terminals) totaled \$151.4 million, or \$7.31 per enplaned passenger. HAS received \$7.2 million in net revenues, equivalent to 15.1% of sales at those outlets for which HAS retained concession revenues.

Effective FY 2016, HAS entered into new agreements for food and beverage concessions (including specialty coffee) at Intercontinental with Host International, Latrelle's Galley, and SSP America. The agreements cover all terminals except most outlets in Terminal C, where the current agreement with JDDA Concession Management/SSP America extends to December 2018, and United's Terminal E, B-South concourse, and new C-North concourse.

At Hobby, food and beverage outlets occupy 30,400 square feet of terminal space, including 10,600 square feet in the West Terminal and West Concourse. In FY 2017, sales from food and beverage concessions were \$49.7 million, or \$7.46 per enplaned passenger. HAS received \$7.6 million in net revenues, equivalent to 15.3% of sales. The current food and beverage concession agreement with 4Families Houston extends through May 2020 and encompasses outlets in the West Terminal and West Concourse.

Retail, News, and Gift

In FY 2017, sales from retail concessions (including news and gift) at Intercontinental (for all terminals) totaled \$75.7 million, or \$3.66 per enplaned passenger. Net revenues received by HAS were \$4.2 million, equivalent to 15.6% of sales at those outlets for which HAS retained concession revenues.

Effective FY 2016, HAS entered into new agreements for retail concessions at Intercontinental with ATU Americas, Paradies, and World Duty Free Group (WDFG). The agreements encompass all terminals except United's Terminal E, B-South concourse, and new C-North concourse.

At Hobby, retail outlets occupy 13,600 square feet of terminal space, including 4,300 square feet in the West Concourse. Effective FY 2016, HAS entered into new agreements for retail concessions at Hobby with Paradies and WDFG. In FY 2017, sales from retail concessions totaled \$18.5 million, or \$2.78 per enplaned passenger. HAS received \$3.7 million in net revenues, equivalent to 19.9% of sales.

Duty Free

In FY 2017, sales from duty free concessions at Intercontinental (for all terminals) totaled \$21.9 million, or \$4.14 per international enplaned passenger. HAS received \$3.4 million in net revenues, equivalent to 39.5% of sales at those outlets for which HAS retained concession revenues.

Effective FY 2016, HAS entered into new agreements for duty free concessions at Intercontinental with ATU Americas and WDFG. The agreements encompass all terminals except United's Terminal E and B-South concourse.

At Hobby, duty free outlets occupy approximately 2,000 square feet of space in the West Concourse. Effective FY 2016, HAS entered into a new agreement for duty free concessions at Hobby with WDFG. In FY 2017, sales from duty free concessions totaled \$1.3 million, or \$2.87 per enplaned international passenger. HAS received \$0.4 million in net revenues, equivalent to 30.0% of sales.

Advertising

In FY 2017, HAS received \$3.0 million in advertising revenues at Intercontinental, and \$1.2 million in advertising revenues at Hobby. Advertising displays are provided by a JCDcaux joint venture. The concession agreement for Intercontinental is scheduled to expire in February 2021 and provides for the payment of 70% of gross revenues. The concession agreement for Hobby is scheduled to expire in July 2021 and provides for the payment to HAS of 60% of gross revenues. United retains advertising revenues attributable to its net-leased terminal premises at Intercontinental. Advertising revenues were forecast to increase with price inflation and enplaned passenger numbers.

Other Passenger Services

HAS receives revenues from passenger convenience services such as baggage cart rentals, vending machines, currency exchange, automated teller machines (ATMs), vending machines, shoeshine stands, and business services. In FY 2017, HAS received \$3.5 million in such revenues at Intercontinental and \$0.3 million at Hobby. United retains revenues from services at its net-leased terminal premises at Intercontinental. Revenues from these services were forecast to increase with price inflation and enplaned passenger numbers.

PARKING AND GROUND TRANSPORTATION REVENUES

Public Parking

Table 38 shows the number of revenue-producing public parking spaces and parking rates at Intercontinental and Hobby.

At Intercontinental, in addition to the standard self-park product, which is priced at \$22 per day, preferred parking, branded SurePark, with the guarantee of a garage parking space, is provided for \$24 per day and valet parking is provided at all terminals for \$26 per day. Economy parking, branded ecopark, is served by courtesy shuttles. The ecopark1 lot is located off John F. Kennedy Boulevard at the south airport entrance and the ecopark2 lot (opened in June 2016) is located off Will Clayton Parkway east of the terminals. Spaces in the C/D/E garage have the highest occupancy rates.

Intercontinental parking rates were last increased effective May 2017, when the daily garage rate was increased from \$20 to \$22 and the short-stay rate (less than one hour) was increased from \$3 to \$5. Before then, parking rates were last increased effective July 2015, when the daily garage rate was increased from \$19 to \$20, the daily rate for SurePark was increased from \$23 to \$24, and the daily rate for valet parking was increased from \$25 to \$26. Before then, rates were last increased effective December 2013, when the daily garage rate was increased from \$17 to \$19, the daily rate for SurePark was increased from \$20 to \$23, and the daily rate for valet parking was increased from \$23 to \$25. The rates for ecopark were last increased as of September 2013, when the daily rate for uncovered parking was increased from \$5 to \$6 and the daily rate for covered parking was increased from \$7 to \$8. Under a City ordinance, HAS has the authority to increase parking rates, without further approval from City Council, up to specified amounts (maximum daily garage rate set at \$25 for both Intercontinental and Hobby).

Six off-airport parking lots located near Intercontinental (operated by four different companies) provide approximately 15,100 spaces served by courtesy shuttles and priced competitively with ecopark. Approximately 8,100 of these spaces are located off Will Clayton Parkway near the east airport entrance and approximately 7,000 spaces are located off John F. Kennedy Boulevard near the ecopark lot at the south airport entrance.

Table 38
PUBLIC PARKING FACILITIES
George Bush Intercontinental Airport and William P. Hobby Airport
July 2017

	Number of spaces	Long-stay parking rates (a)
George Bush Intercontinental Airport		
Garage parking		
Terminal A/B garage	4,720	
Terminal C/D/E garage	<u>8,300</u>	
	13,020 (b)	\$22 per day
Economy parking		
ecopark1 (covered)	1,650	\$8 per day
ecopark1 (uncovered)	6,960	\$6 per day
ecopark2 (covered)	<u>2,300</u>	\$6 per day
	<u>10,910</u>	
	23,930	
William P. Hobby Airport		
Central (Red) garage		
	2,670	
West (Blue) garage		
	<u>2,930</u>	
	5,600	\$22 per day
Economy parking		
ecopark (uncovered)	<u>930</u>	\$10 per day
	6,530	

(a) At all garages and lots, there is no charge for the first 10 minutes to allow patrons who are unable to find a vacant space to exit without payment. Thereafter, short-stay garage rates are \$5 for up to 1 hour, \$6 for 1-2 hours, \$8 for 2-3 hours, and \$10 for 3-5 hours. Short-stay ecopark rates, for up to 3 hours, are \$6 at Hobby and \$4 or \$5 at Intercontinental. Short-stay and long-stay spaces are not separated.

(b) Includes spaces for SurePark and valet parking.

Source: Houston Airport System records.

At Hobby, in addition to the standard self-park product, priced at \$22 per day, valet parking is provided for \$26 per day. The ecopark lot, located east of the Central Terminal, is within walking distance of the terminal. All existing parking facilities have high occupancy rates.

Hobby parking rates were last increased effective May 2017 when the daily garage rate was increased from \$20 to \$22 and the short-stay rate (less than one hour) was increased from \$3 to \$5. Before then, parking rates were last increased effective July 2015, when the daily garage rate was increased from \$19 to \$20, the daily rate for valet parking was increased from \$25 to \$26, and the daily ecopark rate was increased from

\$8 to \$10. Before then, Hobby parking rates were last increased as of December 2013, when the daily garage rate was increased from \$17 to \$19, the daily valet rate was increased from \$23 to \$25, and the daily ecopark rate was increased from \$7 to \$8.

Seven off-airport parking garages and lots (operated by four different companies), most within a mile of Hobby, provide approximately 11,200 spaces served by courtesy shuttles and priced competitively with ecopark.

Public parking facilities at both Intercontinental and Hobby are operated for HAS by New South Parking, a division of Standard Parking, under a management agreement that expired in January 2017 and is in holdover status through March 2018 pending completion of the selection process for a replacement management agreement. The agreement is structured as a management contract under which all parking O&M expenses are reimbursed to the operator in addition to a management fee. The parking revenues shown in Exhibits E, E-1, and E-3 are the gross revenues received by HAS. All parking O&M expenses are shown in Exhibits D-1, D-2, and D-3.

Parking revenues represent by far the largest single line item of HAS nonairline revenues. In FY 2017, public parking revenues were \$70.6 million at Intercontinental, equivalent to \$7.03 per originating passenger, and \$23.5 million at Hobby, equivalent to \$5.27 per originating passenger. In addition, in FY 2017, HAS received revenues for contract (employee) parking of \$4.8 million at Intercontinental and \$0.6 million at Hobby.

Over the past several years, numbers of airport parking transactions have decreased relative to numbers of originating passengers. At Intercontinental, between FY 2011 and FY 2017, the propensity to park as measured by the ratio of garage parking transactions per originating passenger decreased an average of 4% per year. At Hobby, over the same period, the ratio decreased an average of 7% per year.

The decreased propensity to park is largely attributable to the slowdown in the Houston economy in 2015 and 2016 precipitated by reduced oil prices, but is likely also the result of changing airport access travel choices attributable to changes in the relative cost and convenience of competing travel modes, parking rate increases, and off-airport parking competition. Short-stay parking transactions have also been reduced as mobile phones make arranging curbside pick-up easier.

Between FY 2015 and FY 2017, the decrease in the propensity to park has coincided with the increase in the number of airport trips made by Uber, Lyft, and other ride-hailing services (also referred to transportation network companies or TNCs), as discussed in the later section "Ground Transportation Fees."

Parking revenues were forecast assuming that:

1. Increases in parking demand with increased numbers of originating passengers will be offset by further decreases in the propensity to park as changes in technology and economics make travel modes other than driving more convenient and attractive. As a result, there will be only a small net underlying increase in numbers of parking transactions.
2. At Intercontinental, the projected net loss of approximately 1,500 parking spaces associated with the enlargement of the Central FIS will result in a reduction in numbers of parking transactions.
3. At Hobby, existing parking facilities will provide sufficient capacity to accommodate parking demand.
4. Parking rates will be increased every 2 years (at the beginning of FY 2019 and FY 2021) so as to result in an average increase in revenues per transaction of approximately 3% per year.
5. Parking facilities will continue to be operated under management agreements with financial terms substantially the same as those of the current agreement.

Rental Car Privilege Fees

Table 39 shows the rental car companies providing service at Intercontinental and Hobby and their shares of gross revenues at the airports in FY 2017.

Company	Intercontinental		Hobby		Total (a)	
	Revenues	Share	Revenues	Share	Revenues	Share
Alamo/National (b)	\$ 53,658,390	26.8%	\$22,115,942	26.5%	\$ 75,774,332	26.7%
Hertz (c)	46,124,546	23.0	15,305,011	18.3	61,429,558	21.7
Avis (d)	35,609,688	17.8	12,782,978	15.3	48,392,667	17.1
Enterprise (b)	24,769,246	12.4	12,677,555	15.2	37,449,178	13.2
Budget (d)	15,769,837	7.9	9,252,231	11.1	25,022,068	8.8
Dollar (c)	8,913,897	4.5	4,311,646	5.2	13,225,543	4.7
Thrifty (c)	6,645,155	3.3	2,813,240	3.4	9,458,395	3.3
Advantage	3,558,771	1.8	1,687,018	2.0	5,245,789	1.8
Payless (d)	3,245,804	1.6	1,677,730	2.0	4,923,534	1.7
EZ Rent	1,910,593	1.0	851,152	1.0	2,761,746	1.0
Ability	--	--	30,308	0.0	30,308	0.0
	<u>\$200,205,929</u>	<u>100.0%</u>	<u>\$83,504,811</u>	<u>100.0%</u>	<u>\$283,713,117</u>	<u>100.0%</u>

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

(a) Includes \$2,377 for Enterprise at Ellington Airport.
 (b) Subsidiary of Enterprise Holdings, Inc.
 (c) Subsidiary of Hertz Global Holdings, Inc.
 (d) Subsidiary of the Avis Budget Group.

The rental car companies operate at the airports under the terms of competitively bid concession agreements. At Intercontinental, the rental car concession agreements will expire in June 2027. At Hobby, the agreements will expire in December 2020. Under the concession agreements, the rental car companies pay HAS the greater of a minimum annual guarantee or 10% of their gross receipts. At Intercontinental, all rental car companies operate on-airport from the consolidated rental car center. The rental car companies also pay ground rentals for sites used for vehicle storage, staging, and maintenance (included with building and ground rentals, discussed later). At Hobby, some rental car companies operate from sites located off airport property, but are subject to the same concession fees as the on-airport companies.

In FY 2017, rental car privilege fees received by HAS totaled \$20.3 million from rental car operations at Intercontinental, or \$2.02 per originating passenger, and totaled \$8.5 million from operations at Hobby, or \$1.91 per originating passenger.

Since FY 2014, rental car privilege fees per originating passenger have decreased as both numbers of transactions per passenger and average revenues per transaction have decreased. Between FY 2014 and FY 2017, rental car privilege fees per originating passenger decreased an average of approximately 8% per year at both Intercontinental and Hobby. The decrease is believed to be largely attributable to the slowdown in the Houston economy in 2015 and 2016, but is likely also the result of changing travel choices. The decrease in rental car transactions has coincided with the increased use of Uber, Lyft, and other transportation network companies, as discussed in the following section “Ground Transportation Fees.” Rental car privilege fees were forecast to increase with price inflation assuming a continued decrease in the propensity to rent.

The consolidated rental car center at Intercontinental was financed with the proceeds from the sale of special facilities revenue bonds in 2001 that are secured by and payable from a CFC assessed on all rental car customers. The CFC is currently set by HAS at \$4.00 per rental car transaction-day. CFC revenues are excluded from Net Revenues securing Bonds. The adequacy of CFC revenues to meet the debt service requirements of the 2001 special facilities revenue bonds is not addressed in this report. Under the terms of facilities leases at Intercontinental that extend to 2027, the rental car companies are responsible for all O&M expenses for the consolidated rental car center and shuttle bus system.

Ground Transportation Fees

Ground transportation fees are paid by off-airport rental car companies not operating under concession agreements (at Hobby), off-airport parking operators, taxicab providers, transportation network companies, limousine providers, hotel courtesy shuttle operators, and other commercial ground transportation providers.

Off-airport rental car companies not operating under concession agreements and off-airport parking operators pay privilege fees of 8% of gross revenues. SuperShuttle, which has an exclusive contract with HAS to provide on-demand, door-to-door transportation services, pays privilege fees of 10% of gross revenues. Taxicabs, transportation network companies, limousines, and other commercial ground transportation providers pay a per-trip fee of \$2.75 at Intercontinental and \$1.25 at Hobby. HAS also receives a share of tolls collected from vehicles using the road between Intercontinental and the Hardy Toll Road.

Since transportation network companies began operating legally at Intercontinental and Hobby (effective July 2015), trips reported by these companies have increased rapidly and in June 2017 accounted for 74% of all trips made by taxis, TNCs, limousines, and other per-trip providers at the two airports. The increased use of TNCs for airport access has most obviously been at the expense of taxicabs, but such use, both for airport access and in general, has also contributed to the decrease in the use of other airport access modes, airport parking, and rental cars.

In FY 2017, ground transportation fees at Intercontinental totaled \$7.5 million, or \$0.74 per originating passenger. Approximately 37% of the Intercontinental fees were from off-airport parking operators. At Hobby in FY 2017, ground transportation fees totaled \$2.2 million, or \$0.50 per originating passenger. Approximately 67% of the Hobby fees were from off-airport parking operators. Ground transportation fees were forecast to increase with numbers of originating passengers and price inflation, assuming no increase in the per trip fee.

OTHER NONAIRLINE REVENUES

Building and Ground Rentals

HAS receives rentals for cargo buildings, hangars, and other buildings and ground rentals for facilities developed by tenants. In FY 2017, such rentals totaled \$18.6 million at Intercontinental. Major air cargo tenants include Aero Houston, Industrial Properties, FedEx, Trammel Crow, and UPS Air Cargo. Building and ground rentals were forecast to increase with the escalation provisions of the various leases.

United's maintenance hangars, mail sort facility, cargo facilities, pilot training center, and other facilities at Intercontinental were financed in part with special facilities revenue bonds. The term of the special facilities leases under which United is obligated to pay all debt service on the bonds extends to 2037. United pays HAS only ground rentals for the facilities. United leases approximately 4,280 parking spaces for employees at a lot adjacent to the ecopark1 lot at Intercontinental.

At Hobby, HAS received \$6.0 million in building and ground rentals in FY 2017, mostly for hangars, fixed base operator sites, and rental car sites. Such building and ground rentals were forecast to increase in accordance with the escalation provisions of the various leases.

Airport Hotel

The Marriott hotel at Intercontinental is operated by Host of Houston (an affiliate of Host Hotels & Resorts) under a 40-year lease and development agreement that was executed in 2013. The agreement provided for investment in the renovation of hotel facilities, which was completed in January 2016. Host pays HAS a concession fee calculated as 10% of gross hotel revenues, subject to a minimum rental amount and rental credits for certain investments made by Host. In FY 2017, HAS received hotel revenues of \$3.1 million. Such revenues were forecast to increase with price inflation.

Nonairline Terminal Rentals

HAS receives revenues from terminal rentals paid by the TSA and other nonairline tenants. In FY 2017, \$1.4 million in such revenues were recorded at Intercontinental and \$0.6 million were recorded at Hobby. Such revenues were forecast to increase with price inflation.

General Aviation

HAS receives general aviation revenues from fees for fuel dispensed by the fixed base operators and fees for aircraft parking. Fuel flowage fees are assessed at a rate of \$0.06 per gallon at both Intercontinental and Hobby. In FY 2017, fuel flowage and aircraft parking fees totaled \$2.5 million at Intercontinental and \$1.2 million at Hobby. Such general aviation revenues were forecast to be unchanged through the forecast period.

Miscellaneous

HAS receives miscellaneous revenues, largely from recoveries and refunds of the costs of utilities and services provided to tenants. In FY 2017, such miscellaneous revenues totaled \$9.4 million at Intercontinental and \$1.6 million at Hobby. Of the Intercontinental amount, \$6.6 million was attributable to revenues generated in prior years. Excluding such one-time payments, miscellaneous revenues were forecast to increase with price inflation.

ELLINGTON AIRPORT REVENUES

Revenues at Ellington are derived mainly from hangar rentals, ground rentals, and fuel flowage fees (assessed at \$0.06 per gallon). In FY 2017, Ellington revenues totaled \$2.2 million. As facilities are developed in connection with the Houston Spaceport, HAS expects that ground rentals and other revenues at Ellington will increase, but no such increases were considered in this report and revenues were forecast to increase only with inflation.

SYSTEMWIDE REVENUES

Investment Earnings

Investment earnings included in Gross Revenues are derived from amounts in funds and accounts other than the Construction Fund and the PFC Fund. Investment of such amounts is managed by the office of the City Controller on behalf of HAS. Interest income in FY 2017 was \$9.3 million and was forecast to remain at that amount.

Other Systemwide Revenues

Other systemwide revenues recorded include ground transportation permit fees, certain ground rentals, and the sale of noncapital equipment. In FY 2017, such revenues totaled \$1.6 million and were forecast to increase with inflation.

Allocation among Houston Airport System Airports

Investment income and other systemwide revenues are allocated to HAS's three airports on the basis of direct O&M Expenses. In FY 2017, systemwide revenues were allocated 74.0% to Intercontinental, 24.0% to Hobby, and 2.0% to Ellington.

APPLICATION OF REVENUES

Exhibit G shows the application of Gross Revenues in accordance with the priorities established by the Bond Ordinance. All Airport System Gross Revenues are deposited into the Revenue Fund and applied as shown. Amounts remaining after all other requirements have been met are deposited into the Airports Improvement Fund and may be used for any lawful Airport System purpose. As shown in Exhibit A, AIF moneys are planned to be a major source of funding for CIP projects.

APPLICATION OF PFC REVENUES

All PFC revenues are deposited into the PFC Fund to be used for approved projects, either to pay project costs (pay-as-you-go) or to pay debt service on Bonds. Under the Bond Ordinance, Debt Service Requirements are defined to be after the deduction of PFC revenues that have been irrevocably committed to the payment of Bond debt service. As shown in Exhibit G, all PFC revenues that the City expects to use to pay Bond debt service (as shown in Exhibits F, F-1, and F-2) are deducted in the calculation of Debt Service Requirements for purposes of calculating debt service coverage.

BOND DEBT SERVICE COVERAGE

Exhibit G shows the calculation of debt service coverage. Coverage of the Debt Service Requirements of all Bonds, including the proposed 2018AB Bonds and the planned future Bonds, by Net Revenues is forecast to exceed the requirements of the Rate Covenant of the Master Bond Ordinance in all Fiscal Years.

BASE CASE FORECASTS AND STRESS TEST PROJECTIONS

Exhibit H-1 summarizes the forecast financial results as presented in Exhibits A through G, assuming the base case forecasts of enplaned passengers shown in Table 33 for Intercontinental and in Table 34 for Hobby.

Exhibit H-2 is an identical presentation of financial results in which projected Net Revenues are reduced to reflect the stress test forecasts of enplaned passengers.

The assumptions underlying the stress test projections are the same as those underlying the base case forecasts, except (1) revenues related to passenger numbers, such as terminal concession revenues, parking revenues, and rental car revenues, are reduced in proportion to reduced passenger numbers, and (2) PFC revenues are similarly reduced and cover a lower share of Bond debt service requirements.

For the stress test projections, the CIP projects were assumed to be implemented and Bond-funded on the same schedule as for the base case. O&M Expenses were also assumed to be the same as for the base case. Under the stress test assumptions, required airline payments per enplaned passenger would increase because of reduced PFC offsets to airline rate base requirements, and net applications to the Airports Improvement Fund would be reduced. Projected Bond debt service coverage ratios would still exceed the Rate Covenant requirements of the Bond Ordinance.

Exhibit A

CAPITAL IMPROVEMENT PROGRAM 2016-2021

Houston Airport System
(dollars in thousands)

	Project costs (a)	Federal grants	Tenant and CFC funds	HAS Airports Impr'mt Fund	PFC revenues pay-as-you-go	Airline special facilities bonds	Subordinate Lien Bonds	
							2018AB	2019
CIP to 2021								
IAH Terminal Redevelopment Program (ITRP)								
Planning and design	\$ 160,000	\$ -	\$ -	\$ -	\$ 120,000	\$ -	\$ -	\$ 40,000
Enabling projects	61,200	-	-	39,300	-	-	-	21,900
New C-North concourse	329,800	-	-	26,400	80,400	186,500	36,500	-
Subtotal ITRP projects	\$ 551,000	\$ -	\$ -	\$ 65,700	\$ 200,400	\$ 186,500	\$ 36,500	\$ 61,900
George Bush Intercontinental Airport (non-ITRP)								
Airfield	\$ 340,121	\$ 136,502	\$ -	\$ 109,303	\$ -	\$ -	\$ -	\$ 94,316
Terminal A	168,859	55,432	-	113,427	-	-	-	-
Terminals B and C	73,392	32,300	-	1,700	-	39,391	-	-
Terminal D	39,743	-	-	39,743	-	-	-	-
Terminal E and Central FIS	2,058	-	-	-	-	2,058	-	-
Skyway APM	31,279	-	-	31,279	-	-	-	-
Subway ITT	11,804	-	-	11,804	-	-	-	-
Rental Car Center	1,594	-	1,594	-	-	-	-	-
Parking and Ground Transportation	30,999	-	-	30,999	-	-	-	-
Roadways	23,006	-	-	23,006	-	-	-	-
Buildings and Grounds	100,863	-	87,950	12,913	-	-	-	-
Airport Support	4,711	-	-	4,711	-	-	-	-
Infrastructure	16,670	-	-	16,670	-	-	-	-
Subtotal Intercontinental (non-ITRP)	\$ 845,097	\$ 224,234	\$ 89,544	\$ 395,554	\$ -	\$ 41,450	\$ -	\$ 94,316
William P. Hobby Airport								
Hobby Airfield	\$ 25,484	\$ 12,257	\$ -	\$ 13,226	\$ -	\$ -	\$ -	\$ -
Hobby West Terminal								
Terminal facilities (Southwest project)	117,457	1,575	-	-	-	-	115,882	-
Satellite utility plant	25,111	-	-	2,541	1,458	-	21,112	-
West parking garage	58,937	-	-	7,611	449	-	50,876	-
Roadway modifications	15,042	-	-	208	3,295	-	11,539	-
Hobby Central Terminal	22,891	10,111	-	2,485	10,295	-	-	-
Hobby Rental Car Center	22,303	-	22,303	-	-	-	-	-
Hobby other	25,614	-	-	25,614	-	-	-	-
Subtotal Hobby	\$ 312,839	\$ 23,943	\$ 22,303	\$ 51,686	\$ 15,498	\$ -	\$ 199,409	\$ -
Ellington Airport								
Houston Spaceport	\$ 18,237	\$ 7,202	\$ -	\$ 11,035	\$ -	\$ -	\$ -	\$ -
Subtotal Ellington	\$ 38,457	\$ 7,202	\$ -	\$ 31,255	\$ -	\$ -	\$ -	\$ -
HAS System Support								
Grand total all projects	\$ 1,883,361	\$ 271,216	\$ 111,846	\$ 664,326	\$ 215,898	\$ 227,950	\$ 235,909	\$ 156,216

(a) Source: Houston Airport System records.

Project costs are escalated from 2016 estimates per the ITRP Program Manager's calculations or at 3.0% per year.

Exhibit B

SOURCES AND USES OF BOND FUNDS

Houston Airport System
(dollars in thousands)

Proposed 2018AB Subordinate Lien Bonds

	2018A New Money (AMT)			2018B New Money (Non-AMT)			Subtotal	2018B		Total	Planned	Total Bonds
	IAH ITRP	HOU Terminal	HOU SUP	Subtotal	HOU Garage	HOU Roads	Subtotal	2018AB	Refund 2007B	2018AB	2019	
								New Money	Non-AMT			
Sources of Bond funds												
Bond proceeds												
Airport System Revenue Bonds	\$ 39,450	\$ 125,690	\$ 22,900	\$ 188,040	\$ 54,625	\$ 12,395	\$ 67,020	\$ 255,060	\$ 264,515	\$ 519,575	\$ 188,244	\$ 707,819
Original issue premium (discount)	-	-	-	-	-	-	-	-	-	-	-	-
Issuer contribution	-	-	-	-	-	-	-	-	2,867	2,867	-	2,867
Net proceeds	\$ 39,450	\$ 125,690	\$ 22,900	\$ 188,040	\$ 54,625	\$ 12,395	\$ 67,020	\$ 255,060	\$ 267,382	\$ 522,442	\$ 188,244	\$ 710,686
Investment earnings on bond funds												
Construction fund	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,035	\$ 2,035
Capitalized interest account	-	-	-	-	-	-	-	-	-	-	384	384
Subtotal investment earnings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,419	\$ 2,419
Total sources of Bond funds	\$ 39,450	\$ 125,690	\$ 22,900	\$ 188,040	\$ 54,625	\$ 12,395	\$ 67,020	\$ 255,060	\$ 267,382	\$ 522,442	\$ 190,664	\$ 713,105
Uses of Bond funds												
Project costs	\$ 36,500	\$ 115,882	\$ 21,112	\$ 173,494	\$ 50,876	\$ 11,539	\$ 62,415	\$ 235,909	\$ -	\$ 235,909	\$ 156,216	\$ 392,125
Refunding escrow deposits												
Cash deposit	-	-	-	-	-	-	-	-	\$ -	\$ -	-	\$ -
Purchase of SLGS	-	-	-	-	-	-	-	-	265,002	265,002	-	265,002
Subtotal refunding escrow deposits	-	-	-	-	-	-	-	-	\$ 265,002	\$ 265,002	-	\$ 265,002
Capitalized interest account	-	-	-	-	-	-	-	-	-	-	19,209	19,209
Reserve Fund Requirement												
Fund deposit	\$ 2,595	\$ 8,673	\$ 1,583	\$ 12,851	\$ 3,257	\$ 741	\$ 3,999	\$ 16,849	\$ -	\$ 16,849	\$ 13,356	\$ 30,206
Surety	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Reserve Fund Requirement	\$ 2,595	\$ 8,673	\$ 1,583	\$ 12,851	\$ 3,257	\$ 741	\$ 3,999	\$ 16,849	\$ -	\$ 16,849	\$ 13,356	\$ 30,206
Issuance costs	355	1,135	205	1,695	492	115	606	2,302	2,380	4,682	1,882	6,564
Total uses of bond funds	\$ 39,450	\$ 125,690	\$ 22,900	\$ 188,040	\$ 54,625	\$ 12,395	\$ 67,020	\$ 255,060	\$ 267,382	\$ 522,442	\$ 190,664	\$ 713,105

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Source for proposed 2018AB Bonds: Hilltop Securities Inc., February 16, 2018.

Bond financing assumptions:

											July 1, 2019
Bond interest rate (average coupon)	4.25%	4.25%	4.25%		4.25%	4.25%			3.25%		5.00%
True interest cost (all-in)	4.32%	4.34%	4.34%		4.32%	4.32%			3.37%		
Investment earnings rate	0.00%	0.00%	0.00%		0.00%	0.00%			0.00%		2.00%
Capitalized interest period (years)	-	-	-		-	-			-		2
Interest-only period thereafter (years)	4	-	-		-	-			-		-
Final maturity (July 1 of year)	2047	2041	2041		2048	2048			2030		2046
Principal amortization period (years)	25	23	23		30	30			12		25
Issuance cost (percent of principal)	0.90%	0.90%	0.90%		0.90%	0.92%			0.90%		1.00%

Exhibit C-1

AIRPORT SYSTEM REVENUE BOND DEBT SERVICE REQUIREMENTS

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Senior Lien Obligations										
2009A Bonds	\$ 22,393	\$ 23,819	\$ 33,094	\$ 33,096	\$ 33,094	\$ 33,092	\$ 33,096	\$ 33,092	\$ 33,095	\$ 33,094
Senior Lien commercial paper Notes	-	0	38	135	1,704	2,850	3,700	4,550	4,550	4,550
Subtotal Senior Lien Obligations	\$ 22,393	\$ 23,820	\$ 33,133	\$ 33,232	\$ 34,798	\$ 35,942	\$ 36,796	\$ 37,642	\$ 37,645	\$ 37,644
Subordinate Lien Bonds										
2000B Bonds	\$ 2,426	\$ 2,426	\$ 2,426	\$ 2,426	\$ 2,426	\$ 2,426	\$ 2,426	\$ 2,426	\$ 8,626	\$ 8,778
2000P-1 Bonds (b)	1,557	1,605	1,709	1,902	2,085	3,843	3,835	3,847	3,826	3,852
2000P-2 Bonds (b)	1,558	1,599	1,710	1,903	2,081	3,830	3,822	3,809	3,719	3,818
2002A Bonds	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025	1,025
2002B Bonds	1,373	1,373	1,373	1,373	1,373	1,373	1,373	1,373	1,373	1,373
2002C Bonds (b)	2,707	2,961	2,798	3,227	3,779	9,675	6,657	6,946	6,694	6,932
2002D-1 Bonds (b)	2,513	2,787	2,699	3,042	3,504	2,875	6,165	5,755	6,121	5,777
2002D-2 Bonds (b)	2,499	2,801	2,661	3,065	3,446	5,905	5,613	5,748	5,628	5,738
2007B Bonds (c)	17,991	17,992	17,987	17,982	17,981	18,549	-	-	-	-
2010 Bonds (b)	999	809	763	803	1,329	5,057	5,046	5,043	5,122	5,114
2011A Bonds	52,206	52,202	52,210	52,205	52,559	48,090	47,299	47,302	47,293	47,303
2011B Bonds	13,505	13,533	13,495	13,494	13,492	11,808	9,149	9,148	4,167	4,169
2012A Bonds	14,329	14,329	14,329	17,369	17,367	19,058	21,726	21,723	21,735	17,546
2012B Bonds	10,857	10,857	10,857	10,857	10,857	10,857	10,857	10,857	15,787	15,455
Proposed 2018A (New Money)	-	-	-	-	-	2,242	11,927	11,929	11,930	11,928
Proposed 2018B (New Money)	-	-	-	-	-	799	3,993	3,995	3,994	3,996
Proposed 2018B (2007B Refunding)	-	-	-	-	-	2,412	20,802	20,795	14,926	19,589
Planned 2019 Bonds	-	-	-	-	-	-	-	-	-	13,356
Fiscal agent and other fees	68	54	73	58	57	100	100	100	100	100
Subtotal Subordinate Lien Bonds	\$ 125,612	\$ 126,352	\$ 126,116	\$ 130,730	\$ 133,360	\$ 149,922	\$ 161,812	\$ 161,820	\$ 162,066	\$ 175,848
Inferior Lien obligations										
1997A Special Facilities Bonds (d)	\$ 6,586	\$ 6,584	\$ 6,582	\$ 6,583	\$ 6,583	\$ 256	\$ -	\$ -	\$ -	\$ -
Appropriation facility fees	-	-	-	-	-	752	752	752	752	752
	\$ 6,586	\$ 6,584	\$ 6,582	\$ 6,583	\$ 6,583	\$ 1,008	\$ 752	\$ 752	\$ 752	\$ 752
Total debt service requirements	\$ 154,591	\$ 156,756	\$ 165,830	\$ 170,545	\$ 174,742	\$ 186,872	\$ 199,359	\$ 200,214	\$ 200,462	\$ 214,244

(a) Source: Houston Airport System records.

(b) Bonds bearing interest at variable rates. See text section "Debt Service Requirements" for assumed rates.

(c) Bonds to be refunded by the proposed 2018B Bonds.

(d) Payments equal to debt service on special facilities revenue bonds issued to pay certain of the costs of the Skyway APM system and paid by HAS under a sublease agreement with United on the same basis as Inferior Lien obligations. The final payment on such bonds was made on July 15, 2017.

Source for proposed 2018AB Bonds: Hilltop Securities Inc., February 16, 2018.

Exhibit C-2

AIRLINE TERMINAL SPECIAL FACILITIES REVENUE BOND DEBT SERVICE REQUIREMENTS

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Prior Terminal Special Facilities Revenue Bonds										
1997B Special Facilities Bonds	\$ 7,406	\$ 7,354	\$ 7,291	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2011 Special Facilities Bonds	7,461	7,461	7,461	7,461	7,461	7,461	7,461	7,461	7,461	7,461
2014 Special Facilities Bonds	-	-	16,209	15,001	15,001	15,001	15,001	49,181	49,053	23,292
2015B-1 Special Facilities Bonds	-	-	-	7,091	8,833	8,833	8,833	8,833	8,833	8,833
2015B-2 Special Facilities Bonds (b)	-	-	-	1,902	2,370	2,370	2,370	2,370	48,575	-
Subtotal prior special facilities bonds	\$ 14,866	\$ 14,815	\$ 30,961	\$ 31,454	\$ 33,663	\$ 33,663	\$ 33,663	\$ 67,843	\$ 113,921	\$ 39,585
Future Terminal Special Facilities Bonds										
2018 Special Facilities Bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,691	\$ 4,691
Future special facilities bonds	-	-	-	-	-	-	-	-	4,691	4,691
Total debt service requirements	\$ 14,866	\$ 14,815	\$ 30,961	\$ 31,454	\$ 33,663	\$ 33,663	\$ 33,663	\$ 67,843	\$ 118,611	\$ 44,276

Note: Does not include debt service requirements of airline non-terminal special facilities bonds or rental car special facilities revenue bonds.

(a) Source: Houston Airport System records.

(b) Includes bullet principal payment of \$47.4 million in FY 2021.

Exhibit D

OPERATION AND MAINTENANCE EXPENSES

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Airport System	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenses by type										
Personnel	\$ 104,162	\$ 108,383	\$ 115,889	\$ 123,872	\$ 136,861	\$ 119,255	\$ 124,025	\$ 128,986	\$ 134,146	\$ 139,512
Supplies	7,344	8,822	7,927	8,140	7,791	9,318	9,597	9,885	10,182	10,487
Utilities	25,027	20,439	20,754	20,254	18,898	19,742	20,334	20,944	21,572	22,220
Public safety	38,940	39,097	43,071	48,130	48,491	49,363	51,337	53,391	55,526	57,747
Building maintenance	26,053	26,146	26,000	30,975	28,460	33,716	34,727	35,769	36,842	37,947
Parking	17,907	19,466	19,346	21,630	25,229	27,679	28,510	29,365	30,246	31,153
Other services	14,118	24,462	25,374	25,275	20,589	25,889	26,665	27,465	28,289	29,138
Administration and overhead	17,975	20,484	23,738	35,218	27,374	30,831	31,756	32,708	33,689	34,700
Noncapital equipment	1,112	1,338	1,352	1,114	669	2,486	2,561	2,637	2,717	2,798
Pension obligation bond interest	107	107	107	107	107	107	110	113	116	120
O&M Expenses (Bond Ordinance) (b)	\$ 252,745	\$ 268,745	\$ 283,557	\$ 314,715	\$ 314,469	\$ 318,385	\$ 329,623	\$ 341,265	\$ 353,327	\$ 365,823
Annual percent change	0.3%	6.3%	5.5%	11.0%	-0.1%	1.2%	3.5%	3.5%	3.5%	3.5%
Capital outlays	\$ 5,470	\$ 2,386	\$ 5,782	\$ 4,947	\$ 3,018	\$ 4,802	\$ 4,946	\$ 5,095	\$ 5,248	\$ 5,405
Collateralized pension note	2,502	2,502	2,502	2,502	2,502	2,502	2,577	2,655	2,734	2,816
Total (rates and charges)	\$ 260,718	\$ 273,633	\$ 291,841	\$ 322,164	\$ 319,990	\$ 325,690	\$ 337,146	\$ 349,015	\$ 361,309	\$ 374,045
Expenses by airport										
Intercontinental (c)	\$ 203,367	\$ 211,362	\$ 225,926	\$ 242,009	\$ 238,597	\$ 244,707	\$ 253,053	\$ 261,895	\$ 270,879	\$ 280,512
Hobby (d)	52,497	56,973	60,452	74,264	75,475	74,738	77,630	80,432	83,502	86,365
Ellington (e)	4,853	5,298	5,463	5,891	5,917	6,245	6,463	6,687	6,928	7,167
Total (rates and charges)	\$ 260,718	\$ 273,633	\$ 291,841	\$ 322,164	\$ 319,990	\$ 325,690	\$ 337,146	\$ 349,015	\$ 361,309	\$ 374,045
Share by airport										
Intercontinental	78.0%	77.2%	77.4%	75.1%	74.6%	75.1%	75.1%	75.0%	75.0%	75.0%
Hobby	20.1%	20.8%	20.7%	23.1%	23.6%	22.9%	23.0%	23.0%	23.1%	23.1%
Ellington	1.9%	1.9%	1.9%	1.8%	1.8%	1.9%	1.9%	1.9%	1.9%	1.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

(a) Source: Houston Airport System records.

(b) Personnel amount for FY 2017 excludes an extraordinary pension obligation accrual reported in the City's financial statements in accordance with GASB Statement No. 27.

(c) See Exhibit D-1 for detail by type. Excludes capital outlays and pension note repayment.

(d) See Exhibit D-2 for detail by type. Excludes capital outlays and pension note repayment.

(e) See Exhibit D-3 for detail by type. Excludes capital outlays and pension note repayment.

Exhibit D-1

OPERATION AND MAINTENANCE EXPENSES

George Bush Intercontinental Airport

For Fiscal Years ending June 30

(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Intercontinental	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenses by type										
Direct expenses										
Personnel	\$ 45,914	\$ 47,803	\$ 45,970	\$ 43,100	\$ 54,366	\$ 51,214	\$ 53,263	\$ 55,394	\$ 57,609	\$ 59,914
Supplies	5,086	5,899	5,157	5,408	5,029	5,960	6,138	6,323	6,512	6,708
Utilities	20,567	16,438	16,640	15,648	14,478	14,977	15,427	15,889	16,366	16,857
Public safety	28,941	28,417	31,898	34,493	34,810	36,111	37,555	39,058	40,620	42,245
Building maintenance	22,066	23,390	23,628	26,680	24,608	28,481	29,335	30,215	31,122	32,056
Parking	14,634	15,369	15,543	17,271	20,239	22,187	22,853	23,538	24,244	24,972
Other services	10,707	18,522	19,184	18,301	14,929	18,795	19,359	19,940	20,538	21,154
Noncapital equipment	451	546	597	391	142	721	743	765	788	812
Pension obligation bond interest	50	49	46	43	43	44	46	47	49	50
Subtotal direct expenses	\$ 148,416	\$ 156,433	\$ 158,664	\$ 161,336	\$ 168,643	\$ 178,491	\$ 184,719	\$ 191,169	\$ 197,849	\$ 204,766
Allocated HAS overhead	50,705	53,424	63,486	77,488	67,533	62,658	64,670	66,952	69,143	71,742
Subtotal	\$ 199,121	\$ 209,857	\$ 222,150	\$ 238,824	\$ 236,176	\$ 241,149	\$ 249,389	\$ 258,121	\$ 266,991	\$ 276,508
Capital outlays	3,034	292	2,564	1,973	1,209	2,345	2,415	2,488	2,562	2,639
Collateralized pension note	1,212	1,212	1,212	1,212	1,212	1,212	1,249	1,286	1,325	1,365
Total (rates and charges)	\$ 203,367	\$ 211,362	\$ 225,926	\$ 242,009	\$ 238,597	\$ 244,707	\$ 253,053	\$ 261,895	\$ 270,879	\$ 280,512
Annual percent change	1.6%	3.9%	6.9%	7.1%	-1.4%	2.6%	3.4%	3.5%	3.4%	3.6%

(a) Source: Houston Airport System records.

Exhibit D-2

OPERATION AND MAINTENANCE EXPENSES

William P. Hobby Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Hobby	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenses by type										
Direct expenses										
Personnel	\$ 15,912	\$ 15,987	\$ 17,309	\$ 17,925	\$ 21,601	\$ 19,699	\$ 20,487	\$ 21,307	\$ 22,159	\$ 23,046
Supplies	1,251	1,576	1,612	1,719	1,900	2,189	2,255	2,323	2,392	2,464
Utilities	3,877	3,061	3,270	4,015	3,931	3,969	4,088	4,211	4,337	4,468
Public safety	9,998	10,680	11,172	13,637	13,682	13,252	13,782	14,333	14,906	15,503
Building maintenance	2,279	2,653	2,316	4,206	3,881	4,980	5,129	5,283	5,441	5,605
Parking	3,258	4,068	3,760	4,317	4,958	5,458	5,622	5,791	5,964	6,143
Other services	2,400	4,690	3,723	5,489	4,242	5,445	5,609	5,777	5,950	6,129
Noncapital equipment	60	100	126	152	286	828	852	878	904	931
Pension obligation bond interest	18	17	18	18	17	17	18	18	19	19
Subtotal direct expenses	\$ 39,052	\$ 42,831	\$ 43,305	\$ 51,478	\$ 54,498	\$ 55,838	\$ 57,843	\$ 59,921	\$ 62,075	\$ 64,308
Allocable HAS overhead	12,611	13,524	16,314	22,088	20,328	18,012	18,873	19,570	20,457	21,059
Subtotal	\$ 51,663	\$ 56,355	\$ 59,619	\$ 73,566	\$ 74,826	\$ 73,850	\$ 76,716	\$ 79,490	\$ 82,532	\$ 85,366
Capital outlays	371	155	369	235	186	425	437	450	464	478
Collateralized pension note	463	463	463	463	463	463	477	491	506	521
Total (rates and charges)	\$ 52,497	\$ 56,973	\$ 60,452	\$ 74,264	\$ 75,475	\$ 74,738	\$ 77,630	\$ 80,432	\$ 83,502	\$ 86,365
Annual percent change	1.9%	8.5%	6.1%	22.8%	1.6%	-1.0%	3.9%	3.6%	3.8%	3.4%

(a) Source: Houston Airport System records.

Exhibit D-3

OPERATION AND MAINTENANCE EXPENSES

Ellington Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Ellington	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Expenses by type										
Direct expenses										
Personnel	\$ 1,954	\$ 2,174	\$ 2,101	\$ 2,071	\$ 2,619	\$ 2,526	\$ 2,627	\$ 2,732	\$ 2,842	\$ 2,955
Supplies	335	407	310	300	320	317	327	336	346	357
Utilities	333	307	280	262	235	333	343	353	364	375
Public safety	-	-	-	-	-	-	-	-	-	-
Building maintenance	64	104	56	51	76	255	263	271	279	287
Parking	(0)	-	1	2	2	2	2	2	2	2
Other services	1,010	1,248	1,254	1,485	1,418	1,648	1,698	1,749	1,801	1,855
Noncapital equipment	43	3	64	14	31	25	25	26	27	28
Pension obligation bond interest	2	2	2	2	2	2	2	2	2	3
Subtotal direct expenses	\$ 3,742	\$ 4,245	\$ 4,069	\$ 4,186	\$ 4,703	\$ 5,108	\$ 5,287	\$ 5,471	\$ 5,663	\$ 5,861
Allocable HAS overhead	793	898	947	1,240	1,094	1,087	1,125	1,162	1,211	1,250
Subtotal	\$ 4,534	\$ 5,143	\$ 5,016	\$ 5,426	\$ 5,797	\$ 6,195	\$ 6,411	\$ 6,634	\$ 6,874	\$ 7,111
Capital outlays	269	106	397	415	70	-	-	-	-	-
Collateralized pension note	50	50	50	50	50	50	51	53	55	56
Total	\$ 4,853	\$ 5,298	\$ 5,463	\$ 5,891	\$ 5,917	\$ 6,245	\$ 6,463	\$ 6,687	\$ 6,928	\$ 7,167
Annual percent change	7.1%	9.2%	3.1%	7.8%	0.5%	5.5%	3.5%	3.5%	3.6%	3.4%

(a) Source: Houston Airport System records.

Exhibit E

GROSS REVENUES
Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Airport System	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
George Bush Intercontinental Airport (b)										
Airline revenues										
Landing fees	\$ 73,429	\$ 71,583	\$ 75,506	\$ 67,910	\$ 69,254	\$ 70,833	\$ 71,915	\$ 74,970	\$ 75,085	\$ 84,420
Terminal rentals and use fees	133,801	138,195	147,477	154,354	159,463	173,122	176,066	180,790	180,901	184,423
Subtotal airline revenues	\$ 207,229	\$ 209,778	\$ 222,983	\$ 222,264	\$ 228,717	\$ 243,955	\$ 247,981	\$ 255,760	\$ 255,986	\$ 268,843
Nonairline revenues										
Terminal concessions	\$ 29,293	\$ 27,581	\$ 28,846	\$ 21,391	\$ 23,581	\$ 15,274	\$ 16,482	\$ 17,408	\$ 18,370	\$ 19,373
Parking and ground transportation	84,459	97,119	103,738	105,771	103,201	105,024	108,661	114,470	108,982	114,647
Other nonairline revenues	33,812	33,986	39,417	33,272	43,056	37,311	38,365	39,374	40,415	41,490
Subtotal nonairline revenues	\$ 147,564	\$ 158,686	\$ 172,001	\$ 160,435	\$ 169,839	\$ 157,608	\$ 163,509	\$ 171,252	\$ 167,767	\$ 175,511
Total Intercontinental	\$ 354,793	\$ 368,464	\$ 394,984	\$ 382,698	\$ 398,555	\$ 401,564	\$ 411,490	\$ 427,012	\$ 423,753	\$ 444,354
Annual percent change	1.6%	3.9%	7.2%	-3.1%	4.1%	0.8%	2.5%	3.8%	-0.8%	4.9%
William P. Hobby Airport (c)										
Airline revenues										
Landing fees	\$ 13,483	\$ 12,514	\$ 13,920	\$ 14,793	\$ 14,783	\$ 16,235	\$ 17,193	\$ 18,290	\$ 18,203	\$ 18,565
Terminal rentals and use fees	23,326	23,674	24,401	35,214	34,728	28,009	30,256	30,663	31,209	31,326
Subtotal airline revenues	\$ 36,809	\$ 36,188	\$ 38,320	\$ 50,008	\$ 49,511	\$ 44,244	\$ 47,449	\$ 48,954	\$ 49,412	\$ 49,892
Nonairline revenues										
Terminal concessions	\$ 9,515	\$ 10,613	\$ 10,801	\$ 11,972	\$ 13,251	\$ 13,563	\$ 14,652	\$ 15,448	\$ 16,278	\$ 17,144
Parking and ground transportation	28,614	33,416	34,314	35,890	34,936	35,922	37,312	39,210	39,559	41,543
Other nonairline revenues	9,723	9,659	9,598	12,939	12,090	11,891	12,150	12,416	12,690	12,973
Subtotal nonairline revenues	\$ 47,852	\$ 53,688	\$ 54,713	\$ 60,801	\$ 60,277	\$ 61,376	\$ 64,113	\$ 67,074	\$ 68,527	\$ 71,660
Total Hobby	\$ 84,661	\$ 89,876	\$ 93,034	\$ 110,809	\$ 109,788	\$ 105,620	\$ 111,562	\$ 116,028	\$ 117,939	\$ 121,551
Annual percent change	6.9%	6.2%	3.5%	19.1%	-0.9%	-3.8%	5.6%	4.0%	1.6%	3.1%
Ellington Airport										
General aviation	\$ 187	\$ 221	\$ 209	\$ 253	\$ 214	\$ 221	\$ 228	\$ 234	\$ 241	\$ 249
Building and ground rentals	1,320	1,307	1,367	1,768	1,652	2,111	2,174	2,239	2,306	2,375
Other revenues	282	899	230	303	314	323	326	330	333	337
Total Ellington	\$ 1,789	\$ 2,428	\$ 1,806	\$ 2,324	\$ 2,180	\$ 2,655	\$ 2,728	\$ 2,803	\$ 2,881	\$ 2,961
Total Houston Airport System	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 545,843	\$ 544,573	\$ 568,866
Annual percent change	2.6%	4.4%	6.3%	1.2%	3.0%	-0.1%	3.1%	3.8%	-0.2%	4.5%

(a) Source: Houston Airport System records.

(b) See Exhibit E-1 for detail.

(c) See Exhibit E-3 for detail.

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Exhibit E-1

GROSS REVENUES
George Bush Intercontinental Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Intercontinental	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Landing fees										
Passenger airlines	\$ 69,585	\$ 71,037	\$ 75,669	\$ 70,317	\$ 67,684	\$ 69,191	\$ 70,430	\$ 73,446	\$ 73,703	\$ 82,635
Cargo airlines	4,592	4,841	5,159	4,395	4,499	4,660	4,593	4,725	4,680	5,181
Less: Air service incentive credits	(748)	(4,294)	(5,322)	(6,802)	(2,930)	(3,018)	(3,108)	(3,201)	(3,297)	(3,396)
Total landing fees	\$ 73,429	\$ 71,583	\$ 75,506	\$ 67,910	\$ 69,254	\$ 70,833	\$ 71,915	\$ 74,970	\$ 75,085	\$ 84,420
Annual percent change	5.2%	-2.5%	5.5%	-10.1%	2.0%	2.3%	1.5%	4.2%	0.2%	12.4%
Terminal rentals and use fees (b)										
Terminal A	\$ 15,905	\$ 14,687	\$ 15,176	\$ 17,571	\$ 16,809	\$ 18,872	\$ 18,979	\$ 18,892	\$ 18,710	\$ 19,078
Terminal B	9,798	11,915	13,043	13,746	13,437	16,283	18,343	18,146	17,387	17,688
Terminal C	31,382	30,909	31,822	39,417	38,701	37,864	37,475	37,732	38,274	38,865
Terminal D	21,342	22,490	21,581	26,797	28,495	28,686	28,917	29,413	29,227	29,783
Terminal E	15,080	14,612	15,140	16,208	16,459	16,990	17,300	17,685	17,521	17,933
Central FIS	27,795	30,078	33,235	37,556	36,526	37,654	37,839	38,660	39,282	40,179
Skyway APM	13,906	14,326	17,824	18,375	17,313	16,773	17,212	20,261	20,499	20,897
Reconciliation adjustment	(1,408)	(822)	(344)	(15,316)	(8,276)	-	-	-	-	-
Total terminal rentals and use fees	\$ 133,801	\$ 138,195	\$ 147,477	\$ 154,354	\$ 159,463	\$ 173,122	\$ 176,066	\$ 180,790	\$ 180,901	\$ 184,423
Annual percent change	-2.5%	3.3%	6.7%	4.7%	3.3%	8.6%	1.7%	2.7%	0.1%	1.9%
Total airline revenues	\$ 207,229	\$ 209,778	\$ 222,983	\$ 222,264	\$ 228,717	\$ 243,955	\$ 247,981	\$ 255,760	\$ 255,986	\$ 268,843
Annual percent change	0.1%	1.2%	6.3%	-0.3%	2.9%	6.7%	1.7%	3.1%	0.1%	5.0%
Airline revenues as share of total revenues	58.4%	56.9%	56.5%	58.1%	57.4%	60.8%	60.3%	59.9%	60.4%	60.5%
Terminal concessions										
Food and beverage	\$ 14,871	\$ 16,095	\$ 17,003	\$ 24,597	\$ 24,442	\$ 22,603	\$ 24,415	\$ 25,747	\$ 27,137	\$ 28,588
Retail, news, and gift	11,396	13,162	13,653	11,892	13,483	15,888	17,162	18,097	19,072	20,090
Duty free	5,221	6,200	6,046	6,572	7,310	8,872	9,581	10,215	10,875	11,566
Advertising	12,403	10,430	12,278	11,754	10,325	8,324	8,992	9,478	9,984	10,512
Other services	2,041	2,239	5,890	3,699	3,395	4,311	4,657	4,908	5,170	5,444
Subtotal	\$ 45,932	\$ 48,125	\$ 54,870	\$ 58,513	\$ 58,956	\$ 59,998	\$ 64,807	\$ 68,445	\$ 72,240	\$ 76,200
Amounts retained by airlines	(17,448)	(21,555)	(24,988)	(37,100)	(36,694)	(44,725)	(48,324)	(51,037)	(53,870)	(56,826)
Accrual-to-cash adjustment	808	1,011	(1,036)	(22)	1,320	-	-	-	-	-
Total terminal concessions	\$ 29,293	\$ 27,581	\$ 28,846	\$ 21,391	\$ 23,581	\$ 15,274	\$ 16,482	\$ 17,408	\$ 18,370	\$ 19,373
Annual percent change	8.9%	-5.8%	4.6%	-25.8%	10.2%	-35.2%	7.9%	5.6%	5.5%	5.5%
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Revenue per enplaned passenger	\$1.48	\$1.37	\$1.38	\$1.00	\$1.14	\$0.75	\$0.77	\$0.79	\$0.82	\$0.84

GROSS REVENUES

George Bush Intercontinental Airport
For Fiscal Years ending June 30
(dollars in thousands)

Intercontinental	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Parking and ground transportation										
Parking	\$ 59,007	\$ 68,028	\$ 74,091	\$ 76,952	\$ 75,479	\$ 78,046	\$ 80,171	\$ 85,098	\$ 78,709	\$ 83,456
Rental car privilege fees	21,101	23,310	23,105	21,771	20,250	19,482	20,399	20,848	21,295	21,742
Ground transportation fees	4,352	5,781	6,541	7,048	7,472	7,496	8,091	8,525	8,977	9,449
Total parking and ground transportation	\$ 84,459	\$ 97,119	\$ 103,738	\$ 105,771	\$ 103,201	\$ 105,024	\$ 108,661	\$ 114,470	\$ 108,982	\$ 114,647
Annual percent change	6.7%	15.0%	6.8%	2.0%	-2.4%	1.8%	3.5%	5.3%	-4.8%	5.2%
Originating passengers	8,369	8,786	9,425	10,099	10,267	10,000	10,480	10,720	10,960	11,200
Revenue per originating passenger	\$10.09	\$11.05	\$11.01	\$10.47	\$10.05	\$10.50	\$10.37	\$10.68	\$9.94	\$10.24
Other nonairline revenues										
Building and ground rentals	\$ 17,567	\$ 17,277	\$ 17,649	\$ 18,118	\$ 18,576	\$ 19,134	\$ 19,708	\$ 20,299	\$ 20,908	\$ 21,535
Airport hotel	2,797	3,240	2,183	1,826	3,137	3,199	3,456	3,642	3,837	4,040
Nonairline terminal rentals	636	927	997	1,217	1,379	1,420	1,463	1,507	1,552	1,598
General aviation	2,844	2,992	2,877	2,744	2,548	2,625	2,703	2,785	2,868	2,954
Miscellaneous	3,857	4,621	10,437	1,117	9,375	2,853	2,938	3,026	3,117	3,211
Allocated systemwide	6,109	4,929	5,274	8,250	8,041	8,080	8,097	8,115	8,133	8,152
Total other nonairline revenues	\$ 33,812	\$ 33,986	\$ 39,417	\$ 33,272	\$ 43,056	\$ 37,311	\$ 38,365	\$ 39,374	\$ 40,415	\$ 41,490
Annual percent change	-6.2%	0.5%	16.0%	-15.6%	29.4%	-13.3%	2.8%	2.6%	2.6%	2.7%
Total nonairline revenues	\$ 147,564	\$ 158,686	\$ 172,001	\$ 160,435	\$ 169,839	\$ 157,608	\$ 163,509	\$ 171,252	\$ 167,767	\$ 175,511
Annual percent change	3.9%	7.5%	8.4%	-6.7%	5.9%	-7.2%	3.7%	4.7%	-2.0%	4.6%
Nonairline revenues as share of total revenues	41.6%	43.1%	43.5%	41.9%	42.6%	39.2%	39.7%	40.1%	39.6%	39.5%
Total revenues	\$ 354,793	\$ 368,464	\$ 394,984	\$ 382,698	\$ 398,555	\$ 401,564	\$ 411,490	\$ 427,012	\$ 423,753	\$ 444,354
Annual percent change	1.6%	3.9%	7.2%	-3.1%	4.1%	0.8%	2.5%	3.8%	-0.8%	4.9%

(a) Source: Houston Airport System records.

(b) See Exhibit E-2 for detail.

Exhibit E-2

AIRLINE PAYMENTS PER ENPLANED PASSENGER

George Bush Intercontinental Airport

For Fiscal Years ending June 30

(dollars in thousands)

Intercontinental	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Passenger airline landing fees										
Landing fees	\$ 69,585	\$ 71,037	\$ 75,669	\$ 70,317	\$ 67,684	\$ 69,191	\$ 70,430	\$ 73,446	\$ 73,703	\$ 82,635
Annual percent change	4.8%	2.1%	6.5%	-7.1%	-3.7%	2.2%	1.8%	4.3%	0.3%	12.1%
Landed weight	24,780	25,093	26,247	26,658	25,176	24,857	26,070	26,688	27,307	27,925
Average landing fee rate (per 1,000 lbs of landed weight)	\$2.81	\$2.83	\$2.88	\$2.64	\$2.69	\$2.78	\$2.70	\$2.75	\$2.70	\$2.96
Terminal rentals and use fees										
Terminal A	\$ 15,905	\$ 14,687	\$ 15,176	\$ 17,571	\$ 16,809	\$ 18,872	\$ 18,979	\$ 18,892	\$ 18,710	\$ 19,078
Terminal B	9,798	11,915	13,043	13,746	13,437	16,283	18,343	18,146	17,387	17,688
Terminal C	31,382	30,909	31,822	39,417	38,701	37,864	37,475	37,732	38,274	38,865
Terminal D	21,342	22,490	21,581	26,797	28,495	28,686	28,917	29,413	29,227	29,783
Terminal E	15,080	14,612	15,140	16,208	16,459	16,990	17,300	17,685	17,521	17,933
Central FIS	27,795	30,078	33,235	37,556	36,526	37,654	37,839	38,660	39,282	40,179
Skyway APM	13,906	14,326	17,824	18,375	17,313	16,773	17,212	20,261	20,499	20,897
Reconciliation adjustment	(1,408)	(822)	(344)	(15,316)	(8,276)	-	-	-	-	-
Subtotal terminal rentals and use fees	\$ 133,801	\$ 138,195	\$ 147,477	\$ 154,354	\$ 159,463	\$ 173,122	\$ 176,066	\$ 180,790	\$ 180,901	\$ 184,423
Annual percent change	-2.5%	3.3%	6.7%	4.7%	3.3%	8.6%	1.7%	2.7%	0.1%	1.9%
Airline payments to HAS										
Landing fees	\$ 69,585	\$ 71,037	\$ 75,669	\$ 70,317	\$ 67,684	\$ 69,191	\$ 70,430	\$ 73,446	\$ 73,703	\$ 82,635
Terminal rentals and use fees	133,801	138,195	147,477	154,354	159,463	173,122	176,066	180,790	180,901	184,423
Total airline payments	\$ 203,385	\$ 209,231	\$ 223,146	\$ 224,671	\$ 227,147	\$ 242,313	\$ 246,496	\$ 254,236	\$ 254,603	\$ 267,058
Less: Air service incentive credits	(748)	(4,294)	(5,322)	(6,802)	(2,930)	(3,018)	(3,108)	(3,201)	(3,297)	(3,396)
Less: Concession revenues retained by airlines										
Terminal B	\$ -	\$ (4,662)	\$ (6,442)	\$ (7,203)	\$ (5,634)	\$ (6,663)	\$ (7,212)	\$ (7,585)	\$ (7,973)	\$ (8,379)
Terminal C	-	-	-	(10,122)	(10,239)	(13,785)	(14,899)	(15,671)	(16,475)	(17,313)
Terminal E	(17,448)	(16,893)	(18,546)	(19,776)	(18,587)	(21,574)	(23,295)	(24,696)	(26,159)	(27,688)
Total revenues retained	\$ (17,448)	\$ (21,555)	\$ (24,988)	\$ (37,100)	\$ (34,461)	\$ (42,023)	\$ (45,406)	\$ (47,951)	\$ (50,607)	\$ (53,379)
Net airline payments	\$ 185,189	\$ 183,383	\$ 192,836	\$ 180,769	\$ 189,756	\$ 197,273	\$ 197,982	\$ 203,084	\$ 200,699	\$ 210,283
Annual percent change	-4.3%	-1.0%	5.2%	-6.3%	5.0%	4.0%	0.4%	2.6%	-1.2%	4.8%
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Average airline payments to HAS										
per enplaned passenger	\$9.37	\$9.12	\$9.20	\$8.44	\$9.17	\$9.62	\$9.21	\$9.23	\$8.92	\$9.14
Discounted to \$2017 at 3.0% per year	10.55	9.97	9.76	8.69	9.17	9.34	8.68	8.45	7.93	7.89

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AIRLINE PAYMENTS PER ENPLANED PASSENGER

George Bush Intercontinental Airport

For Fiscal Years ending June 30

(dollars in thousands)

Intercontinental	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Debt service on Special Facilities Bonds paid directly by airlines										
Prior special facilities bonds	\$ 14,866	\$ 14,815	\$ 30,961	\$ 31,454	\$ 33,663	\$ 33,663	\$ 33,663	\$ 67,843	\$ 113,921	\$ 39,585
Future special facilities bonds	-	-	-	-	-	-	-	-	4,691	4,691
Total	\$ 14,866	\$ 14,815	\$ 30,961	\$ 31,454	\$ 33,663	\$ 33,663	\$ 33,663	\$ 67,843	\$ 118,611	\$ 44,276
Terminal O&M expenses paid directly by airlines										
Terminal B	\$ -	\$ 3,418	\$ 3,528	\$ 3,634	\$ 3,743	\$ 8,332	\$ 8,582	\$ 8,840	\$ 9,105	\$ 9,378
Terminal C	-	-	-	16,573	17,070	17,582	18,110	18,653	19,213	19,789
Terminal E	10,675	10,980	11,334	11,674	12,024	12,385	12,756	13,139	13,533	13,939
Subtotal O&M expenses paid directly	\$ 10,675	\$ 14,398	\$ 14,862	\$ 31,881	\$ 32,837	\$ 38,299	\$ 39,448	\$ 40,632	\$ 41,851	\$ 43,106
All-in airline payments										
Net airline payments to HAS	\$ 185,189	\$ 183,383	\$ 192,836	\$ 180,769	\$ 189,756	\$ 197,273	\$ 197,982	\$ 203,084	\$ 200,699	\$ 210,283
Special facilities bond debt service (b)	14,866	14,815	30,961	31,454	33,663	33,663	33,663	67,843	118,611	44,276
Terminal O&M expenses paid directly	10,675	14,398	14,862	31,881	32,837	38,299	39,448	40,632	41,851	43,106
All-in airline payments	\$ 210,730	\$ 212,596	\$ 238,658	\$ 244,104	\$ 256,257	\$ 269,236	\$ 271,094	\$ 311,559	\$ 361,161	\$ 297,665
Annual percent change	-3.6%	0.9%	12.3%	2.3%	5.0%	5.1%	0.7%	14.9%	15.9%	-17.6%
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Average all-in airline payments per enplaned passenger										
	\$10.67	\$10.57	\$11.39	\$11.39	\$12.38	\$13.13	\$12.61	\$14.16	\$16.05	\$12.94
<i>Discounted to \$2017 at 3.0% per year</i>	<i>12.01</i>	<i>11.55</i>	<i>12.08</i>	<i>11.73</i>	<i>12.38</i>	<i>12.75</i>	<i>11.89</i>	<i>12.96</i>	<i>14.26</i>	<i>11.16</i>

(a) Source: Houston Airport System records.

(b) See Exhibit C-2 for detail. Includes bullet principal payments in FY 2021 of \$47.4 million on 2015B-2 bonds.

Exhibit E-3

GROSS REVENUES
William P. Hobby Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Hobby	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Landing fees										
Passenger airlines	\$ 13,483	\$ 12,514	\$ 13,920	\$ 14,793	\$ 14,783	\$ 16,235	\$ 17,193	\$ 18,290	\$ 18,203	\$ 18,565
Cargo airlines	-	-	-	-	-	-	-	-	-	-
Total landing fees	\$ 13,483	\$ 12,514	\$ 13,920	\$ 14,793	\$ 14,783	\$ 16,235	\$ 17,193	\$ 18,290	\$ 18,203	\$ 18,565
Annual percent change	2.6%	-7.2%	11.2%	6.3%	-0.1%	9.8%	5.9%	6.4%	-0.5%	2.0%
Terminal rentals and use fees (b)										
Central Terminal	\$ 26,180	\$ 24,059	\$ 25,359	\$ 26,171	\$ 18,486	\$ 19,956	\$ 20,410	\$ 20,930	\$ 21,521	\$ 21,878
West Terminal	-	-	-	3,644	4,962	5,257	6,728	6,951	7,169	7,291
FIS Facility	-	-	-	2,859	3,947	4,178	5,218	5,295	5,467	5,564
Total terminal rentals and use fees	\$ 26,180	\$ 24,059	\$ 25,359	\$ 32,674	\$ 27,395	\$ 29,391	\$ 32,356	\$ 33,176	\$ 34,156	\$ 34,733
Less: Credits	-	-	-	(820)	(1,422)	(1,382)	(2,100)	(2,512)	(2,947)	(3,407)
Reconciliation adjustment	(2,854)	(385)	(958)	3,361	8,755	-	-	-	-	-
Net terminal rentals and use fees	\$ 23,326	\$ 23,674	\$ 24,401	\$ 35,214	\$ 34,728	\$ 28,009	\$ 30,256	\$ 30,663	\$ 31,209	\$ 31,326
Total airline revenues	\$ 36,809	\$ 36,188	\$ 38,320	\$ 50,008	\$ 49,511	\$ 44,244	\$ 47,449	\$ 48,954	\$ 49,412	\$ 49,892
Annual percent change	3.4%	-1.7%	5.9%	30.5%	-1.0%	-10.6%	7.2%	3.2%	0.9%	1.0%
Airline revenues as share of total revenues	43.5%	40.3%	41.2%	45.1%	45.1%	41.9%	42.5%	42.2%	41.9%	41.0%
Terminal concessions										
Food and beverage	\$ 4,573	\$ 5,406	\$ 5,929	\$ 7,253	\$ 7,616	\$ 7,797	\$ 8,419	\$ 8,871	\$ 9,343	\$ 9,836
Retail, news, and gift	2,922	3,577	3,489	2,995	3,687	3,775	4,076	4,295	4,524	4,762
Duty free	-	-	-	384	379	408	447	480	513	549
Advertising	1,504	1,195	1,005	984	1,169	1,197	1,293	1,362	1,435	1,510
Other services	356	366	338	461	378	386	417	439	462	487
Subtotal	\$ 9,355	\$ 10,545	\$ 10,760	\$ 12,077	\$ 13,229	\$ 13,563	\$ 14,652	\$ 15,448	\$ 16,278	\$ 17,144
Accrual-to-cash adjustment	160	68	41	(105)	22	-	-	-	-	-
Total terminal concessions	\$ 9,515	\$ 10,613	\$ 10,801	\$ 11,972	\$ 13,251	\$ 13,563	\$ 14,652	\$ 15,448	\$ 16,278	\$ 17,144
Annual percent change	22.2%	11.5%	1.8%	10.8%	10.7%	2.4%	8.0%	5.4%	5.4%	5.3%
Enplaned passengers	5,377	5,836	5,945	6,383	6,660	6,620	6,940	7,100	7,260	7,420
Revenue per enplaned passenger	\$1.77	\$1.82	\$1.82	\$1.88	\$1.99	\$2.05	\$2.11	\$2.18	\$2.24	\$2.31

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GROSS REVENUES

William P. Hobby Airport
For Fiscal Years ending June 30
(dollars in thousands)

Hobby	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Parking and ground transportation										
Parking	\$ 18,589	\$ 22,145	\$ 23,424	\$ 24,698	\$ 24,273	\$ 25,215	\$ 25,988	\$ 27,577	\$ 27,612	\$ 29,276
Rental car privilege fees	8,422	9,472	8,885	8,965	8,482	8,436	8,864	9,045	9,226	9,407
Ground transportation fees	1,604	1,799	2,004	2,227	2,181	2,271	2,460	2,588	2,722	2,861
Total parking and ground transportation	\$ 28,614	\$ 33,416	\$ 34,314	\$ 35,890	\$ 34,936	\$ 35,922	\$ 37,312	\$ 39,210	\$ 39,559	\$ 41,543
Annual percent change	9.9%	16.8%	2.7%	4.6%	-2.7%	2.8%	3.9%	5.1%	0.9%	5.0%
Originating passengers	3,785	3,893	4,028	4,310	4,401	4,450	4,680	4,780	4,880	4,980
Revenue per enplaned passenger	\$7.56	\$8.58	\$8.52	\$8.33	\$7.94	\$8.07	\$7.97	\$8.20	\$8.11	\$8.34
Other nonairline revenues										
Building and ground rentals	\$ 5,395	\$ 5,478	\$ 5,569	\$ 5,817	\$ 6,022	\$ 6,251	\$ 6,439	\$ 6,632	\$ 6,831	\$ 7,036
Nonairline terminal rentals	474	501	517	536	592	714	735	757	780	803
General aviation	1,116	1,031	1,063	1,169	1,247	1,255	1,262	1,270	1,279	1,287
Miscellaneous	1,124	1,295	1,005	2,781	1,627	1,140	1,174	1,209	1,245	1,283
Allocated systemwide	1,613	1,354	1,444	2,636	2,602	2,532	2,539	2,547	2,555	2,564
Total other nonairline revenues	\$ 9,723	\$ 9,659	\$ 9,598	\$ 12,939	\$ 12,090	\$ 11,891	\$ 12,150	\$ 12,416	\$ 12,690	\$ 12,973
Annual percent change	-0.5%	-0.7%	-0.6%	34.8%	-6.6%	-1.6%	2.2%	2.2%	2.2%	2.2%
Total nonairline revenues	\$ 47,852	\$ 53,688	\$ 54,713	\$ 60,801	\$ 60,277	\$ 61,376	\$ 64,113	\$ 67,074	\$ 68,527	\$ 71,660
Annual percent change	9.8%	12.2%	1.9%	11.1%	-0.9%	1.8%	4.5%	4.6%	2.2%	4.6%
Nonairline revenues as share of total revenues	56.5%	59.7%	58.8%	54.9%	54.9%	58.1%	57.5%	57.8%	58.1%	59.0%
Total revenues	\$ 84,661	\$ 89,876	\$ 93,034	\$ 110,809	\$ 109,788	\$ 105,620	\$ 111,562	\$ 116,028	\$ 117,939	\$ 121,551
Annual percent change	6.9%	6.2%	3.5%	19.1%	-0.9%	-3.8%	5.6%	4.0%	1.6%	3.1%

(a) Source: Houston Airport System records.

(b) See Exhibit E-4 for detail.

Exhibit E-4

AIRLINE PAYMENTS PER ENPLANED PASSENGER

William P. Hobby Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Hobby	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Passenger airline landing fees										
Landing fees	\$ 13,483	\$ 12,514	\$ 13,920	\$ 14,793	\$ 14,783	\$ 16,235	\$ 17,193	\$ 18,290	\$ 18,203	\$ 18,565
Annual percent change	2.6%	-7.2%	11.2%	6.3%	-0.1%	9.8%	5.9%	6.4%	-0.5%	2.0%
Landed weight	6,629	7,077	6,933	7,192	7,455	7,390	7,780	7,959	8,139	8,318
Average landing fee rate (per 1,000 lbs of landed weight)	\$2.03	\$1.77	\$2.01	\$2.06	\$1.98	\$2.20	\$2.21	\$2.30	\$2.24	\$2.23
Terminal rentals and use fees										
Central Terminal	\$ 26,180	\$ 24,059	\$ 25,359	\$ 26,171	\$ 18,486	\$ 19,956	\$ 20,410	\$ 20,930	\$ 21,521	\$ 21,878
West Terminal (b)	-	-	-	6,503	8,910	9,435	11,946	12,245	12,636	12,856
Less: Concession revenue credit	-	-	-	(820)	(1,422)	(1,382)	(2,100)	(2,512)	(2,947)	(3,407)
<i>Reconciliation adjustment</i>	<i>(2,854)</i>	<i>(385)</i>	<i>(958)</i>	<i>3,361</i>	<i>8,755</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
Net terminal rentals and use fees	\$ 23,326	\$ 23,674	\$ 24,401	\$ 35,214	\$ 34,728	\$ 28,009	\$ 30,256	\$ 30,663	\$ 31,209	\$ 31,326
Annual percent change	3.9%	1.5%	3.1%	44.3%	-1.4%	-19.3%	8.0%	1.3%	1.8%	0.4%
Net airline payments	\$ 36,809	\$ 36,188	\$ 38,320	\$ 50,008	\$ 49,511	\$ 44,244	\$ 47,449	\$ 48,954	\$ 49,412	\$ 49,892
Enplaned passengers	5,377	5,836	5,945	6,383	6,660	6,620	6,940	7,100	7,260	7,420
Average airline payments to HAS per enplaned passenger	\$6.85	\$6.20	\$6.45	\$7.83	\$7.43	\$6.68	\$6.84	\$6.89	\$6.81	\$6.72
<i>Discounted to \$2017 at 3.0% per year</i>	<i>7.71</i>	<i>6.78</i>	<i>6.84</i>	<i>8.07</i>	<i>7.43</i>	<i>6.49</i>	<i>6.44</i>	<i>6.31</i>	<i>6.05</i>	<i>5.80</i>

(a) Source: Houston Airport System records.

(b) Includes FIS Facility use fees.

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Exhibit F

SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Airport System	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
PFC revenues										
George Bush Intercontinental Airport (b)										
Collections from \$3.00 PFC	\$ 47,465	\$ 48,181	\$ 52,462	\$ 52,972	\$ 51,339	\$ 50,358	\$ 52,815	\$ 54,043	\$ 55,271	\$ 56,500
Collections from \$1.50 PFC	-	-	6,807	27,494	26,647	26,138	27,413	28,050	28,688	29,325
Investment earnings	673	618	776	1,217	1,573	1,543	1,618	1,656	1,693	1,731
Subtotal Intercontinental	\$ 48,138	\$ 48,799	\$ 60,045	\$ 81,683	\$ 79,558	\$ 78,038	\$ 81,845	\$ 83,749	\$ 85,652	\$ 87,555
William P. Hobby Airport (c)										
Collections from \$3.00 PFC	\$ 13,731	\$ 14,422	\$ 14,783	\$ 15,564	\$ 15,841	\$ 16,262	\$ 17,048	\$ 17,441	\$ 17,834	\$ 18,227
Collections from \$1.50 PFC	-	-	1,918	8,078	8,222	8,441	8,849	9,053	9,257	9,461
Investment earnings	197	221	310	500	498	489	513	525	536	548
Subtotal Hobby	\$ 13,928	\$ 14,642	\$ 17,012	\$ 24,142	\$ 24,562	\$ 25,191	\$ 26,409	\$ 27,018	\$ 27,627	\$ 28,236
Total Airport System PFC revenues [A]	\$ 62,066	\$ 63,442	\$ 77,057	\$ 105,824	\$ 104,120	\$ 103,230	\$ 108,254	\$ 110,767	\$ 113,279	\$ 115,792

SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

Houston Airport System

For Fiscal Years ending June 30

(dollars in thousands)

Airport System	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Uses of PFC revenues										
George Bush Intercontinental Airport (b)										
Pay-as-you-go expenditures										
Pre-2014 projects	\$ -	\$ -	\$ -	\$ 21,138	\$ 6,821	\$ -	\$ -	\$ -	\$ -	\$ -
Future projects	-	-	-	-	51,637	28,763	-	-	60,000	60,000
Subtotal pay-as-you-go	\$ -	\$ -	\$ -	\$ 21,138	\$ 58,457	\$ 28,763	\$ -	\$ -	\$ 60,000	\$ 60,000
Debt service										
Pre-2014 projects	\$ 31,068	\$ 32,201	\$ 34,246	\$ 38,206	\$ 39,083	\$ 38,640	\$ 40,954	\$ 40,973	\$ 40,933	\$ 40,864
Future projects	-	-	-	-	-	-	-	-	-	1,710
Subtotal debt service	\$ 31,068	\$ 32,201	\$ 34,246	\$ 38,206	\$ 39,083	\$ 38,640	\$ 40,954	\$ 40,973	\$ 40,933	\$ 42,574
Subtotal Intercontinental	\$ 31,068	\$ 32,201	\$ 34,246	\$ 59,343	\$ 97,541	\$ 67,404	\$ 40,954	\$ 40,973	\$ 100,933	\$ 102,574
William P. Hobby Airport (c)										
Pay-as-you-go expenditures										
Pre-2014 projects	\$ -	\$ -	\$ -	\$ 20,821	\$ 25,816	\$ -	\$ -	\$ -	\$ -	\$ -
Future projects	-	-	-	-	10,498	5,000	-	-	-	-
Subtotal pay-as-you-go	\$ -	\$ -	\$ -	\$ 20,821	\$ 36,314	\$ 5,000	\$ -	\$ -	\$ -	\$ -
Debt service										
Pre-2014 projects	\$ 2,124	\$ 2,205	\$ 2,612	\$ 3,087	\$ 4,564	\$ 5,425	\$ 5,620	\$ 5,619	\$ 5,656	\$ 5,572
Future projects	-	-	-	-	-	1,453	8,250	8,252	8,254	8,252
Subtotal debt service	\$ 2,124	\$ 2,205	\$ 2,612	\$ 3,087	\$ 4,564	\$ 6,878	\$ 13,870	\$ 13,871	\$ 13,909	\$ 13,824
Subtotal Hobby	\$ 2,124	\$ 2,205	\$ 2,612	\$ 23,908	\$ 40,877	\$ 11,878	\$ 13,870	\$ 13,871	\$ 13,909	\$ 13,824
Total Airport System uses	\$ 33,193	\$ 34,406	\$ 36,859	\$ 83,251	\$ 138,418	\$ 79,282	\$ 54,824	\$ 54,844	\$ 114,842	\$ 116,398
Calculation of PFC fund balances										
Excess of PFC revenues over uses										
Intercontinental	\$ 17,070	\$ 16,598	\$ 25,799	\$ 22,339	\$ (17,982)	\$ 10,635	\$ 40,891	\$ 42,776	\$ (15,281)	\$ (15,019)
Hobby	11,804	12,438	14,400	234	(16,315)	13,313	12,540	13,147	13,718	14,412
Total Airport System	\$ 28,873	\$ 29,035	\$ 40,198	\$ 22,573	\$ (34,298)	\$ 23,948	\$ 53,431	\$ 55,923	\$ (1,563)	\$ (607)
PFC fund balances										
Intercontinental	\$ 76,405	\$ 93,003	\$ 118,801	\$ 141,140	\$ 123,158	\$ 133,793	\$ 174,684	\$ 217,460	\$ 202,179	\$ 187,160
Hobby	26,910	38,139	51,343	50,200	22,859	24,162	24,652	25,750	27,419	29,783
Total Airport System	\$ 103,314	\$ 131,142	\$ 170,144	\$ 191,341	\$ 146,017	\$ 157,955	\$ 199,336	\$ 243,210	\$ 229,599	\$ 216,944

(a) Source: Houston Airport System records.

(b) See Exhibit F-1 for detail.

(c) See Exhibit F-2 for detail.

Exhibit F-1

SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

George Bush Intercontinental Airport

For Fiscal Years ending June 30

(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Intercontinental	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Calculation of PFC revenues										
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Percent PFC-eligible	83.1%	82.9%	85.7%	85.5%	85.8%	85.0%	85.0%	85.0%	85.0%	85.0%
Net PFC collection per passenger										
\$3.00 PFC portion (b)	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89
\$1.50 PFC portion	-	-	0.38	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Net PFC collection per passenger	\$2.89	\$2.89	\$3.27	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39
PFC revenues										
Collections from \$3.00 PFC	\$ 47,465	\$ 48,181	\$ 52,462	\$ 52,972	\$ 51,339	\$ 50,358	\$ 52,815	\$ 54,043	\$ 55,271	\$ 56,500
Collections from \$1.50 PFC	-	-	6,807	27,494	26,647	26,138	27,413	28,050	28,688	29,325
Investment earnings (c)	673	618	776	1,217	1,573	1,543	1,618	1,656	1,693	1,731
Total PFC revenues	[A] \$ 48,138	\$ 48,799	\$ 60,045	\$ 81,683	\$ 79,558	\$ 78,038	\$ 81,845	\$ 83,749	\$ 85,652	\$ 87,555
Pay-as-you-go expenditures										
Pre-2014 projects	\$ -	\$ -	\$ -	\$ 21,138	\$ 6,821	\$ -	\$ -	\$ -	\$ -	\$ -
Future projects										
Mickey Leland International Terminal	-	-	-	-	-	-	-	-	37,500	37,500
Central FIS expansion	-	-	-	-	-	-	-	-	22,500	22,500
New C-North concourse	-	-	-	-	51,637	28,763	-	-	-	-
Total pay-as-you-go	[B] \$ -	\$ -	\$ -	\$ 21,138	\$ 58,457	\$ 28,763	\$ -	\$ -	\$ 60,000	\$ 60,000

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SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

George Bush Intercontinental Airport

For Fiscal Years ending June 30

(dollars in thousands)

Intercontinental	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Payment of Bond debt service										
Pre-2014 projects										
Skyway APM	\$ 17,380	\$ 18,030	\$ 20,640	\$ 21,003	\$ 21,230	\$ 18,924	\$ 19,174	\$ 19,180	\$ 19,181	\$ 19,153
Terminal B expansion	1,115	1,135	1,117	3,038	3,050	2,986	3,028	3,029	3,029	3,033
Central FIS facility	8,059	8,516	7,976	8,493	8,983	12,185	13,248	13,260	13,255	13,197
Runway 8L-26R	3,022	3,026	3,020	3,019	3,021	3,079	2,813	2,812	2,829	2,799
Central plant upgrades	-	-	-	1,160	1,307	1,305	1,339	1,340	1,340	1,342
Terminal A-B south taxiways	1,493	1,495	1,494	1,493	1,493	162	1,351	1,351	1,299	1,342
Subtotal	\$ 31,068	\$ 32,201	\$ 34,246	\$ 38,206	\$ 39,083	\$ 38,640	\$ 40,954	\$ 40,973	\$ 40,933	\$ 40,864
Future projects										
Mickey Leland International Terminal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,710
Total debt service [C]	\$ 31,068	\$ 32,201	\$ 34,246	\$ 38,206	\$ 39,083	\$ 38,640	\$ 40,954	\$ 40,973	\$ 40,933	\$ 42,574
Total uses [D=B+C]	\$ 31,068	\$ 32,201	\$ 34,246	\$ 59,343	\$ 97,541	\$ 67,404	\$ 40,954	\$ 40,973	\$ 100,933	\$ 102,574
Calculation of PFC fund ending balance										
Net revenues over (under) expenditures [A-D]	\$ 17,070	\$ 16,598	\$ 25,799	\$ 22,339	\$ (17,982)	\$ 10,635	\$ 40,891	\$ 42,776	\$ (15,281)	\$ (15,019)
PFC fund ending balance	\$ 76,405	\$ 93,003	\$ 118,801	\$ 141,140	\$ 123,158	\$ 133,793	\$ 174,684	\$ 217,460	\$ 202,179	\$ 187,160

- (a) Source: PFC quarterly reports (reported on a cash basis) and airline rates and charges calculations, Houston Airport System records. Collections for FY 2017 and FY 2018 have been adjusted for amounts attributable to FY 2017 that were received in FY 2018.
- (b) PFC of \$3.00 net of airline collection fee of \$0.11.
- (c) Assuming changes in investment earnings in proportion to changes in PFC collections.

Exhibit F-2

SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

William P. Hobby Airport
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

Hobby	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Calculation of PFC revenues										
Enplaned passengers	5,377	5,836	5,945	6,383	6,660	6,620	6,940	7,100	7,260	7,420
Percent PFC-eligible	88.4%	85.5%	85.2%	84.4%	82.3%	85.0%	85.0%	85.0%	85.0%	85.0%
Net PFC collection per passenger										
\$3.00 PFC portion (b)	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89	\$2.89
\$1.50 PFC portion	-	-	0.38	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Net PFC collection per passenger	\$2.89	\$2.89	\$3.27	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39	\$4.39
PFC revenues										
Collections from \$3.00 PFC	\$ 13,731	\$ 14,422	\$ 14,783	\$ 15,564	\$ 15,841	\$ 16,262	\$ 17,048	\$ 17,441	\$ 17,834	\$ 18,227
Collections from \$1.50 PFC	-	-	1,918	8,078	8,222	8,441	8,849	9,053	9,257	9,461
Investment earnings (c)	197	221	310	500	498	489	513	525	536	548
Total PFC revenues	[A] \$ 13,928	\$ 14,642	\$ 17,012	\$ 24,142	\$ 24,562	\$ 25,191	\$ 26,409	\$ 27,018	\$ 27,627	\$ 28,236
Pay-as-you-go expenditures										
Pre-2014 projects										
Central Terminal expansion	\$ -	\$ -	\$ -	\$ 3,696	\$ 25,816	\$ -	\$ -	\$ -	\$ -	\$ -
Other projects	\$ -	\$ -	\$ -	\$ 17,125	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal	\$ -	\$ -	\$ -	\$ 20,821	\$ 25,816	\$ -	\$ -	\$ -	\$ -	\$ -
Future projects										
Airfield	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
West Terminal	-	-	-	-	1,907	-	-	-	-	-
Central Terminal	-	-	-	-	-	5,000	-	-	-	-
Hold baggage screening	-	-	-	-	5,295	-	-	-	-	-
Roadways	-	-	-	-	3,295	-	-	-	-	-
Subtotal	\$ -	\$ -	\$ -	\$ -	\$ 10,498	\$ 5,000	\$ -	\$ -	\$ -	\$ -
Total pay-as-you-go	[B] \$ -	\$ -	\$ -	\$ 20,821	\$ 36,314	\$ 5,000	\$ -	\$ -	\$ -	\$ -

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SOURCES AND USES OF PASSENGER FACILITY CHARGE REVENUES

William P. Hobby Airport

For Fiscal Years ending June 30

(dollars in thousands)

Hobby	Historical (a)					Forecast				
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Payment of Bond debt service										
Pre-2014 projects										
Central Terminal expansion	\$ 1,197	\$ 1,208	\$ 1,196	\$ 1,377	\$ 11,026	\$ 12,010	\$ 12,050	\$ 12,049	\$ 12,049	\$ 12,048
Other projects	2,124	2,205	2,612	3,087	4,564	5,425	5,620	5,619	5,656	5,572
Subtotal	\$ 3,322	\$ 3,413	\$ 3,808	\$ 4,463	\$ 15,589	\$ 17,435	\$ 17,670	\$ 17,668	\$ 17,705	\$ 17,620
Future projects										
Airfield	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
West Terminal	-	-	-	-	-	1,453	8,250	8,252	8,254	8,252
Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,453	\$ 8,250	\$ 8,252	\$ 8,254	\$ 8,252
Total debt service	[C] \$ 3,322	\$ 3,413	\$ 3,808	\$ 4,463	\$ 15,589	\$ 18,888	\$ 25,919	\$ 25,920	\$ 25,958	\$ 25,872
Total uses	[D=B+C] \$ 3,322	\$ 3,413	\$ 3,808	\$ 25,284	\$ 51,903	\$ 23,888	\$ 25,919	\$ 25,920	\$ 25,958	\$ 25,872
Calculation of PFC fund ending balance										
Net revenues over (under) expenditures	[A-D] \$ 10,606	\$ 11,230	\$ 13,204	\$ (1,143)	\$ (27,341)	\$ 1,303	\$ 490	\$ 1,098	\$ 1,669	\$ 2,364
PFC fund ending balance	\$ 26,910	\$ 38,139	\$ 51,343	\$ 50,200	\$ 22,859	\$ 24,162	\$ 24,652	\$ 25,750	\$ 27,419	\$ 29,783

(a) Source: PFC quarterly reports (reported on a cash basis) and airline rates and charges calculations, Houston Airport System records.

(b) PFC of \$3.00 net of airline collection fee of \$0.11.

(c) Assuming changes in investment earnings in proportion to changes in PFC collections.

Exhibit G

APPLICATION OF GROSS REVENUES AND DEBT SERVICE COVERAGE

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

This exhibit is based on information from the sources indicated and assumptions provided by, or reviewed with and approved by, Airport System management, as described in the accompanying text. Inevitably, some assumptions used to develop the forecasts 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.

	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Gross Revenues (b)	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 545,843	\$ 544,573	\$ 568,866
Application of Gross Revenues										
1. Operation and Maintenance Expenses (c)	\$ 252,745	\$ 268,745	\$ 283,557	\$ 314,715	\$ 314,469	\$ 318,385	\$ 329,623	\$ 341,265	\$ 353,327	\$ 365,823
2. Senior Lien Bond Interest and Sinking Fund (d) (pay debt service on Senior Lien Obligations)	\$ 22,393	\$ 23,820	\$ 33,133	\$ 33,232	\$ 34,798	\$ 35,942	\$ 36,796	\$ 37,642	\$ 37,645	\$ 37,644
Less: PFC revenues to pay debt service	(8,431)	(8,957)	(12,443)	(15,659)	(20,861)	(23,992)	(23,993)	(23,991)	(23,994)	(23,993)
Less: Grants to pay debt service	-	-	-	-	-	-	-	-	-	-
Less: Interest and other amounts to pay debt service	(303)	(221)	(229)	(6,514)	(335)	-	-	-	-	-
Net Senior Debt Service Requirements [A]	\$ 13,659	\$ 14,642	\$ 20,461	\$ 11,058	\$ 13,602	\$ 11,951	\$ 12,803	\$ 13,651	\$ 13,651	\$ 13,651
3. Senior Lien Bond Reserve Fund (maintain Senior Lien Reserve Fund Requirement)	-	-	-	-	-	-	-	-	-	-
4. Subordinate Lien Bond Interest and Sinking Fund (d) (pay debt service on Subordinate Lien Bonds)	\$ 125,612	\$ 126,352	\$ 126,116	\$ 130,730	\$ 133,360	\$ 149,922	\$ 161,812	\$ 161,820	\$ 162,066	\$ 175,848
Less: PFC revenues to pay debt service	(19,374)	(20,074)	(19,030)	(20,078)	(27,228)	(33,280)	(42,881)	(42,902)	(42,897)	(44,453)
Less: Grants to pay debt service	-	-	-	-	-	-	-	-	-	-
Less: Interest and other amounts to pay debt service	(349)	(110)	(2,283)	(126)	(160)	-	-	-	-	-
Net Subordinate Debt Service Requirements [B]	\$ 105,889	\$ 106,168	\$ 104,803	\$ 110,527	\$ 105,972	\$ 116,642	\$ 118,931	\$ 118,918	\$ 119,169	\$ 131,395
5. Subordinate Lien Bond Reserve Fund (maintain Subordinate Lien Reserve Reserve Fund Requirement)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. Inferior Lien obligations (d) (pay debt service on Inferior Lien obligations)	\$ 6,586	\$ 6,584	\$ 6,582	\$ 6,583	\$ 6,583	\$ 256	\$ -	\$ -	\$ -	\$ -
Less: PFC Revenues to pay debt service	(6,585)	(6,583)	(6,582)	(6,583)	(6,583)	(256)	-	-	-	-
Less: Interest and other amounts to pay debt service	(1)	(1)	-	-	776	-	-	-	-	-
Net Inferior Debt Service Requirements [C]	\$ -	\$ -	\$ -	\$ -	\$ 776	\$ -	\$ -	\$ -	\$ -	\$ -
7. Operation and Maintenance Reserve Fund (maintain reserve of two months' current Operation and Maintenance Expenses)	\$ 2,767	\$ (792)	\$ 3,035	\$ 5,054	\$ (362)	\$ 950	\$ 1,909	\$ 1,978	\$ 2,049	\$ 2,123
8. Renewal and Replacement Fund (maintain Renewal and Replacement Requirement)	\$ 900	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9. Airports Improvement Fund (may be used for capital expenditures and any other lawful Airport System purpose)	\$ 65,283	\$ 72,004	\$ 77,967	\$ 54,478	\$ 76,067	\$ 61,910	\$ 62,514	\$ 70,031	\$ 56,377	\$ 55,875
Total application of Gross Revenues	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 545,843	\$ 544,573	\$ 568,866

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Exhibit G (page 2 of 2)

APPLICATION OF GROSS REVENUES AND DEBT SERVICE COVERAGE

Houston Airport System

For Fiscal Years ending June 30

(dollars in thousands)

	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Calculation of Net Revenues										
Gross Revenues	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 545,843	\$ 544,573	\$ 568,866
Less: Operation and Maintenance Expenses	(252,745)	(268,745)	(283,557)	(314,715)	(314,469)	(318,385)	(329,623)	(341,265)	(353,327)	(365,823)
Net Revenues	[D] \$ 188,498	\$ 192,023	\$ 206,266	\$ 181,116	\$ 196,055	\$ 191,453	\$ 196,158	\$ 204,578	\$ 191,246	\$ 203,043
Calculation of debt service coverage										
Debt Service Requirements										
Senior Lien Obligations	[A] \$ 13,659	\$ 14,642	\$ 20,461	\$ 11,058	\$ 13,602	\$ 11,951	\$ 12,803	\$ 13,651	\$ 13,651	\$ 13,651
Subordinate Lien Bonds	[B] 105,889	106,168	104,803	110,527	105,972	116,642	118,931	118,918	119,169	131,395
Inferior Lien obligations	[C] -	-	-	-	776	-	-	-	-	-
Total Debt Service Requirements	[E=A+B+C] \$119,548	\$120,810	\$125,265	\$121,585	\$120,350	\$128,593	\$131,734	\$132,570	\$132,820	\$145,046
Debt service coverage for all										
Airport System Revenue Bonds	[D/E] 157.7%	158.9%	164.7%	149.0%	162.9%	148.9%	148.9%	154.3%	144.0%	140.0%

(a) Source: Houston Airport System records.

(b) See Exhibit E for detail.

(c) See Exhibit D for detail.

(d) See Exhibit C-1 for detail.

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Exhibit H-1

SUMMARY OF FORECAST RESULTS: BASE CASE PASSENGER FORECASTS

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

	Historical (a)					Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Airport System Revenue Bond										
debt service coverage										
Gross Revenues	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 545,843	\$ 544,573	\$ 568,866
Operation and Maintenance Expenses	(252,745)	(268,745)	(283,557)	(314,715)	(314,469)	(318,385)	(329,623)	(341,265)	(353,327)	(365,823)
Net Revenues	[A] \$ 188,498	\$ 192,023	\$ 206,266	\$ 181,116	\$ 196,055	\$ 191,453	\$ 196,158	\$ 204,578	\$ 191,246	\$ 203,043
Bond debt service	\$ 154,591	\$ 156,756	\$ 165,830	\$ 170,545	\$ 174,742	\$ 186,121	\$ 198,608	\$ 199,462	\$ 199,711	\$ 213,492
Less: PFC revenues used to pay debt service	(34,390)	(35,614)	(38,054)	(42,320)	(54,673)	(57,528)	(66,873)	(66,893)	(66,891)	(68,447)
Less: Grants to pay debt service	-	-	-	-	-	-	-	-	-	-
Less: Other amounts to pay debt service	(653)	(332)	(2,511)	(6,640)	282	-	-	-	-	-
Net Debt Service Requirements	[B] \$ 119,548	\$ 120,810	\$ 125,265	\$ 121,585	\$ 120,351	\$ 128,593	\$ 131,734	\$ 132,570	\$ 132,820	\$ 145,046
Less: Reserve and other fund deposits	3,667	(792)	3,035	5,054	(362)	950	1,909	1,978	2,049	2,123
Net to Airports Improvement Fund	\$ 65,283	\$ 72,004	\$ 77,967	\$ 54,478	\$ 76,067	\$ 61,910	\$ 62,514	\$ 70,031	\$ 56,377	\$ 55,875
Airports Improvement Fund balance			\$ 236,081	\$ 240,801	\$ 270,358	\$ 254,776	\$ 172,323	\$ 152,732	\$ 181,456	\$ 204,512
Coverage of Airport System										
Debt Service Requirements	[A/B] 157.7%	158.9%	164.7%	149.0%	162.9%	148.9%	148.9%	154.3%	144.0%	140.0%
Airline payments per enplaned passenger										
Intercontinental										
Net airline payments to HAS	\$ 185,189	\$ 183,383	\$ 192,836	\$ 180,769	\$ 189,756	\$ 197,273	\$ 197,982	\$ 203,084	\$ 200,699	\$ 210,283
Special facilities bond debt service	14,866	14,815	30,961	31,454	33,663	33,663	33,663	67,843	118,611	44,276
O&M expenses paid directly by airlines	10,675	14,398	14,862	31,881	32,837	38,299	39,448	40,632	41,851	43,106
All-in airline payments	\$ 210,730	\$ 212,596	\$ 238,658	\$ 244,104	\$ 256,257	\$ 269,236	\$ 271,094	\$ 311,559	\$ 361,161	\$ 297,665
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	22,000	22,500	23,000
Average all-in airline payments per enplaned passenger	\$10.67	\$10.57	\$11.39	\$11.39	\$12.38	\$13.13	\$12.61	\$14.16	\$16.05	\$12.94
Hobby										
Net airline payments to HAS	\$ 36,809	\$ 36,188	\$ 38,320	\$ 50,008	\$ 49,511	\$ 44,244	\$ 47,449	\$ 48,954	\$ 49,412	\$ 49,892
Enplaned passengers	5,377	5,836	5,945	6,383	6,660	6,620	6,940	7,100	7,260	7,420
Average airline payments per enplaned passenger	\$6.85	\$6.20	\$6.45	\$7.83	\$7.43	\$6.68	\$6.84	\$6.89	\$6.81	\$6.72

(a) Source: Houston Airport System records.
See preceding exhibits for detail.

Exhibit H-2

SUMMARY OF PROJECTED RESULTS: STRESS TEST PASSENGER FORECASTS

Houston Airport System
For Fiscal Years ending June 30
(dollars in thousands)

	Historical (a)					Projected				
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Airport System Revenue Bond										
debt service coverage										
Gross Revenues	\$ 441,243	\$ 460,768	\$ 489,823	\$ 495,831	\$ 510,524	\$ 509,838	\$ 525,780	\$ 531,066	\$ 530,052	\$ 553,181
Operation and Maintenance Expenses	(252,745)	(268,745)	(283,557)	(314,715)	(314,469)	(318,385)	(329,623)	(341,265)	(353,327)	(365,823)
Net Revenues	[A] \$ 188,498	\$ 192,023	\$ 206,266	\$ 181,116	\$ 196,055	\$ 191,453	\$ 196,158	\$ 189,801	\$ 176,725	\$ 187,357
Bond debt service	\$ 154,591	\$ 156,756	\$ 165,830	\$ 170,545	\$ 174,742	\$ 186,121	\$ 198,608	\$ 199,462	\$ 199,711	\$ 213,492
Less: PFC revenues used to pay debt service	(34,390)	(35,614)	(38,054)	(42,320)	(54,673)	(57,528)	(66,873)	(63,504)	(64,073)	(66,324)
Less: Grants to pay debt service	-	-	-	-	-	-	-	-	-	-
Less: Other amounts to pay debt service	(653)	(332)	(2,511)	(6,640)	282	-	-	-	-	-
Net Debt Service Requirements	[B] \$ 119,548	\$ 120,810	\$ 125,265	\$ 121,585	\$ 120,351	\$ 128,593	\$ 131,734	\$ 135,959	\$ 135,638	\$ 147,169
Less: Reserve and other fund deposits	3,667	(792)	3,035	5,054	(362)	950	1,909	1,978	2,049	2,123
Net to Airports Improvement Fund	\$ 65,283	\$ 72,004	\$ 77,967	\$ 54,478	\$ 76,067	\$ 61,910	\$ 62,514	\$ 51,864	\$ 39,038	\$ 38,066
Airports Improvement Fund balance			\$ 236,081	\$ 240,801	\$ 270,358	\$ 254,776	\$ 172,323	\$ 152,732	\$ 163,290	\$ 169,007
Coverage of Airport System										
Debt Service Requirements	[A/B] 157.7%	158.9%	164.7%	149.0%	162.9%	148.9%	148.9%	139.6%	130.3%	127.3%
Airline payments per enplaned passenger										
Intercontinental										
Net airline payments to HAS	\$ 185,189	\$ 183,383	\$ 192,836	\$ 180,769	\$ 189,756	\$ 197,273	\$ 197,982	\$ 212,872	\$ 210,876	\$ 220,749
Special facilities bond debt service	14,866	14,815	30,961	31,454	33,663	33,663	33,663	67,843	118,611	44,276
O&M expenses paid directly by airlines	10,675	14,398	14,862	31,881	32,837	38,299	39,448	40,632	41,851	43,106
All-in airline payments	\$ 210,730	\$ 212,596	\$ 238,658	\$ 244,104	\$ 256,257	\$ 269,236	\$ 271,094	\$ 321,347	\$ 371,338	\$ 308,131
Enplaned passengers	19,756	20,105	20,959	21,430	20,704	20,500	21,500	17,544	18,044	18,544
Average all-in airline payments per enplaned passenger	\$10.67	\$10.57	\$11.39	\$11.39	\$12.38	\$13.13	\$12.61	\$18.32	\$20.58	\$16.62
Hobby										
Net airline payments to HAS	\$ 36,809	\$ 36,188	\$ 38,320	\$ 50,008	\$ 49,511	\$ 44,244	\$ 47,449	\$ 54,751	\$ 54,778	\$ 54,658
Enplaned passengers	5,377	5,836	5,945	6,383	6,660	6,620	6,940	5,926	6,086	6,246
Average airline payments per enplaned passenger	\$6.85	\$6.20	\$6.45	\$7.83	\$7.43	\$6.68	\$6.84	\$9.24	\$9.00	\$8.75

(a) Source: Houston Airport System records.
See preceding exhibits for detail.

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APPENDIX B

AIRPORT SYSTEM FUND FINANCIAL STATEMENTS

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CAFR

COMPREHENSIVE ANNUAL FINANCIAL REPORT
FISCAL YEARS ENDED JUNE 30, 2017 AND JUNE 30, 2016
PREPARED BY OFFICE OF THE CITY CONTROLLER, CHRIS BROWN



THE AIRPORT SYSTEM FUND
AN ENTERPRISE FUND OF THE CITY OF HOUSTON, TEXAS



Cover Art: *Houston, Can You Hear Me?*

Artist: Hana Hillerova



Airport System Fund
An Enterprise Fund of the
City of Houston, Texas
Comprehensive Annual
Financial Report

Fiscal Years Ended June 30, 2017 and June 30, 2016

Prepared by:
Office of City Controller

Chris Brown
City Controller

Carl Medley
Deputy Director Controller



COMPREHENSIVE ANNUAL FINANCIAL REPORT

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↓ Baggage Claim / Reclamo de Equipaje
↓ Ground Transport / Transporte Terrestre
Terminals A C D E
Daily Parking
← Elevators
Elevators →

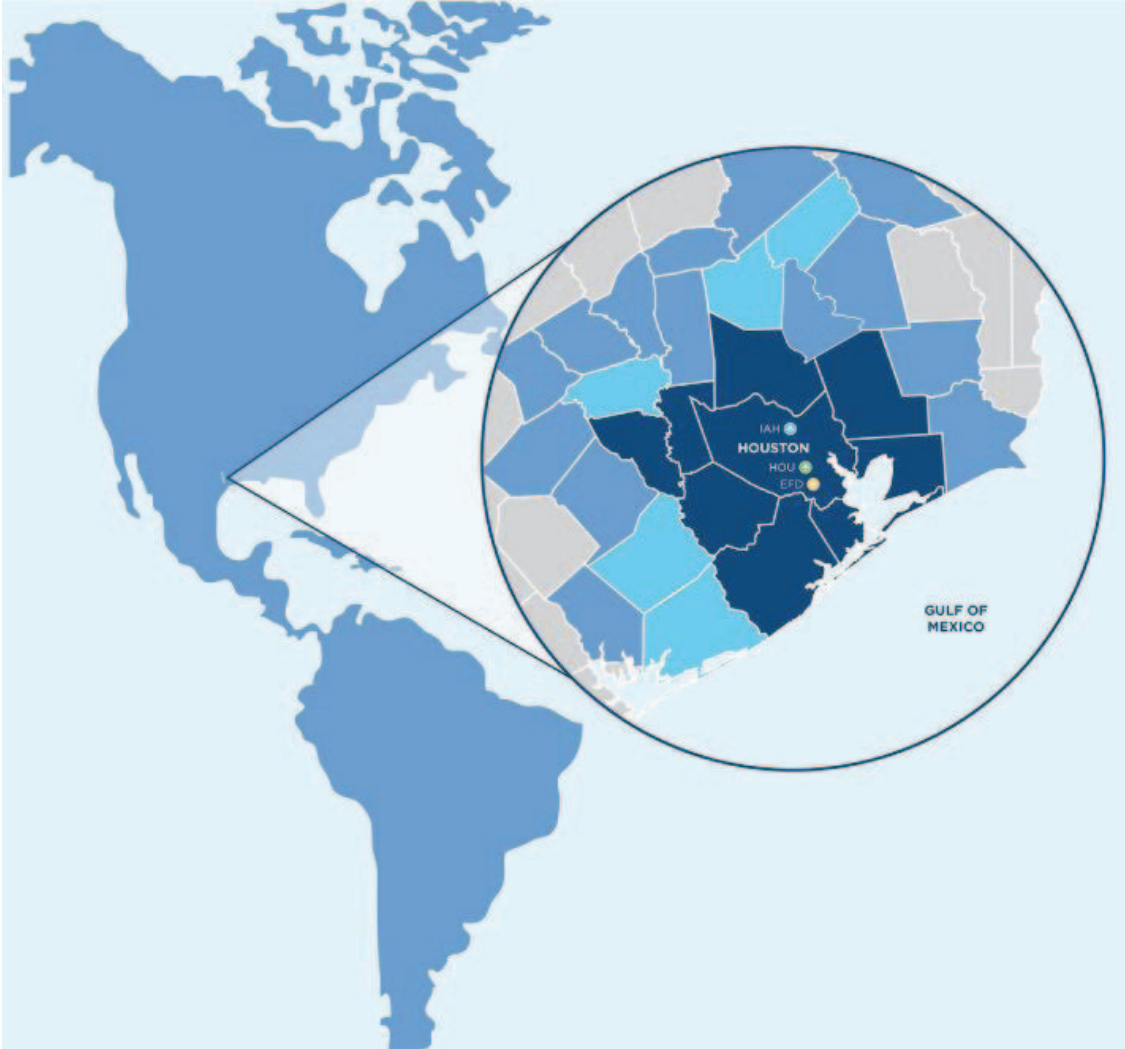
Elevator Core by Rachel Hecker

INTRODUCTORY SECTION

COMPREHENSIVE ANNUAL FINANCIAL REPORT



HOUSTON AIRPORT SYSTEM



	<p>Metropolitan Statistical Area (MSA) of Houston-The Woodlands-Sugar Land, TX includes 9 counties.</p>
	<p>Consolidated Statistical Area (CSA) of Houston-Woodlands, TX adds Matagorda, Trinity, Walker, Washington, and Wharton counties.</p>





Government Finance Officers Association

**Certificate of
Achievement
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in Financial
Reporting**

Presented to

**City of Houston, Texas
Airport System Fund**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

Office of the City Controller
City of Houston, Texas



Chris B. Brown

November 20, 2017

To the Citizens, Mayor and Members of the City Council of the City of Houston, Texas:

I am pleased to present you with the Comprehensive Annual Financial Report (CAFR) for the City of Houston, Texas, Airport System Fund (the Fund) for the fiscal years ended June 30, 2017 and June 30, 2016, including the independent auditors' report. The Controller's Office and the Houston Airport System share responsibility for both the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the Fund.

The CAFR includes four sections: Introductory, Financial, Statistical, and Compliance. The Introductory Section includes this transmittal letter, a list of principal officials, and the Fund's organizational chart. The Financial Section includes Management's Discussion and Analysis and financial statements with accompanying notes, as well as the independent auditors' report on the financial statements. The Statistical Section includes selected financial trends, revenue capacity, debt capacity, demographic, economic, and operating information, generally presented on a ten-year basis. The Compliance Section includes the independent auditors' report on Passenger Facility Charge Program.

The Financial Section described above is prepared in accordance with Generally Accepted Accounting Principles (GAAP) for governments as prescribed by the Governmental Accounting Standards Board (GASB). The Management's Discussion and Analysis offers readers an overview and analysis of the financial activities of the Fund and should be read as an introduction to the financial statements. In addition, the notes to the financial statements offer additional important information and are essential to a full understanding of this report.

The Reporting Entity and Its Services

The Houston Airport System (HAS), under the administrative control of the Mayor, manages and operates the Fund. The City Controller, as the chief financial officer of the City of Houston (the City), maintains the books of account, prepares financial statements, and, with the Mayor, co-signs all warrants, contracts, and orders for payment of any public funds or money relating to the Fund.

The Fund is an enterprise fund of the City and is included in the City's Comprehensive Annual Financial Report, which is a matter of public record. An enterprise fund is used to account for services provided to the general public on a continuing basis with costs recovered primarily through user charges. The City's Airport System includes the following: George Bush Intercontinental Airport (Intercontinental); William P. Hobby Airport (Hobby); and Ellington Airport. United Airlines is the dominant air carrier operating at Intercontinental and Southwest Airlines is the dominant air carrier operating at Hobby.

Economic Conditions and Major Initiatives

Economic Conditions

The City of Houston is the nation's fourth most populous city and lies within the fifth largest metropolitan statistical area in the United States. The service region for the Houston Airport System, the nine county Houston-The Woodlands-Sugar Land Metropolitan Statistical Area, has a diverse economic base and is recognized as a major national and international energy, financial, medical, transportation, educational, and distribution center. Widely recognized as the "Energy Capital of the World," Houston is a global center for virtually every segment of the oil-and-gas industry. The City is also home to the Texas Medical Center, the world's largest concentration of biomedical research and healthcare institutions, and the Lyndon B. Johnson Space Center, NASA's center for human spaceflight training, research, and flight control, and related support firms specializing in aircraft and space

vehicle manufacturing, research, and technology. The deepwater Port of Houston is the nation's busiest port as ranked by foreign tonnage and second-busiest port as ranked by total tonnage.

The Houston Airport System (HAS) consists of both a large hub airport (Bush Intercontinental) and a medium hub airport (Hobby), as classified by the Federal Aviation Administration (FAA). Based on total U.S. airport passenger traffic for calendar year 2016, Intercontinental ranked as the nation's 14th busiest airport, while Hobby ranked 34th busiest. Intercontinental is located approximately 22 miles north of the City's central business district and serves as Houston's primary international gateway, handling nearly 11 million international passengers (enplaned plus deplaned) in fiscal year 2017. Hobby is located approximately seven miles southeast of the central business district. A domestic-only airport since Intercontinental opened in 1969, a new international terminal opened in October 2015, allowing for new service to Mexico, the Caribbean, and Central America. Ellington Airport (Ellington), located approximately 15 miles to the southeast of the central business district, serves as a general aviation airport and is also used by several governmental agencies such as NASA, the US Coast Guard and the Army and Air Force National Guard. HAS obtained a spaceport license for Ellington in June 2015 from the Federal Aviation Administration, allowing Ellington to accommodate horizontal-launch commercial spaceflight operations.

Key factors that will affect future airline traffic at the Houston Airport System include (1) the growth in the population and economy of the service region; (2) national and international economic and political conditions; (3) airline economics and air fares; (4) the price of aviation fuel; (5) airline service decisions; (6) the capacity of the air traffic control system; and (7) the capacity of the airports themselves. During fiscal year 2017, HAS systemwide passenger growth decreased 1.6% from fiscal year 2016, driven by a 3.4% decrease in passengers at Intercontinental which was partially offset by a 4.4% increase at Hobby. International passenger traffic for fiscal year 2017 was relatively flat, increasing 0.4% over fiscal year 2016, driven by growing international service at HOU. Fiscal year 2017 represented the third consecutive year in which the airport served more than 10 million international passengers (enplaned plus deplaned).

Capital Improvement Program

The Houston Airport System's (HAS) five-year Capital Improvement Plan (CIP) for fiscal years 2018-2022 has appropriation requirements of approximately \$2.1 billion, with 39% of the appropriations planned for fiscal year 2018 as of June 30, 2017. This CIP was developed in connection with master planning studies for all three system airports. Future improvements will be funded with airport funds, the remaining proceeds from bond issues, proceeds from new bond issues, FAA and other grants, and passenger facility charges. The CIP excludes amounts funded on a permanent basis by airline tenants under the terms of special facilities leases. HAS continually reviews its CIP to address changing economic and air traffic demand levels, operating conditions, and assessments of facility condition.

At IAH, HAS is proceeding with the planning and procurement of design and construction support for the IAH Terminal Redevelopment Program (ITRP) that includes the newly constructed 11-gate concourse just west of the existing Terminal C North (becoming the "New Terminal C North") and reconstructing and integrating the existing Terminal C North and Terminal D into a new single common-use international facility (the Mickey Leland International Terminal (MLIT)). The expansion of the terminal facilities will also necessitate an enlargement of certain components of the existing Federal Inspection Services (FIS) facility as well as related improvements to aircraft parking aprons and roadways. The terminal will be used by United Airlines and all foreign-flag airlines serving IAH and share the existing FIS Facility. The City awarded contracts for executive program manager and program management support services in fiscal year 2015 and in fiscal year 17 began the selection process for architectural/engineering and construction management firms.

At HOU, capital improvements are planned for the airfield as required by the FAA, as well as normal pavement management, and customer service enhancements for the HOU Central Concourse. Additionally, a new parking office is planned for development starting in late FY18.

At EFD, a new air traffic control tower is currently being constructed and procurement is underway for a Design/Build contract for Spaceport Infrastructure to provide roadways and utilities for future tenants.

Financial Information

Accounting Systems and Budgetary Controls

The Fund's financial accounting system utilizes an accrual basis of accounting. Internal accounting controls are an integral part of the Fund's accounting system and are designed to provide reasonable, but not absolute, assurance that assets are safeguarded from unauthorized use or disposition. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and the valuation of costs and benefits requires estimates and judgments by management.

The Fund controls current expenses at all division levels. The Houston Airport System's Deputy Directors are responsible for the expenses approved by the Division Managers reporting to them; in turn, Division Managers are responsible for budgetary items that are controllable at their organizational level. Budgetary control is maintained at the expenditure category (i.e., Personnel Services, Supplies, Other Services and Capital Outlay) through the encumbrance of estimated purchase amounts prior to the release

of purchase orders or contracts to vendors. This is accomplished primarily through an automated encumbrance and accounts payable system.

The City Council approves the Fund's annual operations budget for current expenses. The Airport Fund as a whole is not budgeted. City Council authorizes capital project expenditures through individual appropriation ordinances based on a five-year Capital Improvement Plan that is proposed by the Mayor and the Houston Airport System Director and approved by City Council. City Council can legally appropriate only those amounts of money that the City Controller has certified.

Other Information

Independent Audit

An independent auditor audits the financial statements of the Airport System Fund each year. McConnell & Jones/Banks, Finley, White & Co. performed the fiscal year 2017 and 2016 audits. The financial section of this report includes the independent auditors' report on the basic financial statements.

The City is required to undergo an annual Single Audit in conformity with the provisions of the Single Audit Act, Title 2 of the US *Code of Federal Regulations (CFR) Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, and the State of Texas Single Audit Circular. These audits are conducted simultaneously with the Fund's annual financial statement audit. Information related to these Single Audits, including the schedules of financial assistance, findings and recommendations, is included in separate Single Audit Reports.

Awards/Acknowledgments

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to City of Houston, Texas, Airport System Fund for its comprehensive annual financial report for the fiscal year ended June 30, 2016. This was the 23rd consecutive year that the Airport System Fund has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA to determine its eligibility for another certificate.

The preparation of this comprehensive annual financial report was made possible by the dedicated service of the Finance Division of the Houston Airport System and the City Controller's Office.

Respectfully submitted,



Chris B. Brown
City Controller

INTRODUCTORY SECTION

LIST OF PRINCIPAL OFFICIALS

ELECTED OFFICIALS AS OF JUNE 30, 2017:



Left to Right: Mike Laster, Jack Christie, David Robinson, Karla Cisneros, Larry Green, Mike Knox, Ellen Cohen, Dwight Boykins, Sylvester Turner, Chris Brown, Jerry Davis, Brenda Stardig, Robert Gallegos, Amanda Edwards, Greg Travis, Dave Martin, Michael Kubosh, Steve Le.
Photo credit: Daniel Schein

Mayor	Sylvester Turner
Controller	Chris Brown
Councilmember, At-Large, Position 1	Mike Knox
Councilmember, At-Large, Position 2	David Robinson
Councilmember, At-Large, Position 3	Michael Kubosh
Councilmember, At-Large, Position 4	Amanda Edwards
Councilmember, At-Large, Position 5	Jack Christie
Councilmember, District A	Brenda Stardig
Councilmember, District B	Jerry Davis
Councilmember, District C	Ellen Cohen
Councilmember, District D	Dwight Boykins
Councilmember, District E	Dave Martin
Councilmember, District F	Steve Le
Councilmember, District G	Greg Travis
Councilmember, District H	Karla Cisneros
Councilmember, District I	Robert Gallegos
Councilmember, District J	Mike Laster
Councilmember, District K	Larry Green

INTRODUCTORY SECTION

LIST OF PRINCIPAL OFFICIALS

HOUSTON AIRPORT SYSTEM (a department of the City of Houston)

AS OF JUNE 30, 2017:



Mario C. Diaz
Director of Aviation

In alphabetical order



Saba Abashawi
Chief External Affairs Officer



Richard McCurley
Interim General Manager
William P. Hobby Airport



Robert "Bob" Barker
Chief Development Officer



Fred McDowell
Interim Chief Technology Officer



Harleen Hines Smith
Chief Human Resources Officer



Robert Merz
Chief Financial Officer



Ted Kitchens
General Manager
George Bush Intercontinental
Airport



Jesus H. Saenz Jr.
Chief Operating Officer



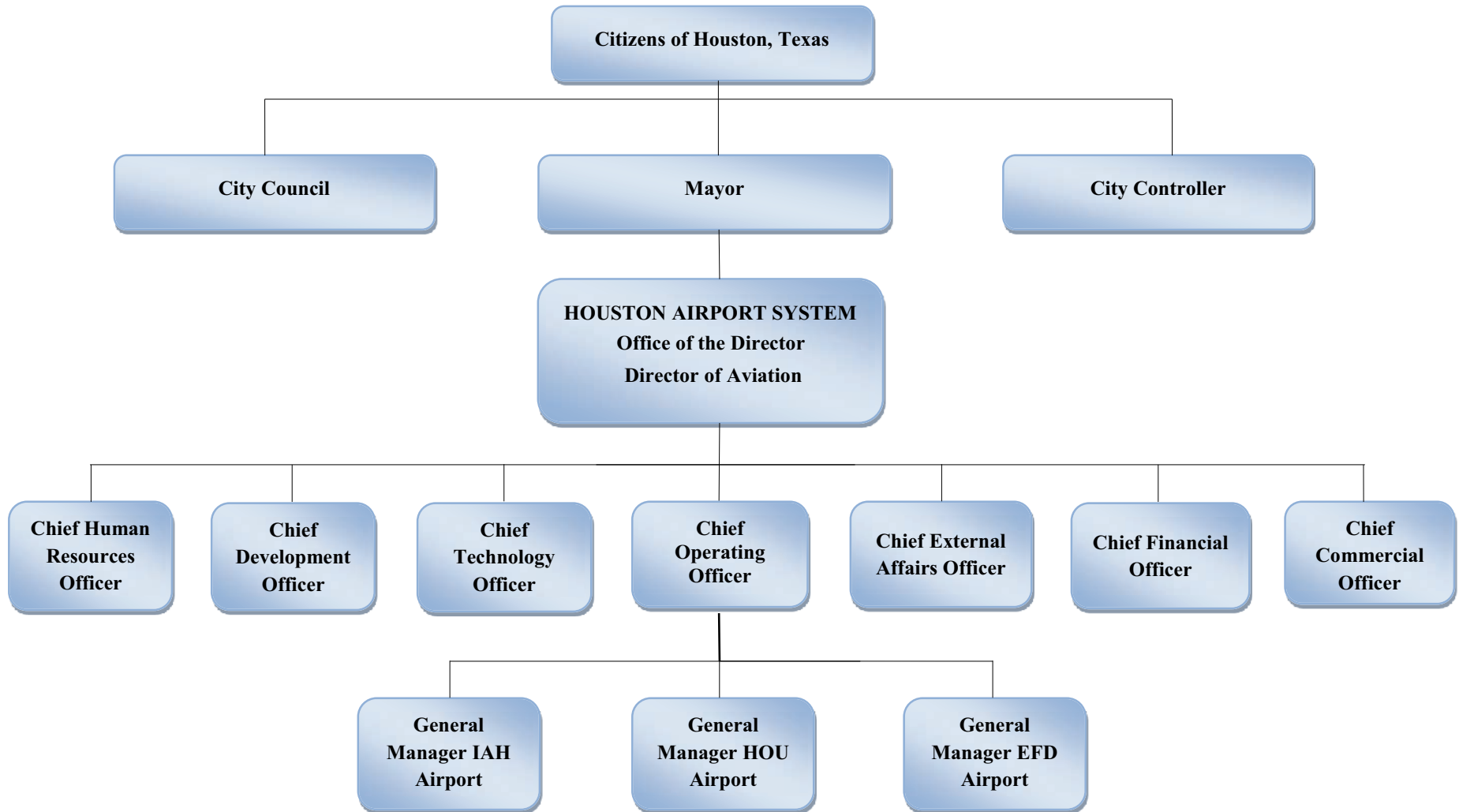
Arturo Machuca
General Manager
Ellington Airport



Ian Wadsworth
Chief Commercial Officer

AS OF JULY 31, 2017:

Chief Technology Officer -----Tanya Acevedo





Call Ernie by Jim Love

FINANCIAL SECTION

COMPREHENSIVE ANNUAL FINANCIAL REPORT



Independent Auditors' Report

To the Honorable Mayor,
Members of City Council, and City Controller
City of Houston, Texas

We have audited the accompanying financial statements of the Airport System Fund (the "Fund") of the City of Houston, Texas (the "City"), which comprise the statement of net position as of June 30, 2017 and 2016 the related statements of revenues, expenses and changes in net position and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion in the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

To the Honorable Mayor,
Members of City Council, and City Controller
City of Houston, Texas

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of the Airport System Fund of the City of Houston, Texas, as of June 30, 2017 and 2016 the changes in net position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in Note 1, the financial statement presents only the Airport System Fund and do not purport to and do not, present fairly the net position of the City of Houston, Texas as of June 30, 2017 and 2016, the changes in its net position or, where applicable, its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As explained in Notes 6 and 12 in the Fund's financial statements, substantive changes were made to the funding and benefit structure of the City's pension system, effecting the City's three pension plans during fiscal year 2017. Consistent with generally accepted accounting principles, the Fund's pension expense reflects a significant decrease due to the change in benefit terms and discount rates and corresponding reduction in net pension liability and an increase in net position.

Our opinion is not modified with respect to these matters

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis (pages 4 through 9) and the Pension System Supplementary Information and Other Post- Employment Benefits Supplementary Information (page 49) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

To the Honorable Mayor,
Members of City Council, and City Controller
City of Houston, Texas

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Fund's basic financial statements. The Introductory Section, the Statistical Section and Compliance Section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Passenger Facility Charge Revenues and Disbursements Schedule and accompanying notes on pages 68 to 73 are the responsibility of management and were derived from, and relate directly to, the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information to the underlying and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, based on our audit and the procedures performed as describe above, the above-mentioned schedule is fairly stated in all material respects in relation to the financial statements as a whole.

The Introductory Section and the Statistical Section have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 20, 2017, on our consideration of the City of Houston, Texas's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City of Houston, Texas's internal control over financial reporting and compliance.

November 20, 2017

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

As management of the Airport System Fund (Fund), we offer readers of the Fund's financial statements this narrative overview and analysis of the financial activities of the Fund for the fiscal years ended June 30, 2017 and June 30, 2016. Please read the Management's Discussion and Analysis (unaudited) section in conjunction with the financial statements and the notes to the financial statements, which follow this section. All amounts, unless otherwise indicated, are expressed in thousands of dollars.

Financial Highlights

The Fund's net position increased by \$128.1 million or 9.5% during fiscal year 2017 and increased \$64.4 million or 5.0% during fiscal year 2016.

In fiscal year 2017, operating income increased \$61.3 million or 1,035.5% due to the reduction in pension expense arising from the pension reform efforts of the City of Houston (City) See Notes 6 and 12. In fiscal year 2016, operating income decreased \$18.2 million or 148.4% due to an increase in operating expenses of \$30.8 million or 6.6 %.

Maintenance and operating expenses decreased \$61.0 million or 19.3% in fiscal year 2017 and increased \$28.9 million or 10.1% in fiscal year 2016. Depreciation expense increased \$4.8 million or 2.7% in fiscal year 2017 and increased \$1.9 million or 1.1% in fiscal year 2016.

Investment income decreased by \$9.9 million or 74.3% in fiscal year 2017 and increased by \$5.8 million or 76.9% in fiscal year 2016.

The Fund had a net increase before capital contributions of \$92.5 million in fiscal year 2017, compared with a net increase before capital contributions of \$41.9 million in fiscal year 2016.

The Fund implemented Governmental Accounting Standards Board (GASB) Statement No. 68 at the start of fiscal year 2015, to record a net pension liability based not on the City's legal funding requirement, but on an actuarial calculation of total pension liability less the net position of the Houston Municipal Employee Pension System (HMEPS). This resulted in an unrestricted net position of \$(178.0) million as of June 30, 2015 and 2016. The unrestricted net position as of June 30, 2017 was reduced further to \$(126.9) due to cost savings included in pension reforms implemented by the City. See Notes 1 and 6 for more information.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Fund's financial statements. The Airport System Fund's financial statements consist of the following components: this management's discussion and analysis, the financial statements, the notes to the financial statements, and required supplementary information. The notes are essential to a full understanding of this report. In addition, a statistical section is included for further analysis. A fund is a group of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. An enterprise fund is used to account for a business-like activity within a government. The Airport System Fund is an enterprise fund of the City of Houston. The Houston Airport System (HAS), consisting of George Bush Intercontinental Airport (IAH), William P. Hobby Airport (HOU), and Ellington Airport (EFD), is managed and operated as a department of the City. The Airport System Fund is also included in the City of Houston's Comprehensive Annual Financial Report (CAFR).

The statement of net position presents information on all the Fund's assets, deferred outflows of resources (if any), liabilities, and deferred inflows of resources (if any), with the difference between these sections reported as net position. Changes in net position from year to year may serve as a useful indicator of whether the financial position of the Airport System Fund is improving or deteriorating.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

The statement of revenues, expenses and changes in net position presents information showing how the Fund's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows.

The statement of cash flows reports how much cash was provided by or used for the Fund's operations, investing activities, non-capital financing activities, and capital and related financing activities.

The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. In addition to the financial statements and accompanying notes, this report also presents certain required supplementary information concerning the City's progress in funding its obligation to provide pension and other post employment benefits to its employees.

Net Position

Total net position at June 30, 2017 was \$1,473.8 million, a 9.5% increase from June 30, 2016.

Total net position at June 30, 2016 was \$1,345.8 million, a 5.0% increase from June 30, 2015.

NET POSITION
JUNE 30, 2017, JUNE 30, 2016, and JUNE 30, 2015
(in thousands)

	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Assets			
Current assets	\$ 452,246	\$ 445,841	\$ 379,126
Noncurrent assets	892,490	854,870	881,893
Net capital assets	<u>2,883,432</u>	<u>2,958,464</u>	<u>2,918,004</u>
Total assets	<u>4,228,168</u>	<u>4,259,175</u>	<u>4,179,023</u>
Deferred Outflows of Resources	<u>81,177</u>	<u>59,367</u>	<u>43,490</u>
Liabilities			
Current liabilities	218,419	318,700	188,524
Long term liabilities	<u>2,612,622</u>	<u>2,651,555</u>	<u>2,750,775</u>
Total liabilities	<u>2,831,041</u>	<u>2,970,255</u>	<u>2,939,299</u>
Deferred Inflows of Resources	<u>4,487</u>	<u>2,526</u>	<u>1,847</u>
Net Position			
Net investment in capital assets	542,363	537,172	466,196
Restricted net assets	1,058,392	986,592	993,174
Unrestricted (deficit)	<u>(126,938)</u>	<u>(178,003)</u>	<u>(178,003)</u>
Total net position	<u>\$ 1,473,817</u>	<u>\$ 1,345,761</u>	<u>\$ 1,281,367</u>

More than a third of the Fund's total net position (36.8% in fiscal year 2017; 39.9% in fiscal year 2016) reflects net investment in capital assets (e.g., land, buildings, runways, equipment and infrastructure), less any related outstanding debt used to acquire those assets. The Fund uses these capital assets to operate the airports; consequently, these assets are not available for future spending. Although the Fund's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from airport revenue or other sources procured by the Fund, since the capital assets themselves cannot be used to liquidate these liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

The other portions of the Fund's net position represent resources that are restricted and the unrestricted deficit. The restricted resources (71.8% in fiscal year 2017; 73.3% in fiscal year 2016) are subjected to external restrictions on how they may be used. Most of these restrictions are due to covenants made to the holders of the Fund's revenue bonds within ordinances passed by City Council. These covenants further require that any positive unrestricted net position carried in cash and cash equivalents at the end of the fiscal year be restricted for future capital improvements. The unrestricted (deficit) net position was \$(126.9 million) as of June 30, 2017 and was \$(178.0 million) as of June 30, 2016.

Changes in Net Position

From July 1, 2016 to June 30, 2017, net position of the Airport System Fund increased by \$128.1 million or 9.5%. From July 1, 2015 to June 30, 2016, net position of the Airport System Fund increased by \$64.4 million or 5.0%.

CHANGES IN NET POSITION
YEARS ENDED JUNE 30, 2017, JUNE 30, 2016, and JUNE 30, 2015
(in thousands)

	June 30, 2017	June 30, 2016	June 30, 2015
Operating revenue:			
Landing area fees	\$ 88,046	\$ 86,870	\$ 93,575
Rentals, building and ground areas	221,181	216,018	197,039
Parking and Concessions	178,888	177,685	180,684
Other	5,926	8,324	4,984
Total operating revenues	<u>494,041</u>	<u>488,897</u>	<u>476,282</u>
Nonoperating revenue:			
Investment income (loss)	3,403	13,260	7,496
Passenger facility charges	101,539	104,230	85,392
Customer Facility Charges	14,200	16,417	17,535
Gain on disposal of assets	7,554	54	-
Other nonoperating	4,141	70	7,969
Total nonoperating revenues	<u>130,837</u>	<u>134,031</u>	<u>118,392</u>
Total revenues	<u>624,878</u>	<u>622,928</u>	<u>594,674</u>
Operating expenses:			
Maintenance and operating	254,459	315,419	286,529
Depreciation and amortization	184,203	179,398	177,512
Total operating expenses	<u>438,662</u>	<u>494,817</u>	<u>464,041</u>
Nonoperating expenses:			
Interest expense	87,482	86,212	89,999
Loss on disposal of assets	6,099	-	1,856
Special facility cost	92	47	948
Total nonoperating expenses	<u>93,673</u>	<u>86,259</u>	<u>92,803</u>
Total expenses	<u>532,335</u>	<u>581,076</u>	<u>556,844</u>
Excess (deficit) before contributions	92,543	41,852	37,830
Capital contributions	35,513	22,542	36,432
Change in net position	<u>128,056</u>	<u>64,394</u>	<u>74,262</u>
Beginning net position as previously reported	1,345,761	1,281,367	1,385,108
Cumulative effect of implementation of new accounting principle	-	-	(178,003)
Total net position, July 1	<u>1,345,761</u>	<u>1,281,367</u>	<u>1,207,105</u>
Total net position, June 30	<u>\$ 1,473,817</u>	<u>\$ 1,345,761</u>	<u>\$ 1,281,367</u>

Operating revenues increased by \$5.1 million or 1.1% for fiscal year 2017 and increased by \$12.6 million or 2.6% for fiscal year 2016. Total (enplaned and deplaned) system (IAH and HOU) passenger volume decreased 1.6% in fiscal year 2017. The effect of this decrease was offset by increases in rentals (2.4%) and concessions (4.1%). Operating revenue increases in fiscal year 2016 over fiscal year 2015 were primarily attributable to increases in nonairline revenues resulting from increases in parking fees and passenger volume. Detailed passenger statistics and comparative rates and charges can be found in the statistical section of this report.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

For fiscal year 2017, total operating expenses decreased \$56.2 million or 11.3%. Maintenance and operating expenses decreased \$61.0 million or 19.3% and depreciation increased by \$4.8 million or 2.7%. The 19.3% decrease in maintenance and operating expenses is due to the pension reform efforts of the City of Houston. For fiscal year 2016, total operating expenses increased \$30.8 million or 6.6%. Maintenance and operating expenses increased by \$28.9 million or 10.1% and depreciation increased by \$1.9 million or 1.1%. The 10.1% increase in maintenance and operating expenses is due to higher services and personnel costs.

Capital contributions are grant awards that primarily related to reimbursements for expenses from construction projects. Amounts received from Federal Aviation Administration (FAA) discretionary, FAA entitlement and Transportation Security Administration (TSA) grants fluctuate year-to-year because of timing differences between the date of the award and the date of construction completion. In fiscal year 2017, capital contributions increased \$13.0 million or 57.5% and in fiscal year 2016, capital contributions decreased \$13.9 million or 38.1%.

For fiscal year 2017, non-operating revenues decreased by \$9.3 million or 6.9 %, due to a \$9.9 million decrease in investment income, a \$4.9 million or 4.1% decrease in combined passenger facility charge and customer facility charge collections, due to a decline in passenger traffic, a \$7.1 million refund to the airlines on prior year landing fees and terminal leasing charges, recodation of a prior year unearned grant award of \$3.1 million, and a \$1.4 million increase in revenues from the disposal of assets. Non-operating revenue increased by \$15.6 million or 13.2% in fiscal year 2016, primarily due to an increase of \$18.8 million or 22% in passenger facility charge collections. On January 20, 2015, the FAA approved an amendment to the existing PFC at both IAH and HOU increasing the rate from \$3.00 per enplaned passenger to \$4.50 per enplaned passenger. The new rate was effective March 1, 2015. Investment income decreased by \$9.9 million or 74.3% in fiscal year 2017, due to a \$12.6 decrease in net unrealized fair value adjustments, partly offset by an increase in realized investment income of \$2.8 million related to a 26% increase in apportioned income from the City's General Taxable Pool. In fiscal year 2016, investment income increased \$5.8 million or 76.9%, due mostly to a \$3.7 million increase in the net unrealized fair value adjustments.

Interest expense and total non-operating expense increased by \$1.3 million or 1.5% in fiscal year 2017. In fiscal year 2016, interest expense decreased by \$3.8 million or 4.2% because \$2.9 million more was capitalized with eligible construction projects in fiscal year 2016 than in fiscal year 2015.

Capital Assets

The Airport System Fund's investment in capital assets amounts to \$5.74 billion at June 30, 2017, an increase of \$110.2 million or 2.0%, from June 30, 2016. Capital assets at June 30, 2016 were \$5.63 billion, an increase of \$219.0 million or 4.0%, from June 30, 2015. See Note 3 for further information.

CAPITAL ASSETS
JUNE 30, 2017, JUNE 30, 2016, and JUNE 30, 2015

	(in thousands)		
	June 30, 2017	June 30, 2016	June 30, 2015
Land	\$ 216,079	\$ 222,886	\$ 220,626
Rights & Intangibles - Non-Amortizable	9,569	9,752	9,387
Buildings and building improvements	2,970,950	2,900,383	2,703,195
Improvements other than buildings	2,145,180	2,072,292	2,009,275
Equipment	261,485	249,029	233,321
Rights & Intangibles - Amortizable	5,035	4,084	2,411
Construction work in progress	135,233	174,942	236,163
	<u>\$ 5,743,531</u>	<u>\$ 5,633,368</u>	<u>\$ 5,414,378</u>

At IAH, HAS is proceeding with the planning and procurement of design and construction support for the IAH Terminal Redevelopment Program (ITRP) that includes the newly constructed 11-gate concourse just west of the existing Terminal C North (becoming the "New Terminal C North") and reconstructing and integrating the existing Terminal C North and Terminal D into a new single common-use international facility (the Mickey Leland International Terminal (MLIT)). The expansion of the terminal facilities will also necessitate an enlargement of certain components of the existing Federal Inspection Services (FIS) facility as well as related improvements to aircraft parking aprons and roadways. The terminal will be used by United Airlines and all foreign-flag airlines serving IAH and share the existing FIS Facility. The City awarded contracts for executive program manager and program management support services in FY 2015 and in FY17 began the selection process for architectural/engineering and construction management firms.

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

At HOU, capital improvements are planned for the airfield as required by the FAA, as well as normal pavement management, and customer service enhancements for the HOU Central Concourse. Additionally, a new parking office is planned for development starting in late FY18.

At EFD, a new air traffic control tower is currently being constructed and procurement is underway for a Design/Build contract for Spaceport Infrastructure to provide roadways and utilities for future tenants.

Debt

At the end of the fiscal year, the Airport System Fund had total debt of \$2.4 billion, which represents outstanding senior and subordinate lien revenue bonds net of unamortized discounts and premiums, senior lien commercial paper, and an inferior lien contract, all secured solely by Airport System Fund revenues. In addition, the Fund is responsible for \$2.0 million of taxable general obligation pension bonds and \$91.6 million of special facility revenue bonds (consolidated rental car facility). At the end of fiscal years 2016 and 2015, the Fund had total debt of \$2.5 billion and \$2.4 billion, respectively. See Note 5 for further information.

OUTSTANDING DEBT
JUNE 30, 2017, JUNE 30, 2016, AND JUNE 30, 2015
(in thousands)

	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Senior lien debt:			
Current maturities-revenue bonds	\$ 10,225	\$ 9,740	\$ 9,275
Long-term revenue bonds payable	420,420	430,645	440,385
Unamortized discounts and premium	(476)	(603)	(737)
Commercial paper	87,000	87,000	49,500
Total senior lien debt	<u>517,169</u>	<u>526,782</u>	<u>498,423</u>
Subordinate lien debt:			
Current maturities-revenue bonds	67,630	64,925	56,455
Long-term revenue bonds payable	1,512,135	1,579,765	1,644,690
Unamortized discounts and premium	59,061	65,705	72,562
Total subordinate lien debt	<u>1,638,826</u>	<u>1,710,395</u>	<u>1,773,707</u>
Inferior lien debt:			
Current maturities-contract	6,240	5,915	5,605
Long-term contract payable	-	6,240	12,155
Total inferior lien debt	<u>6,240</u>	<u>12,155</u>	<u>17,760</u>
Other debt:			
Current maturities-note payable	5,018	5,018	-
Long-term note payable	110,403	115,421	-
Pension obligation bonds	2,006	2,006	2,006
Special Facility Revenue Bonds -			
Consolidated Rental Car Facility:			
Current maturities	5,490	5,305	5,160
Long-term payable	86,100	91,590	96,895
Total other debt	<u>209,017</u>	<u>219,340</u>	<u>104,061</u>
Total outstanding debt	<u>\$ 2,371,252</u>	<u>\$ 2,468,672</u>	<u>\$ 2,393,951</u>
Deferred Outflows of Resources:			
Unamortized costs of refunding debt	<u>\$ (27,329)</u>	<u>\$ (30,154)</u>	<u>\$ (33,044)</u>

Total outstanding debt decreased \$97.4 million or 3.9% during fiscal year 2017, due to retirement of existing debt. Total outstanding debt increased \$74.7 million or 3.1% during fiscal year 2016, due to issuance of new commercial paper, retirement of existing debt, and the creation on October 15, 2015 of a note payable to Southwest Airlines for the construction of the Hobby International Terminal Project, with balances on June 30, 2017 and June 30, 2016 of \$115.4 million and \$120.4 million, respectively.

MANAGEMENT’S DISCUSSION AND ANALYSIS (UNAUDITED)

The underlying ratings of the Airport System Fund’s obligations for fiscal year 2017:

	Senior Lien	Subordinate Lien	Consolidated Rental Car SFRB
Fitch's Bond Rating:	Not Rated	A	A-
Moody's Bond Rating:	Aa3	A1	A3
Standard & Poor's Bond Rating:	AA-	A+	A-

Requests for Information

This financial report is designed to provide a general overview of the City of Houston, Texas Airport System Fund finances for all of those with an interest in the fund’s finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Office of the City Controller, 901 Bagby, 8th Floor, P.O. Box 1562, Houston, Texas 77251-1562.

CITY OF HOUSTON, TEXAS

AIRPORT SYSTEM FUND

STATEMENTS OF NET POSITION (in thousands)

JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
Assets		
Current assets		
Equity in pooled cash and investments	\$ 362,714	\$ 389,411
Non-pooled cash	5	5
Restricted cash and cash equivalents	5,796	5,541
Accounts Receivable (net of allowance for doubtful accounts of \$1,623 in 2017 and \$777 in 2016)	44,224	3,347
Due from City of Houston	201	31,833
Inventory	1,875	1,632
Prepays	2,938	2,817
Due from other governments - grants receivable	34,493	11,255
Total current assets	<u>452,246</u>	<u>445,841</u>
Noncurrent assets		
Equity in pooled cash and investments	853,294	817,877
Restricted cash and cash equivalents	37,813	35,512
Prepays	1,383	1,481
Capital Assets		
Land	216,079	222,886
Rights and Intangibles	14,604	13,836
Buildings, improvements and equipment	5,377,615	5,221,704
Construction in progress	135,233	174,942
Total capital assets	5,743,531	5,633,368
Less accumulated depreciation and amortization	<u>(2,860,099)</u>	<u>(2,674,904)</u>
Net capital assets	<u>2,883,432</u>	<u>2,958,464</u>
Total noncurrent assets	<u>3,775,922</u>	<u>3,813,334</u>
Total assets	<u>4,228,168</u>	<u>4,259,175</u>
Deferred Outflows of Resources		
Deferred outflows from refunding of debt	27,329	30,154
Deferred outflows on pension liability	53,848	29,213
Total deferred outflows of resources	<u>\$ 81,177</u>	<u>\$ 59,367</u>

(continued)

The accompanying notes are an integral part of the financial statements

CITY OF HOUSTON, TEXAS

AIRPORT SYSTEM FUND

STATEMENTS OF NET POSITION (in thousands)

JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
Liabilities		
Current Liabilities		
Accounts payable	\$ 14,893	\$ 14,087
Accrued payroll liabilities	3,366	3,133
Due to City of Houston	713	970
Advances and deposits	2,193	2,082
Unearned revenue	5,296	1,922
Claims for workers' compensation	777	868
Compensated absences	6,367	5,945
Revenue bonds payable	77,855	74,665
Special facility revenue bonds payable	5,490	5,305
Inferior lien contract payable	6,240	5,915
Commercial paper payable	-	87,000
Note payable	5,018	5,018
Accrued interest payable	45,689	47,125
Contracts and retainages payable	34,522	64,665
Other current liabilities	10,000	-
Total current liabilities	<u>218,419</u>	<u>318,700</u>
Long-term liabilities		
Revenue bonds payable, net	1,991,140	2,075,512
Special facility revenue bonds payable	86,100	91,590
Inferior lien contract	-	6,240
Commercial paper payable	87,000	-
Pension obligation bonds payable	2,006	2,006
Note payable	110,403	115,421
Claims for workers compensation	642	937
Compensated absences	6,254	6,835
Net pension liability payable	254,420	282,811
Other post employment benefits	74,657	70,203
Total long-term liabilities	<u>2,612,622</u>	<u>2,651,555</u>
Total liabilities	<u>2,831,041</u>	<u>2,970,255</u>
Deferred Inflows of Resources		
Deferred Inflows on pension liability	4,487	2,526
Total deferred inflows of resources	<u>4,487</u>	<u>2,526</u>
Net position		
Net Investment in capital assets	542,363	537,172
Restricted net position		
Restricted for debt service	287,858	333,635
Restricted for maintenance and operations	54,805	54,942
Restricted for special facility	29,369	26,944
Restricted for renewal and replacement	10,000	10,000
Restricted for capital improvements	676,360	561,071
Unrestricted (deficit)	(126,938)	(178,003)
Total net position	<u>\$ 1,473,817</u>	<u>\$ 1,345,761</u>

The accompanying notes are an integral part of the financial statements

CITY OF HOUSTON, TEXAS**STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION (in thousands)
FOR YEARS ENDED JUNE 30, 2017 AND 2016**

	<u>2017</u>	<u>2016</u>
Operating Revenues		
Landing area fees	\$ 88,046	\$ 86,870
Rentals, building and ground area	221,181	216,018
Parking	99,752	101,650
Concessions	79,136	76,035
Other	5,926	8,324
	<u>494,041</u>	<u>488,897</u>
Operating Expenses		
Maintenance and operating	254,459	315,419
Depreciation and amortization	184,203	179,398
	<u>438,662</u>	<u>494,817</u>
Operating income (loss)	<u>55,379</u>	<u>(5,920)</u>
Nonoperating revenues (expenses)		
Investment income (loss)	3,403	13,260
Interest expense	(87,482)	(86,212)
Gain / (Loss) on disposal of assets	1,455	54
Passenger facility charges	101,539	104,230
Customer facility charges	14,200	16,417
Special facility cost	(92)	(47)
Other revenue	4,141	70
	<u>37,164</u>	<u>47,772</u>
Income/(loss) before capital contributions	92,543	41,852
Capital contributions	<u>35,513</u>	<u>22,542</u>
Change in net position	<u>128,056</u>	<u>64,394</u>
Total net position, July 1	<u>1,345,761</u>	<u>1,281,367</u>
Total net position, June 30	<u>\$ 1,473,817</u>	<u>\$ 1,345,761</u>

The accompanying notes are an integral part of the financial statements.

CITY OF HOUSTON, TEXAS

AIRPORT SYSTEM FUND

**STATEMENTS OF CASH FLOWS (in thousands)
FOR YEARS ENDED JUNE 30, 2017 AND 2016**

	<u>2017</u>	<u>2016</u>
Cash flows from operating activities		
Receipts from customers	\$ 454,955	\$ 504,457
Payments to employees	(102,834)	(101,054)
Payments to suppliers	(116,498)	(123,101)
Payments to the City of Houston	(34,214)	(94,776)
Claims paid	(777)	(868)
Other receipts	4,141	70
Net cash provided by operating activities	<u>204,773</u>	<u>184,728</u>
Cash flows from investing activities		
Sale of investments	1,548,829	1,687,735
Purchase of investments	(1,473,462)	(1,629,945)
Investment income (loss)	3,403	13,260
Net cash (used for) provided by investing activities	<u>78,770</u>	<u>71,050</u>
Cash flows from noncapital financing activities		
Interest expense for pension obligation bonds	(106)	(107)
Net cash (used for) provided by noncapital financing activities	<u>(106)</u>	<u>(107)</u>
Cash flows from capital and related financing activities		
Retirement of revenue bonds	(74,665)	(65,730)
Interest expense on debt	(99,558)	(98,308)
Proceeds from issuance of commercial paper	-	37,500
Retirement of inferior lien contract	(5,915)	(5,605)
Retirement of special facility bonds	(5,305)	(5,160)
Passenger facility charges	95,710	105,154
Customer facility charges	14,068	16,640
Grant receipts	12,132	17,930
Acquisition of capital assets	(133,260)	(174,264)
Net cash (used for) capital and related financing activities	<u>(196,793)</u>	<u>(171,843)</u>
Net increase (decrease) in cash and cash equivalents	86,644	83,828
Cash and cash equivalents, beginning of year	128,299	44,471
Cash and cash equivalents, end of the year	<u>\$ 214,943</u>	<u>\$ 128,299</u>
Current restricted cash and cash equivalents	\$ 5,796	\$ 5,541
Nonpooled cash	5	5
Noncurrent restricted cash and cash equivalents	37,813	35,512
Equity in pooled cash and cash equivalents	171,329	87,241
Cash and cash equivalents, end of the year	<u>\$ 214,943</u>	<u>\$ 128,299</u>

The accompanying notes are an integral part of the financial statements

(continued)

STATEMENTS OF CASH FLOWS (in thousands)
FOR YEARS ENDED JUNE 30, 2017 AND 2016

	<u>2017</u>	<u>2016</u>
Noncash transactions		
Capitalized interest expense	\$ 9,789	\$ 8,788
Capital additions included in note payable	(5,018)	120,440
Capital additions included in other liabilities	(30,142)	29,251
Grants included in receivables	23,238	4,612
Bond amortization expense	3,595	3,729
Gain (loss) on disposal of assets	(6,073)	(129)
Noncash transactions	<u>\$ (4,611)</u>	<u>\$ 166,691</u>
Reconciliation of operating income (loss) to net cash provided by operating activities		
Operating income (loss)	\$ 55,379	\$ (5,920)
Adjustments to reconcile operating income (loss) to net cash provided by operating activities		
Terminal space revenue-note payable	(7,656)	(5,153)
Depreciation	184,203	179,398
Capital improvement plan expense	5,243	4,616
Other receipts	4,141	70
Changes in assets and liabilities		
Accounts receivable	(34,916)	20,666
Due from the City of Houston	31,632	(30,960)
Inventory and prepaids	(364)	(16)
Accounts payable	806	(579)
Accrued payroll liabilities	233	634
Other current liabilities	10,000	-
Due to the City of Houston	(257)	609
Advances and deposits	3,485	48
Other post-employment benefits	4,454	5,042
Pension related payables and deferred amounts	(51,065)	16,375
Claims for workers' compensation	(386)	(332)
Compensated absences	(159)	230
Net cash provided by operating activities	<u>\$ 204,773</u>	<u>\$ 184,728</u>

The accompanying notes are an integral part of the financial statements

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NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies**Reporting Entity**

The Airport System Fund (Fund), an enterprise fund of the City of Houston (City), is responsible for the operations, maintenance, and development of the City's Airport System. The Airport System consists of the George Bush Intercontinental Airport (Intercontinental), William P. Hobby Airport (Hobby) and Ellington Airport.

The Mayor and City Council members serve as the governing body that oversees operation of the Fund. The Fund is operated by the Houston Airport System (HAS) as a self-sufficient enterprise and is administered by the Houston Airport System Director, who reports to the City's Mayor.

The Fund is not financially accountable for any other operations, and accordingly, is accounted for as a single major enterprise fund with no component units. The Fund is included in the City's Comprehensive Annual Financial Report, which is a matter of public record.

Basis of Accounting

The City accounts for the Fund as a proprietary fund. Proprietary funds are used to account for operations that are financed and operated in a manner similar to private business enterprises where the intent of the City is that the cost of operations, including depreciation, be financed or recovered through user charges. The Fund is accounted for on a cost of services or "economic resources" measurement focus using the accrual basis of accounting, under which revenues are recognized in the accounting period in which they are earned and the related expenses are recorded in the accounting period incurred, if measurable. All assets and liabilities, deferred outflow/inflow of resources, current, noncurrent and capital are included on the statement of net position.

The financial statements presented in this report conform to the reporting requirements of the Governmental Accounting Standards Board (GASB) which establishes combined statements as the required level for governmental entities that present financial statements in accordance with generally accepted accounting principles. The Fund defines operating revenues as receipts from customers and other receipts that do not result from transactions defined as capital and related financing, non-capital financing, or investing activities. All other revenue is recognized as non-operating. The Fund defines operating expenses as personnel and supply costs, utilities and other charges for service, the purchase of furniture and equipment with a value of less than \$5,000, and other expenses that do not result from transactions defined as capital or related financing, non-capital financing, or investing activities. All other expense is recognized as non-operating.

In June 2015, the GASB issued Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans". This statement will improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB) included in the general purpose external financial reports of state and local governmental OPEB plans for making decisions and assessing accountability. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2016. The City and the Fund have implemented GASB No. 74 in this annual report.

In June 2015, the GASB issued Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions". This statement will improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). The requirements of this statement are effective for financial statements for periods beginning after June 15, 2017. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

In August 2015, the GASB issued Statement No. 77, "Tax Abatement Disclosures". This statement will improve financial reporting by giving users of financial statements essential information that is not consistently or comprehensively reported to the public at present. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2015. The City has implemented GASB No. 77 and the Fund has no tax abatements.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies, continued:

In December 2015, the GASB issued Statement No. 78, "Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans". This statement will address a practice issue regarding the scope and applicability of Statement No. 68. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2015. The City and the Fund have implemented GASB No. 78 in this annual report.

In December 2015, the GASB issued Statement No. 79, "Certain External Investment Pools and Pool Participants". This statement will enhance comparability of financial statements among governments by establishing specific criteria used to determine whether a qualifying external investment pool may elect to use an amortized cost exception to fair value measurement. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2015. The City and the Fund have implemented GASB No. 79 in this annual report.

In January 2016, the GASB issued Statement No. 80, "Blending Requirements for Certain Component Units-an amendment of GASB Statement No. 14". This statement will enhance the comparability of financial statements among governments. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2016. The City has implemented GASB No. 80 and the Fund has no component units.

In March 2016, the GASB issued Statement No. 81, "Irrevocable Split-Interest Agreements". This statement will enhance the comparability of financial statements by providing accounting and financial reporting guidance for irrevocable split-interest agreements in which a government is a beneficiary. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2016. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

In March 2016, the GASB issued Statement No. 82, "Pension Issues". This statement will improve financial reporting by enhancing consistency in the application of financial reporting requirements to certain pension issues. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2016. The City and the Fund have implemented GASB No. 82 in this annual report.

In November 2016, the GASB issued Statement No. 83, "Certain Asset Retirement Obligations". This statement will enhance comparability of financial statements among governments by establishing uniform criteria for governments to recognize and measure certain ARO's, including obligations that may not have been previously reported. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2018. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

In January 2017, the GASB issued Statement No. 84, "Fiduciary Activities". This statement will enhance consistency and comparability for establishing specific criteria for identifying activities that should be reported as fiduciary activities and clarifying whether and how business-type activities should report their fiduciary activities. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2018. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

In March 2017, the GASB issued Statement No. 85, "Omnibus 2017". This statement will enhance consistency in the application of accounting and financial reporting requirements. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2017. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

In May 2017, the GASB issued Statement No. 86, "Certain Debt Extinguishment Issues". This statement will increase consistency in accounting and financial reporting for debt extinguishments by establishing uniform guidance for derecognizing debt that is defeased in substance, regardless of how cash and other monetary assets placed in a irrevocable trust for the purpose of extinguishing that debt were acquired. The requirements of this statement are effective for financial statements for periods beginning after June 15, 2017. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies, continued:

In June 2017, the GASB issued Statement No. 87, "Leases". This statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The requirements of this statement are effective for financial statements for periods beginning after December 15, 2019. The City and the Fund are evaluating the impact, if any, upon its financial position, results of operations or cash flows upon adoption.

Inventories of Material and Supplies

Inventories of material and supplies are valued at average cost and charged to expense as used. Fuel is carried at market/replacement cost.

Capital Assets

The Fund defines capital assets as assets with an initial cost of \$5,000 or more. Acquired or constructed property is recorded at historical cost or estimated historical cost. Donated property is recorded at the acquisition value on the date received. Construction costs (excluding land and equipment) are added to construction work-in-progress until the assets are placed in service and are depreciated following completion. Depreciation on equipment begins in the year of acquisition. Interest costs on funds borrowed to finance the construction of capital assets are capitalized based on the weighted average interest rate of the outstanding debt applied to the average on-going construction in progress during the fiscal year. In the year ended June 30, 2017, \$9.8 million in interest costs was capitalized. In the year ended June 30, 2016, \$8.8 million in interest costs was capitalized.

Depreciation on Airport System buildings and improvements is computed using the straight-line method on the component asset base over the estimated useful life, ranging from fifteen (15) to forty-five (45) years. Depreciation on equipment is computed using the straight-line method over the estimated useful life, ranging from four (4) to fifteen (15) years. Depreciation on depreciable intangibles is computed using the straight-line method over a useful life that is dependent on the nature of the individual asset.

Passenger Facility Charges

The Federal Aviation Administration (FAA) approved a \$3.00 passenger facility charge (PFC) per enplaned passenger to be used for the construction of FAA approved airport capital assets at George Bush Intercontinental (IAH) effective December 1, 2008 and at William P. Hobby Airport (HOU) effective November 1, 2006. On January 20, 2015, the FAA approved an amendment to the existing PFC at both IAH and HOU increasing the rate from \$3.00 to \$4.50 per enplaned passenger effective March 1, 2015. On April 20, 2016, a second PFC application was approved at HOU with an effective date of October 1, 2017 and provided FAA approval to use PFC's on additional capital assets at HOU most notably a new international facility and the existing Central Concourse. The airlines collect and remit this revenue, and the Fund records it as non-operating revenue. See Compliance Section for further information.

Compensated Absences

Full-time civilian employees of the City are eligible for 10 days of vacation leave per year. After four years, employees receive 15 days. The amount of vacation time gradually increases after that, reaching a maximum of 25 days per year after 18 years of service. Employees may accumulate up to 105 days of vacation leave (60 days for employees hired after December 31, 1999). However, upon termination or retirement, full-time employees are paid a maximum of 90 days of unused vacation leave (45 days for employees with a computation date after December 31, 1999) which is based on the average rate of pay during the employee's highest paid 60 days of employment. Part-time and temporary employees (those working less than 30 hours per week) are not eligible for vacation or sick leave benefits.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies, continued:

Most full-time civilian employees are covered under the compensatory sick leave plan and receive a leave time allowance of 2.5 hours per payroll period (bi-weekly) up to a maximum of 65 hours per year. Employees who use fewer than 65 hours during the benefit year will receive a match of additional hours equal to the number of hours accrued minus the number of hours used. Once an employee's balance has reached 1,040 hours, no additional match for unused hours is given. Upon termination, all unused sick leave time allowances in excess of 1,040 hours are payable to the employee at the employee's rate of pay at the time of termination. An employee who uses less than 16 hours of sick leave in any benefit year receives up to three days of personal leave in the next year. Personal leave may be used in place of vacation leave, but will not accumulate and will not be paid out at termination. The other remaining full time civilian employees are covered by a sick plan that was closed to employees in 1985. That plan accumulates a cash value for every sick day not used, which is payable upon resignation or retirement.

The City also has adopted policies of compensatory time to comply with the Fair Labor Standards Act. These policies provide limits to the accumulation of compensatory time and also provide that time not used will be paid in cash. Only classified employees and civilian employees in certain pay grades routinely earn compensatory time.

Vacation and other compensatory time benefits are accrued as liabilities as the benefits are earned, to the extent that the City's obligation is attributable to employees' services already rendered, and it is probable that the City will compensate the employees for the benefits through paid time off or some other means, such as cash payments.

Bond Premiums, Discounts and Issuance Costs

Bond premiums and discounts and prepaid bond insurance in the Airport Fund are amortized over the term of the bonds using the effective interest method for fixed rate bonds and the straight-line method for variable rate bonds. Gains or losses on bond refunding are reported as net inflows or outflows and amortized over the term of the new bonds or the refunded bonds, whichever is lesser, using the same respective methods. Debt issuance costs are recognized as expense when incurred.

Statements of Net Position and Cash Flow – Cash and Cash Equivalents

All highly liquid securities with a maturity date of three months or less are considered to be cash equivalents.

Statements of Net Position – Contracts and Retainages Payable

The portion of the contracts and retainages payable which is attributable to the acquisition, construction, or improvement of capital assets is allocated and applied to net investment in capital assets.

Statements of Net Position – Net Position Classification

Net position is displayed in three separate categories: net investment in capital assets; restricted net position; and unrestricted net position, based on the accessibility of the underlying assets. Net investment in capital assets includes all capital assets, however acquired, including accumulated depreciation, and the outstanding debt and deferred inflows of resources used to finance the construction, acquisition, or improvement of capital assets.

Restricted net position includes assets, net of related liabilities, which are limited as to the manner in or purpose for which they may be used. Restrictions reported by the Fund are imposed either by other governments, as in grants or passenger facility charges, or through legally enforceable City ordinances, passed by City Council, which prioritize the use of Fund revenue as a protection to Airport System bondholders.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies, continued:**Restricted net position – Restricted for debt service**

This category includes net assets in the interest and sinking funds, debt service funds, and debt reserve funds that pay principal and interest for the Revenue Bonds, the Inferior Lien Contract, and the Special Facility Revenue Bonds (Consolidated Rental Car Facility Project). Unexpended Passenger Facility Charges are also included in this category, as they are primarily held, through agreements with the Federal Aviation Administration (FAA), for the repayment of capital financing.

Restricted net position – Restricted for maintenance and operations

This category primarily consists of a reserve fund dedicated to operating and maintenance expense, mandated by the various City ordinances which authorized the issuance of revenue and revenue refunding bonds. At fiscal year end, the reserve fund is required to hold a balance representing at least 60 days of operating expense, based on the annual operating budget authorized by City Council for the next fiscal year. At June 30, 2017, the net position restricted for maintenance and operations also included \$3.1 million, Fund 8037, received under an agreement with the FAA, for the demolition of the IAH Traffic Control Tower and Terminal Radar Approach Control.

Restricted net position – Restricted for special facility

This category holds Customer Facility Charges dedicated to administrative costs and facility improvements for the Consolidated Rental Car Facility (CRCF). These funds are held by The Bank of New York Mellon Trust Company, under a trust indenture authorized by City Council in conjunction with the issuance of the Special Facility Revenue Bonds and Revenue Refunding Bonds (CRCF Project).

Restricted net position – Restricted for renewal and replacement

The Renewal and Replacement (R&R) Fund was created by the various City ordinances which authorized the issuance of airport revenue and revenue refunding bonds. The R&R Fund is intended to replace depreciable assets, and to make major repairs and renovations. Airport revenue is transferred to this fund if it is not needed for maintenance and operations, or for the debt service and reserve funds, or for the operating and maintenance reserve. The R&R fund can also be used for operations or debt service, if other funds are exhausted. If the R&R fund does not have a net position of at least \$10 million at the end of a fiscal year, then additional revenue must be transferred in the next fiscal year. If the R&R fund has a net position that is greater than \$10 million, then the excess is restricted for capital improvements.

Restricted net position – Restricted for capital improvements

This category consists primarily of the Airport Improvement Fund (AIF), created by the various City ordinances which authorized the issuance of revenue bonds. After maintenance and operating expenses are paid, and after all other transfers mandated by City ordinances are made, any net revenue remaining is required to be transferred to the AIF. The AIF is intended for capital expenditures, but it can also be used to cure deficiencies in the R&R fund. If the unappropriated AIF balance is (1) sufficient to cover the capital improvement program for 24 months, or (2) \$50 million, whichever is greater, then the AIF may be used by the City for any lawful purpose not inconsistent with the terms of any Federal grants or aid or any contracts to which the City is a party. Net position restricted for capital improvements also includes grant or contract funds received from the FAA or Transportation Security Administration (TSA) for the construction or acquisition of capital assets. Unspent proceeds from debt issuance are included in this category, along with an allocated portion of the associated unpaid debt, if the debt was issued for capital construction, improvement, or acquisition.

NOTES TO THE FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies, continued:

Net position – Unrestricted (deficit)

This category is defined as any portion of net position that is not classified as either net investment in capital assets or restricted net position. The Fund’s Master Ordinance for the Issuance of Revenue Obligations requires that system revenue not used for specific defined purposes be restricted for capital improvement. Before the Fund’s implementation of GASB No. 68, “Accounting and Financial Reporting for Pensions,” the Fund defined compliance with the ordinance as the annual restriction of net revenue so that unrestricted net position would always be zero. The unrestricted deficit in net position on June 30, 2016 is the amount of the Fund’s net pension liability that was not covered by Fund assets when the Fund implemented GASB No. 68 on July 1, 2014. The reduction in the unrestricted deficit in net position on June 30, 2017 is due to the passage of Texas Senate Bill 2190, which reduced the Fund’s net pension liability. See Note 6 for further information.

2. Deposits and Investments

Deposits

The City’s investment policy requires all deposits to be fully collateralized with depository insurance; obligations of the United States of America or its agencies and instrumentalities (excluding those mortgage backed securities prohibited by the Public Funds Investment Act); or in any other manner and amount provided by law for the deposits of the City. At all times, such securities should have a fair value of not less than 102% of the amount of the deposits collateralized thereby, adjusted by the amount of applicable depository insurance. There were no deposits with custodial risk at year end.

Pooled Cash and Investments

The City maintains a cash and investment pool that is available for use by all funds. The Fund’s portion of this pool is displayed on the Statement of Net Position as “Pooled Cash and Investments.” Participation in the Pool is limited to normal operating activities of the fund and other funds that are restricted because of statutory or contractual considerations, but does not include cash on hand (petty cash and change funds). Earnings from the Pool are allocated to the funds based upon each fund’s average daily balance in the Pool. The Fund’s balance in pooled and non-pooled accounts follows.

Fiscal Year	Pooled Cash and Cash Equivalents	Investments	Equity in Pooled Cash and Investments	Non-Pooled	Total Cash and Investments
2017	\$ 171,328,365	\$ 1,044,679,159	\$ 1,216,007,524	\$ 43,614,720	\$ 1,259,622,244
2016	\$ 87,241,303	\$ 1,120,045,742	\$ 1,207,287,045	\$ 41,058,569	\$ 1,248,345,614

The Airport Fund had petty cash and change funds totaling \$5,450 included in the non-pooled cash at June 30, 2017 and June 30, 2016.

NOTES TO THE FINANCIAL STATEMENTS

2. Deposits and Investments, continued:**Investments and Risk Disclosures**

The following describes the investment positions of the City's operating funds as of June 30, 2017 and June 30, 2016. On these dates, the City had \$3.6 billion and \$3.5 billion, respectively, in high grade, fixed income investments. All investments are governed by state law and the City's Investment Policy, which dictates the following objectives, in order of priority:

1. Safety
2. Liquidity
3. Return on Investment
4. Legal Requirements

These funds are managed internally by City personnel within a City-wide investment pool. The investments listed below do not include the City's three pension funds, which are described separately in this report. This pool consists of all working capital, construction, and debt service funds which are not subject to yield restriction under IRS arbitrage regulations. The funds of the City's enterprise systems which include the Airport Fund, as well as the general fund, are commingled in this pool in order to gain operational efficiency. Approximately 98.3% of the City's total investable funds are contained in this portfolio on June 30, 2017 and June 30, 2016.

	(1)(2) FY2017 & FY2016 Credit Quality Ratings	June 30, 2017		June 30, 2016	
		Fair Value (\$ in millions)	WAM* (years)	Fair Value (\$ in millions)	WAM* (years)
City of Houston Investment					
U.S. Treasury Securities	N/A	\$ 1,757.01	1.595	\$ 1,733.99	1.303
Government Agency Securities (3)	AAA	999.72	1.522	963.71	1.402
Government Agency Securities (State of Israel Bond)	A+	4.98	1.173	-	-
Government Agency Securities (3) (4)	Not Rated	26.02	0.392	130.40	0.763
Government Mortgaged Backed Securities (3) (4)	Not Rated	15.71	1.894	24.60	2.018
MMF - TexSTAR Cash Reserves	AAA Short Term	210.00	0.088	-	-
Commercial Paper	A-1+/P-1 Short Term	314.09	0.215	49.85	0.378
Municipal Securities	AAA Long Term	100.06	1.279	95.93	1.410
Municipal Securities	AA Long Term	195.64	1.230	210.45	1.202
Municipal Securities	A Long Term	8.78	1.681	-	-
Total Investments		\$ 3,632.01	1.332	\$ 3,208.93	1.255

* Weighted Average Maturity (WAM) is computed using average life of mortgage backed securities and effective maturity of callable securities.

(1) Fitch Ratings Inc. has assigned an AAA credit quality rating and V1 volatility rating to the City's General Investment Pool. The AAA signifies the highest level of credit protection, and the V1 rating signifies volatility consistent with a portfolio of government securities maturing from one to three years.

(2) All credit ratings shown are either actual Fitch ratings, or if a Fitch credit rating is not available, the equivalent Fitch credit rating is shown to represent the actual Moody's or Standard & Poor's credit rating.

(3) These are securities issued by government sponsored enterprises, including the Federal Home Loan Bank, Federal Home Loan Mortgage Corporation (Freddie Mac), Federal National Mortgage Corporation (Fannie Mae) and Federal Farm Credit Bank.

(4) These securities were issued by the Federal Home Loan Bank, Freddie Mac, Fannie Mae, and Farmer Mac. While these individual issues were not rated, senior lien debt of these entities is rated AAA.

NOTES TO THE FINANCIAL STATEMENTS

2. Deposits and Investments, continued:**Risk Disclosures:**

Interest Rate Risk. In order to ensure the ability of the City to meet obligations and to minimize potential fair value losses arising from rising interest rate environments, the City's investment policy limits this investment portfolio's dollar-weighted average maturity to 2.5 years maximum. As of June 30, 2017, this investment portfolio's dollar-weighted average maturity was 1.332 years. Modified duration was 1.306 years. Modified duration can be used as a multiplier to determine the percent change in price of a bond portfolio for every 100 basis point (1%) change in yield. For example, a portfolio with a modified duration of 1.306 years would experience approximately a 1.306% change in market price for every 100 basis point change in yield.

Credit Risk – Investments. The U.S. Treasury Securities and Housing and Urban Development Securities are direct obligations of the United States government. Government Agency Securities and Mortgage Backed Securities were issued by government sponsored enterprises but are not direct obligations of the U.S. Government. The Money Market Mutual Funds were rated AAA. Municipal Securities were rated at least AA-. The City's investment policy limits investments in the General Investment Pool to high quality securities with maximum maturity of five years for all U.S. Treasuries, Government Agency, and Municipal Securities with the exception of Government Mortgaged Backed Securities which can have maximum maturity of 15 years. Certificates of Deposit maximum maturity is two years, and Commercial Paper maximum maturity is 270 days. The General Investment Pool maximum sector exposure are as follow: U.S. Treasuries up to 100%; Government Agency Securities up to 85% with maximum exposure to any one Agency issuer is 35%; Mortgage Backed Securities up to 20%; Municipal Securities up to 20% with a rating not less than A by a nationally recognized rating agency; Certificates of Deposit up to 15%; and Commercial Paper up to 15%.

Credit Risk – Securities Lending. Under its securities lending program, the City receives 102% of fair value for its U.S. Treasury securities at the time the repurchase agreements are signed, and agreements are limited to 90 days by policy and have been less than 35 days by practice. At June 30, 2017 there were no securities lending agreements outstanding.

Custodial Credit Risk. The custodial credit risk for investments is the risk that in the event of failure of a counterparty, the City will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are not registered in the name of the City, and are held by either the counterparty or the counterparty's trust department or agent but not in the City's name. As of June 30, 2017, none of the City's investments in the General Investment Pool 9900 were subject to custodial credit risk.

Foreign Currency Risk. Foreign currency risk is the risk that investments will change value due to changes in exchange rates between time of purchase and reporting or sale. The City's general pool investments are limited by policy to US dollar denominated investments and not subject to this risk.

NOTES TO THE FINANCIAL STATEMENTS

2. Deposits and Investments, continued:

A summary of the Pool's investment under the requirements of the fair value hierarchy follows:

Investments by fair value level	Fair Value Measurements Using (\$ in millions)						
	Total	Quoted	Other significant	Significant	Total	Quoted	Other significant
	June 30, 2017	prices (Level 1)	observable inputs (Level 2)	unobservable inputs (Level 3)	June 30, 2016	prices (Level 1)	observable inputs (Level 2)
U.S. Treasury Securities	\$ 1,757.01	\$ 1,757.01	\$ -	\$ -	\$ 1,733.99	\$ 1,733.99	\$ -
Government Agency Securities	1,025.74	-	1,025.74	-	1,094.11	-	1,094.11
Government Agency Securities (State of Israel Bd)	4.98	-	-	4.98	-	-	-
Government Mortgaged Backed Securities	15.71	-	15.71	-	24.60	-	24.60
Municipal Securities	304.48	-	304.48	-	306.38	-	306.38
Commercial Paper	314.09	-	314.09	-	49.85	-	49.85
Total Investments by Fair Value Level	\$ 3,422.01	\$ 1,757.01	\$ 1,660.02	\$ 4.98	\$ 3,208.93	\$ 1,733.99	\$ 1,474.94
Investments measured at the net asset value (NAV)							
MMF - TexSTAR Cash Reserves	\$ 210.00	-	\$ 210.00	-	\$ -	-	-
Total investments measured at the net asset value (NAV)	\$ 210.00	-	\$ 210.00	-	\$ -	-	-
Total investments measured at fair value and NAV	\$ 3,632.01	\$ 1,757.01	\$ 1,870.02	\$ 4.98	\$ 3,208.93	\$ 1,733.99	\$ 1,474.94

Security Valuation Disclosure

Debt securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique provided by third party custodians. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

TexSTAR uses the fair value method to report its investments. Under the fair value method, fixed income securities are valued each day by independent or affiliated commercial pricing services or third party broker-dealers. When sufficient market activity exists, the pricing services or broker-dealers may utilize a market-based approach through which quotes from market makers are used to determine fair value. In instances where sufficient market activity may not exist or is limited, the broker-dealers or pricing services also utilize proprietary valuation models which may consider market transactions in comparable securities and the various relationships between securities in determining value and/or market characteristics such as benchmark yield curves, option adjusted spreads, credit spreads, estimated default rates, coupon-rates, anticipated timing of principal repayments, underlying collateral, and other unique security features in order to estimate the relevant cash flows, which are then discounted to calculate the fair values.

NOTES TO THE FINANCIAL STATEMENTS

2. **Deposits and Investments, continued:**

Restricted Cash and Cash Equivalents - Miscellaneous Money Market Accounts

In addition to its investment pools, the City maintains several money market accounts for various purposes. These accounts are considered cash and cash equivalents on the Statements of Cash Flows because they maintain a weighted average maturity of less than three months. The Airport’s portion of these is as follows:

	FY2017 Credit Quality Ratings	Fair Value June 30, 2017 (\$ in millions)	FY2016 Credit Quality Ratings	Fair Value June 30, 2016 (\$ in millions)	FY2017 & FY2016 Weighted Average Maturity
Blackrock Federal Institutional Fund Balances held for Consolidated Rental Car Facility operations, improvements, debt service	AAA	\$ 36.632	AAA	\$ -	< 60 days
Blackrock Institutional Temporary Liquidity Fund: Balances held for Consolidated Rental Car Facility (CRCF) operations, improvements, debt service	AAA	\$ -	AAA	\$ 34.269	< 60 days
JP Morgan US Government Money Market Fund: Balances held for Airport System Special Facilities Revenue Bd Series 1997A debt service	AAA	6.594	AAA	6.590	< 60 days
JP Morgan US Treasury Securities Money Market Fund: Balances held for auction bonds debt service	AAA	0.376	AAA	0.189	< 60 days
First American US Treasury Money Market Fund: Balance held for commercial paper debt service	AAA	0.007	AAA	0.005	< 60 days
Total Fair Value - Money Market Accounts		\$ 43.609		\$ 41.053	

Risk Disclosures:

Interest Rate Risk. These money market funds maintain an average maturity of less than 60 days and seek to maintain a stable net asset value of \$1.00. These funds are redeemable on a same day notice.

Credit Risk. These funds hold only US dollar denominated securities that present minimal credit risk. They have the highest credit ratings.

Custodial Credit Risk. As of June 30, 2017, none of the City's investments in this pool were subject to custodial credit risk.

Foreign Currency Risk. The City's investments in these accounts are all US dollar denominated and not subject to foreign currency risk.

A summary of investments under the requirements of the fair value hierarchy follows:

	Fair Value Measurements Using (\$ in millions)					
	Total June 30, 2017	Quoted prices (Level 1)	Other significant observable inputs (Level 2)	Total June 30, 2016	Quoted prices (Level 1)	Other significant observable inputs (Level 2)
Investments measured at the net asset value (NAV)						
JP Morgan US Government MMF (Airport System Special Facilities Revenue Bd Series 1997A)	\$ 6.594	\$ -	\$ 6.594	\$ 6.590	\$ -	\$ 6.590
BlackRock FedFund-Institutional	36.632	-	36.632	34.269	-	34.269
JP Morgan US Treasury Securities MMF	0.376	-	0.376	0.189	-	0.189
First American US Treasury MMF	0.007	-	0.007	0.005	-	0.005
Total investments measured at the net asset value (NAV)	\$ 43.609	\$ -	\$ 43.609	\$ 41.053	\$ -	\$ 41.053

NOTES TO THE FINANCIAL STATEMENTS

3. Capital Assets

Summaries of changes in fixed assets for the years ended June 30, 2017 and June 30, 2016 follow (in thousands):

	June 30, 2016	Additions	Retirements	Transfers	June 30, 2017
Capital assets not being depreciated :					
Land	\$222,886	5,390	(\$12,649)	\$452	\$216,079
Rights & Intangibles - Non-Amortizable	9,752	-	-	(183)	9,569
Construction work in progress	174,942	105,020	-	(144,729)	135,233
Total capital assets not being depreciated	407,580	110,410	(12,649)	(144,460)	360,881
Other capital assets:					
Buildings and building improvements	2,900,383	296	-	70,271	2,970,950
Improvements other than buildings	2,072,293	3,451	-	69,436	2,145,180
Equipment	249,028	8,280	(576)	4,753	261,485
Rights & Intangibles - Amortizable	4,084	951	-	-	5,035
Total other capital asset	5,225,788	12,978	(576)	144,460	5,382,650
Less accumulated depreciation for:					
Buildings and building improvements	(1,227,227)	(101,538)	-	49	(1,328,716)
Improvements other than buildings	(1,259,750)	(68,217)	-	(20)	(1,327,987)
Equipment	(186,464)	(14,403)	576	(29)	(200,320)
Rights & Intangibles	(1,463)	(1,613)	-	-	(3,076)
Total accumulated depreciation	(2,674,904)	(185,771) *	576	-	(2,860,099)
Other capital assets, net	2,550,884	(172,793)	-	144,460	2,522,551
Total Capital assets, net	\$2,958,464	(\$62,383)	(\$12,649)	-	\$2,883,432
	June 30, 2015	Additions	Retirements	Transfers	June 30, 2016
Capital assets not being depreciated :					
Land	\$220,626	-	(\$776)	\$3,036	\$222,886
Rights & Intangibles - Non-Amortizable	9,387	-	-	365	9,752
Construction work in progress	236,163	213,242	-	(274,463)	174,942
Total capital assets not being depreciated	466,176	213,242	(776)	(271,062)	407,580
Other capital assets:					
Buildings and building improvements	2,703,195	117	-	197,071	2,900,383
Improvements other than buildings	2,009,275	514	-	62,504	2,072,293
Equipment	233,321	5,865	(1,056)	10,898	249,028
Rights & Intangibles - Amortizable	2,411	907	-	766	4,084
Total other capital asset	4,948,202	7,403	(1,056)	271,239	5,225,788
Less accumulated depreciation for:					
Buildings and building improvements	(1,128,938)	(98,289)	-	-	(1,227,227)
Improvements other than buildings	(1,194,454)	(65,296)	-	-	(1,259,750)
Equipment	(171,671)	(15,661)	1,045	(177)	(186,464)
Rights & Intangibles	(1,311)	(152)	-	-	(1,463)
Total accumulated depreciation	(2,496,374)	(179,398)	1,045	(177)	(2,674,904)
Other capital assets, net	2,451,828	(171,995)	(11)	271,062	2,550,884
Total Capital assets, net	\$2,918,004	\$41,247	(\$787)	-	\$2,958,464
Interest Cost:					
(in thousands)	FY2017	FY2016		Percentage	
Total Interest Cost	\$ 97,271	\$ 94,999		2.4%	
Capitalized Interest	(9,789)	(8,787)		11.4%	
Interest Expense	\$ 87,482	\$ 86,212		1.5%	

* The \$185.771 million addition to accumulated depreciation differs from the \$184.203 million depreciation expense reflected on the Statements of Revenues, Expenses, and Changes in Net Position because of an adjustment for found buildings and improvements that was recorded at book value which increased accumulated depreciation but did not affect current year depreciation.

HAS retired \$12,649,049.34 of land due to the sale of 147 acres and the write-down of a Bahr Woods preserve mitigation easement originally recorded as land. The Bahr Woods easement is entrusted to Legacy Land Trust, and Houston Airport System has no obligation or duty to the asset.

Construction in progress decreased 22% from FY16 to FY17 due to completion of the Hobby Parking Garage, Satellite Utility Plant and Advance Surveillance Program, and delays on other major projects, including construction of the Program Management Office Building and a restoration project on Taxiway WB.

NOTES TO THE FINANCIAL STATEMENTS

4. Leases

A. The Fund as Lessee

The Airport System has obtained equipment through long-term operating leases. The total cost for such leases was \$263,826 for the year ended June 30, 2017.

B. The Fund as Lessor

The Airport System is the lessor of approximately ten percent of its land and substantially all of its buildings and improvements. These lease agreements are non-cancelable operating leases with fixed minimum rentals and non-cancelable operating use and lease agreements with annually adjusted rates. Rental income is earned from leasing various parcels of land with asset costs of \$21,607,879 to airlines, fixed base operators and various corporations for hangars, aircraft maintenance facilities, flight kitchens and cargo buildings; to auto rental companies for their service facilities and storage lots; and to a variety of other entities for buildings and other permanent improvements. Airlines and airport concessionaires lease various sections of City owned airport buildings and improvements for ticket counters, passenger hold rooms, baggage carousels, restaurants, retail stores and other facilities. Leased buildings, improvements and equipment have asset costs of \$5,377,614,428 and carrying costs of \$2,517,515,592. Accumulated depreciation on all these assets is \$2,860,098,836.

Minimum guaranteed income on such non-cancelable operating leases is as follows (in thousands):

<u>Year Ending June 30</u>	<u>Minimum Rental Income</u>
2018	\$ 72,261
2019	72,036
2020	70,936
2021	60,131
2022	56,360
2023-2027	233,380
2028-2032	66,245
2033-2037	52,837
2038-2042	52,211
2043-2047	40,878
2048-2052	39,403
2053-2055	11,377
<u>Total</u>	<u>\$ 828,055</u>

Contingent income associated with these non-cancelable operating leases was approximately \$10,697,316 and \$10,047,554 for the years ended June 30, 2017 and 2016, respectively. Contingent income is earned when a concessionaire's payment, based on a percentage of sales, is higher than the minimum amount guaranteed to the Airport System under the terms of the lease. In addition, income is earned from certain non-cancelable operating use and lease agreements for landing fees and terminal building rentals. Such income is adjusted annually based on a compensatory formula to recover certain operating and capital costs of the related facilities. Compensatory income for the years ended June 30, 2017 and 2016 is as follows (in thousands):

	<u>Compensatory Income</u>	
	<u>2017</u>	<u>2016</u>
Landing Fees	\$ 86,966	\$ 89,505
Terminal Space – Airline	194,191	189,568
	<u>\$ 281,157</u>	<u>\$ 279,073</u>

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities

Changes in long-term liabilities for the years ended June 30, 2017 and 2016 are summarized as follows (in thousands):

	Balance June 30, 2016	Additions	Retirements/ Transfers	Balance June 30, 2017	Amounts Due within One Year
Revenue bonds payable	\$ 2,085,075	\$ -	\$ (74,665)	\$ 2,010,410	\$ 77,855
Plus unamortized premium	68,118	-	(6,816)	61,302	-
Less unamortized discount	(3,016)	-	299	(2,717)	-
Revenue bonds payable, net	<u>2,150,177</u>	<u>-</u>	<u>(81,182)</u>	<u>2,068,995</u>	<u>77,855</u>
Inferior lien contract	12,155	-	(5,915)	6,240	6,240
Special facility bonds payable	96,895	-	(5,305)	91,590	5,490
Commercial paper payable	87,000	-	-	87,000	-
Pension obligation bonds	2,006	-	-	2,006	-
Note payable	120,439	-	(5,018)	115,421	5,018
Claims for workers compensation	1,805	390	(776)	1,419	777
Compensated absences	12,780	9,849	(10,008)	12,621	6,367
Net pension liability payable	282,811	-	(28,391)	254,420	-
Other post employment benefits	70,203	4,454	-	74,657	-
Total long-term liabilities	<u>\$ 2,836,271</u>	<u>\$ 14,693</u>	<u>\$ (136,595)</u>	<u>\$ 2,714,369</u>	<u>\$ 101,747</u>

	Balance June 30, 2015	Additions	Retirements/ Transfers	Balance June 30, 2016	Amounts Due within One Year
Revenue bonds payable	\$ 2,150,805	\$ -	\$ (65,730)	\$ 2,085,075	\$ 74,665
Plus unamortized premium	75,141	-	(7,023)	68,118	-
Less unamortized discount	(3,316)	-	300	(3,016)	-
Revenue bonds payable, net	<u>2,222,630</u>	<u>-</u>	<u>(72,453)</u>	<u>2,150,177</u>	<u>74,665</u>
Inferior lien contract	17,760	-	(5,605)	12,155	5,915
Special facility bonds payable	102,055	-	(5,160)	96,895	5,305
Commercial paper payable	49,500	37,500	-	87,000	87,000
Pension obligation bonds	2,006	-	-	2,006	-
Note payable	-	123,785	(3,346)	120,439	5,018
Contract payable - Southwest Airlines	111,620	-	(111,620)	-	-
Claims for workers compensation	2,137	535	(867)	1,805	868
Compensated absences	12,550	9,912	(9,682)	12,780	5,945
Net pension liability payable	248,348	34,463	-	282,811	-
Other post employment benefits	65,161	5,042	-	70,203	-
Total long-term liabilities	<u>\$ 2,833,767</u>	<u>\$ 211,237</u>	<u>\$ (208,733)</u>	<u>\$ 2,836,271</u>	<u>\$ 184,716</u>

Purpose of Debt

The Fund issues revenue bonds and commercial paper for the purpose of enlarging, maintaining and improving the Houston Airport System. The Fund has issued refunding bonds from time to time when there has been an economic gain. These refundings have been structured as legal defeasances of the old debt as ruled by the Texas Attorney General, and such debt has been removed from the Fund's books.

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities, continued:

Debt Service Requirements to Maturity

Aggregate future Airport system debt service payments to maturity as of June 30, 2017 were as follows (in thousands):

Year Ending June 30	Airport System Total Future Requirements			Year Ending June 30	Airport System Note - Southwest Airlines	
	Principal	Interest	Total		Principal	Interest
2018	\$ 94,603	\$ 100,467	\$ 195,070	2018	\$ 5,018	\$ 2,528
2019	89,253	96,418	185,671	2019	5,018	2,418
2020	99,303	92,365	191,668	2020	5,018	2,308
2021	92,443	88,042	180,485	2021	5,018	2,198
2022	200,528	82,907	283,435	2022	5,018	2,088
2023-2027	615,472	327,659	943,131	2023-2027	25,092	8,792
2028-2032	734,379	176,816	911,195	2028-2032	25,092	6,045
2033-2037	282,341	48,318	330,659	2033-2037	25,092	3,297
2038-2042	104,345	8,200	112,545	2038-2042	15,055	659
Total	\$ 2,312,667	\$ 1,021,192	\$ 3,333,859	Total	\$ 115,421	\$ 30,333

Year Ending June 30	Airport System Senior Lien Revenue Bonds		Airport System Subordinate Lien Revenue Bonds		Airport System Commercial Paper	
	Principal	Interest	Principal	Interest	Principal	Interest
2018	\$ 10,225	\$ 22,613	\$ 67,630	\$ 68,271	\$ -	\$ 1,502
2019	10,735	22,089	67,785	65,133	-	1,502
2020	11,275	21,538	77,050	61,870	-	1,504
2021	11,835	20,961	69,350	58,396	-	1,502
2022	12,430	20,354	88,575	54,818	87,000	850
2023-2027	72,120	91,553	469,835	212,030	-	-
2028-2032	92,385	70,628	603,380	98,864	-	-
2033-2037	120,350	41,811	136,160	3,131	-	-
2038-2042	89,290	7,541	-	-	-	-
Total	\$ 430,645	\$ 319,088	\$ 1,579,765	\$ 622,513	\$ 87,000	\$ 6,860

Year Ending June 30	Airport System Inferior Lien Contract		Airport System Special Facility Bonds - Rental Car Facility		Airport System Pension Obligations	
	Principal	Interest	Principal	Interest	Principal	Interest
2018	\$ 6,240	\$ 171	\$ 5,490	\$ 5,275	\$ -	\$ 107
2019	-	-	5,715	5,170	-	106
2020	-	-	5,960	5,038	-	107
2021	-	-	6,240	4,878	-	107
2022	-	-	7,505	4,691	-	106
2023-2027	-	-	48,425	14,752	-	532
2028-2032	-	-	12,255	843	1,267	436
2033-2037	-	-	-	-	739	79
Total	\$ 6,240	\$ 171	\$ 91,590	\$ 40,647	\$ 2,006	\$ 1,580

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities, continued:

Revenue bonds payable at June 30, 2017 and 2016 (in thousands):

	Maturity Year	Original Interest Rate Range	Face Value Outstanding June 30, 2017	Face Value Outstanding June 30, 2016
Airport System Subordinate Lien Revenue Bonds:				
Series 2000B, \$269,240,000 original principal	2030	5.45%-5.7%	\$ 44,515	\$ 44,515
Series 2002A, \$200,050,000 original principal	2032	5%-5.625%	20,005	20,005
Series 2002B, \$274,455,000 original principal	2032	5%-5.5%	27,450	27,450
Periodic Auction Reset Securities				
Series 2000P-1, \$50,000,000 original principal	2030	N/A	34,100	37,275
Series 2000P-2, \$50,000,000 original principal	2030	N/A	33,875	35,425
Auction Rate Securities				
Series 2002C, \$100,000,000 original principal	2032	N/A	76,875	79,425
Series 2002D-1, \$75,000,000 original principal	2032	N/A	55,800	58,400
Series 2002D-2, \$75,000,000 original principal	2032	N/A	53,825	56,400
Airport System Subordinate Lien Revenue Refunding Bonds:				
Series 2007B, \$298,670,000 original principal	2032	4%-5%	274,315	278,390
Series 2011A, \$449,975,000 original principal	2026	3%-5%	283,580	319,795
Series 2011B, \$116,930,000 original principal	2026	3%-5%	82,040	90,985
Series 2012A, \$286,585,000 original principal	2032	5%	283,545	286,585
Series 2012B, \$217,135,000 original principal	2032	5%	217,135	217,135
Variable Rate Debt Obligations				
Series 2010, \$93,730,000 original principal	2030	N/A	92,705	92,905
Airport System Senior Lien Revenue and Refunding Bonds:				
Series 2009A, \$449,660,000 original principal	2039	5%-5.5%	430,645	440,385
Total principal			\$ 2,010,410	\$ 2,085,075
Less: Total current maturities			(77,855)	(74,665)
Unamortized discount			(2,717)	(3,016)
Unamortized premium			61,302	68,118
Total revenue bonds payable - long term			<u>\$ 1,991,140</u>	<u>\$ 2,075,512</u>

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities, continued:**Security for Airport Debt**

To the extent it legally may do so, the Fund covenants in its bond ordinances to charge rates for use of the Airport System in order that in each fiscal year the net revenues will be not less than 125% of the debt service requirements for Senior Lien Bonds for such fiscal year and 110% of the debt service requirements for Subordinate Lien Bonds for such fiscal year. Generally, the bonds may be redeemed prior to their maturities in accordance with the bond ordinances and at prices which include premiums ranging downward from 1%.

The Fund presently has three outstanding Senior Lien Debt Service Reserve Fund Surety Policies issued by Financial Guaranty Insurance Corporation (FGIC) and reinsured by National Public Finance Guarantee Corporation for any outstanding Senior Lien Notes. These policies have an aggregate maximum amount of \$12,374,996 and terminate on October 25, 2023 and July 1, 2030. Using proceeds of the Series 2009A Bonds, the Fund has also deposited \$33,095,994 into the Senior Lien Bond Reserve Fund.

The Fund has purchased Subordinate Lien Debt Service Reserve Fund Surety Policies that unconditionally guarantee the payment of the current principal and interest on all outstanding Airport System subordinate lien issues. The surety policies terminate on dates ranging from July 1, 2017 to July 1, 2032. Each of the draws made against the surety policies shall bear interest at the prime rate plus two percent, not to exceed a maximum interest rate of 12%. The repayment provisions require one-twelfth of the policy costs for each draw to be repaid monthly, beginning the first month following the date of each draw. The policies were issued by (1) FGIC in the aggregate maximum amount of \$108,444,369, reinsured by National Public Finance Guarantee Corporation; (2) Assured Guarantee Municipal Corporation in the aggregate maximum amount of \$31,921,384; and (3) Syncora Guarantee in the aggregate maximum amount of \$15,756,228. While the Syncora policies are still active, the Fund has made a supplemental cash deposit of \$15,756,228 in the Subordinate Lien Bond Reserve Fund.

Airport System Inferior Lien Contract

On July 1, 2004 the City and United Airlines, formerly Continental Airlines, Inc., entered into a Sublease Agreement associated with the Special Facilities Lease for the Automated People Mover System and the City's Airport System Special Facilities Revenue Bonds (Automated People Mover Project) Series 1997A (1997A Special Facilities Bonds). The City assumed United Airlines' interest in the project upon completion of the expansion of the Automated People Mover System on January 25, 2005. As part of the Sublease, the City agreed to make sublease payments that include amounts equal to the debt service on the 1997A Special Facilities Bonds. The payments are payable from Airport System net revenues on the same priority as inferior lien bonds. Accordingly, the principal amount remaining on the 1997A Special Facilities Bonds, totaling \$6,240,000 at June 30, 2017, is recorded as an Inferior Lien Contract. The 1997A Bonds will reach final maturity on July 15, 2017.

Variable Rate Debt

The Fund has issued variable rate debt in Airport System Subordinate Lien Revenue Bonds Series 2000P-1 and Series 2000P-2. They were issued as auction reset securities with Series 2000P-1 to be auctioned every 7 days, and Series 2000P-2 to be auctioned every 28 days. On July 20, 2005, Series P-2 changed to being auctioned every 7 days. The rate in effect at June 30, 2017, including dealer and auction fees, was 2.5785% for Series 2000P-1 and 2.5175% Series 2000P-2. Additional variable rate debt was issued as Series 2002C, Series 2002D-1, and Series 2002D-2 as auction rate securities to be auctioned every 35 days. These changed to being auctioned every 7 days as of August 10, 2005, August 3, 2005, and July 13, 2005, respectively. Rates in effect at June 30, 2017, including dealer and auction fees, were 2.507% for Series 2002C and Series 2002D-1, and 2.495% also for Series 2002D-2. Starting in February 2008, various auction rate securities began, and continue, to not be remarketed. Auction rate bonds that cannot be sold remain with the bondholder.

However, if the auction is not successful, the rate is reset based on predetermined formulae which include the rating of the insurer, or the underlying rating of the Fund if it is higher than the insurer's rating. The formula for the Series 2000P-1 and Series 2000P-2 was 125% of the commercial paper rate until July 30, 2009, 150% until April 16, 2010 and 200% thereafter. The formula for the Series 2002C, Series 2002D-1, and Series 2002D-2 is 200% of LIBOR.

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities, continued:

Additional variable rate debt was issued as Series 2005A as variable rate demand obligations with a weekly reset. Series 2005A was refunded by Series 2010 on December 21, 2010. Series 2010 is also a variable rate demand obligations issue with a weekly reset. The rate in effect at June 30, 2017, including remarketing fees, was 1.00%. Should Series 2010 be tendered and not remarketed, principal and interest will be paid by a letter of credit issued by Barclay's Bank, PLC, expiring on December 22, 2017 unless extended or terminated. The letter of credit covers the outstanding par value of the bonds plus 35 days accrued interest at a 12% annual rate. The facility fee rate for the letter of credit is .425%. The Fund has made no draws on the letter of credit through June 30, 2017. Because the Series 2010 Bonds were issued as multi-modal bonds, the Houston Airport System can elect to convert the Bonds into long-term fixed rate bonds that would not require a letter of credit.

Arbitrage Rebate

Arbitrage rebate rules, under Chapter 148 of the Federal Tax Code, require generally that a tax-exempt bond issuer pay to the federal government any profit made from investing bond proceeds at a yield above the bond yield, when investing in a taxable market. Payments based on cumulative profit earned by bonds are due, in general, every five years. During Fiscal Year 2017, the Airport Fund paid \$1,682 of arbitrage rebate on interest income earned by commercial paper notes. At June 30, 2017 and June 30, 2016, yield restriction and arbitrage rebate payable by the Airport Fund was \$0 and \$0, respectively.

Commercial Paper

Airport System Commercial Paper Notes (Notes) were originally authorized for \$150 million for Series A and B and \$150 million for Series C to establish, improve, enlarge, and extend the Houston Airport System, acquire land, and pay interest on the Notes. Between July 1, 2013 and December 20, 2013, Series A and B were collateralized by a direct pay letter of credit issued by Bank of America, N.A. On November 20, 2013, the City re-authorized and amended the Series A and B Notes. A new direct pay letter of credit was issued by the Royal Bank of Canada on December 18, 2013, covering \$150 million in face value plus \$11.1 million in respect of 270 days accrued interest computed at 10%. This letter of credit expired on December 16, 2016 and was replaced by a letter of credit for the same amount issued by Sumitomo Mitsui Banking Corporation, which will expire on December 15, 2021. On June 30, 2017 and June 30, 2016 there were \$87.0 million in Series A Notes outstanding.

Forward Delivery Bond Purchase Agreement

On October 21, 2015, the City terminated its authorization for the \$150 million Series C Commercial Paper Notes, and instead authorized the issuance of \$450 million in Airport System Inferior Lien Revenue Bonds in one or more series. The City also authorized the execution of a forward delivery bond purchase agreement. This authorization is valid until October 21, 2017 unless extended by a separate City Council action. Please refer to Note 12, titled "Subsequent Events". On November 5, 2015, The City executed a forward delivery bond purchase agreement for the issuance of up to \$450 million of Airport System Inferior Lien Revenue Bonds with the Royal Bank of Canada. The agreement expires on November 5, 2022. No bonds have been issued as of June 30, 2017.

Pledged Revenues

The Fund has pledged airport system revenues, net of operation and maintenance expenses, to pay principal and interest on outstanding Senior Lien Commercial Paper Notes, Senior Lien Revenue Bonds, Subordinate Lien Revenue Bonds, and an Inferior Lien Contract, with outstanding principal amounts of \$87.0 million, \$430.2 million, \$1,638.8 million and \$6.2 million respectively at June 30, 2017. The Commercial Paper Notes and Revenue Bonds are issued to establish, improve, enlarge, extend and repair the Airport System. The Inferior Lien Sublease Agreement with United Airlines pays debt service on the Airport System Special Facilities Bonds, (Automated People Mover Project) Series 1997A.

Pledged airport system revenues exclude: proceeds of any bonds, replacement proceeds, or any investment income earned by bond proceeds; fair value adjustments to investment income; passenger facility charges; grants or gifts for construction or acquisition; insurance proceeds; revenue from special facilities pledged to Special Facility Bonds; taxes collected for others; and proceeds from the sale of property. Pledged airport system revenues, net of operation and maintenance expense, totaled \$256.0 million in Fiscal Year 2017, covering principal of \$82.7 million and interest of \$92.3 million. In addition to pledged airport system revenue, passenger facility charges totaling \$54.7 million were available to pay debt service in Fiscal Year 2017, making the ratio of net pledged revenue to cover debt service costs 2.13%.

NOTES TO THE FINANCIAL STATEMENTS

5. Long-Term Liabilities, continued:**Special Facility Bonds**

The Airport System Special Facilities Taxable Revenue Bonds, (Consolidated Rental Car Facility Project), Series 2001, original par value \$130,250,000, financed the design and construction at Intercontinental of a common car customer service building, a parking structure, maintenance, storage and administrative facilities for each car rental company lessee, a common bus fleet and maintenance facility, and related infrastructure. The City holds legal title to the completed Consolidated Rental Car Facility ("CRCF"), as it was constructed on airport property, but the facility is operated and maintained by IAH RACS, LLC, a limited liability company formed by various car rental companies. The bonds are payable from customer facility charges collected by the car rental companies from their customers and remitted to a trustee for payment of debt service and other uses allowable by a trust indenture. As of June 30, 2017, the daily usage charge per customer is set at \$4.00. The trust indenture determines when and how the City is responsible for changing the rate. The bonds are limited special obligations of the City, payable solely from and secured by pledged customer facility charges. There is no pledge of the car rental companies' revenues, or against any general revenue of the City or Fund.

On September 4, 2014, the City issued \$38,225,000 in Airport System Special Facilities Taxable Revenue Refunding Bonds (Consolidated Rental Car Facility Project), Series 2014, at coupons ranging from 6.49% to 7.13%. The stated interest rate was 3.117%. The bonds mature in varying amounts from 2015 to 2021. Proceeds of the bonds were used to refund \$37,245,000 of the City's outstanding Airport System Special Facilities Taxable Revenue Bonds (CRCF), Series 2001, and to pay costs of issuance. Net present value saving related to the refunded bonds totaled \$5,078,199 or 13.63% of the refunded bonds and reduced total debt service by \$6,110,108. The bonds are limited special obligations of the City, payable solely from and secured by pledged customer facility charges. These bonds do not constitute a debt or pledge of the faith or credit of the City or the Fund.

In reporting periods prior to FY2015, the Airport Fund elected not to report the CRCF facility or the Special Facility Revenue Bonds (CRCF) on its financial statements, under the Governmental Accounting Standards Board guidance for conduit debt obligations. Beginning in the fiscal year ended June 30, 2015, the Airport Fund elected to change its method of accounting, and to report the CRCF assets, revenues, and associated debt and expenses, with retroactive adjustments on comparative data. At June 30, 2017 and June 30, 2016, special facilities revenue and refunding bonds (CRCF) outstanding totaled \$91.6 million and \$96.9 million, respectively.

Note Payable

In February, 2013, the City entered into a contract with Southwest Airlines Co. ("Southwest") under which Southwest would construct five international gates, a Federal Inspection Service Facility, and associated enabling projects (the "Project") at William P. Hobby Airport. Southwest was responsible for the initial funding of all costs of the Project including any related financing costs, but title to the Project was passed to the City at each point in construction. During construction, the Airport Fund has recorded Southwest's cost of construction in process as a long term contract payable, with a balance of \$111,620,000 on June 30, 2015. The Airport Fund has no responsibility for any financing costs of the Project that may have been incurred by Southwest. The new gates and facility opened on October 15, 2015.

At any time after final completion of the Project, the City has the right to pay off Southwest's note payable for the unamortized costs of the Project, calculated at an annual amortization rate equal to 2.19% over a 25-year period, with final maturity at June 30, 2040. Should the City pay off Southwest's note payable, Southwest will then be responsible for the payment of its share of the Airport Fund's capital cost through rates and charges on the new facilities. As long as the City does not pay off Southwest's note payable for the facilities, then the Airport Fund will record a note payable to Southwest for the unamortized costs of the Project. Southwest will be invoiced monthly using rates that will recover operation and maintenance expenses. Southwest will also be invoiced monthly for the capital cost amortization of the facilities, but a corresponding credit memo will be issued to offset the capital invoice. Capital costs charged to other user airlines will be remitted to Southwest. The Airport Fund has recorded the initial note payable on October 15, 2015 as \$123,785,000, with \$115,421,000 still outstanding on June 30, 2017.

NOTES TO THE FINANCIAL STATEMENTS

6. **Defined Benefit Pension Plan**

As a department of the City, the Houston Airport System Fund participates in the pension plan of the City of Houston’s municipal employees, for which separately published financial statements are available. Since the plan does not separately account for the Fund, the following disclosures, as well as those in Note 7, generally relate to the City as a whole. A complete copy of the summary plan description and the stand-alone financial reports can be obtained from the Houston Municipal Employees Pension System at 1201 Louisiana St., Suite 900, Houston, Texas 77002-2555 or via <http://hmepps.org>.

Plan Description

The Houston Municipal Employees’ Pension System (HMEPS) of the City is a single employer defined benefit pension plan that covers all eligible municipal employees, including all employees of the Fund. This pension plan was established under the authority of Texas statutes (Vernon's Texas Civil Statutes, Article 6243g), which establish the various benefit provisions. An independent Board of Trustees administers each plan. The fiscal year of each pension fund ends June 30. In this CAFR, the Fund reports separately from the City and is required to report as a cost-sharing plan since it is allocated a proportionate share of the Houston Municipal Employees Pension System liability. The schedules of Net Pension Liability, Pension Expense, and Deferred Outflows and Inflows of Resources show the Fund’s cost share of the City’s plan.

Benefits Provided

The Houston Municipal Employees’ Pension System includes a contributory group and two noncontributory groups and provides for service-connected disability and death benefits to eligible members and surviving spouse and/or dependents, with no age or service eligibility requirements. Pension benefits are based on a participant’s average monthly salary and years of debited service, as defined in the Pension Statute. Pension benefits are adjusted annually for a fixed cost of living adjustment of 3% for eligible recipients. The maximum pension benefit is 90% of the participant’s average monthly salary. A Deferred Retirement Option Plan (DROP) is available to eligible members.

Contributions

For the Houston Municipal Employees’ Pension System, employer and employee obligations to contribute, as well as employee contribution rates, are included in the enabling pension statutes, and some requirements are delineated in an amended and restated meet and confer agreement, effective July 1, 2011. Additionally, these laws provide that employer funding be based on periodic actuarial valuations, statutorily approved amounts or, in the cases of the Municipal Employees’ Pension System, amounts agreed to in meet and confer agreements. The employer contribution rate is a percentage of base salary which was 29.36% for fiscal year 2017 and 27.6% for fiscal year 2016. All pension plans provide service, disability, death, and survivor benefits. In addition, each pension plan recognizes participant and employer contributions as revenues in the period in which they are due pursuant to formal commitments and recognizes benefits and refunds when they are due and payable in accordance with the terms of the pension statutes.

As of most recent measurement date of the net pension liability, membership data for the pension plan are as follows:

Retirees and beneficiaries	
currently receiving benefits	10,289
Former members entitled to	
benefits but not yet receiving them	3,432
Former members - not entitled to benefits	2,174
Active members:	
Vested	7,966
Non-vested	4,137
Total participants	<u>27,998</u>

NOTES TO THE FINANCIAL STATEMENTS

6. Defined Benefit Pension Plan, continued:**Net Pension Liability**

The Airport System Fund's liability for the net pension liability in the City's pension plan was allocated and reported on the statement of net position.

The "Net Pension Liability" (NPL) is the difference between the "Total Pension Liability" (TPL) and the plan's "Fiduciary Net Position" (FNP). The TPL is the present value of pension benefits that are allocated to current members due to past service by entry age normal actuarial cost method. The TPL includes benefits related to projected salary and service, and automatic cost of living adjustments (COLA's). In addition, ad hoc COLA's are also included in the TPL to the extent they are substantively automatic. The FNP is determined on the same basis used by the pension plans. The City's net pension liability was measured as of June 30, 2017 and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. A schedule of Net Pension Liability, in addition to the information above, includes multi-year trend information (beginning with FY 2015) and is presented in the Required Supplementary Information section.

Net Pension Liability (in thousands)

Measurement Date	June 30, 2017		June 30, 2016	
	Municipal Employees' Pension	The Fund's proportionate share of NPL	Municipal Employees' Pension	The Fund's proportionate share of NPL
Total Pension Liability	\$ 4,959,510	\$ 535,376	\$ 5,034,390	\$ 540,464
Fiduciary Net Position	(2,602,665)	(280,956)	(2,400,023)	(257,653)
Net Pension Liability	\$ 2,356,845	\$ 254,420	\$ 2,634,367	\$ 282,811

The Fund's proportionate percentage of NPL is 10.79% and 10.74% for fiscal years 2017 and 2016.

Schedule of Changes in Net Pension Liability (in thousands)

	June 30, 2017			June 30, 2016		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Service Cost	\$ 75,961	\$ -	\$ 75,961	\$ 68,968	\$ -	\$ 68,968
Interest on the Total Pension Liability	331,166	-	331,166	379,781	-	379,781
Benefit Changes	(724,683)	-	(724,683)	-	-	-
Difference between Expected and Actual Experience	(38,387)	-	(38,387)	(16,194)	-	(16,194)
Employer Contributions	-	182,558	(182,558)	-	159,958	(159,958)
Employees Contributions	-	15,902	(15,902)	-	15,874	(15,874)
Pension Plan Net Investment Income	-	290,911	(290,911)	-	27,639	(27,639)
Assumptions Changes	562,237	-	562,237	91,248	-	91,248
Benefit Payments	(280,456)	(280,456)	-	(253,178)	(253,178)	-
Refunds	(718)	(718)	-	(1,105)	(1,105)	-
Administrative Expense	-	(6,827)	6,827	-	(7,360)	7,360
Other	-	1,272	(1,272)	-	1,651	(1,651)
Net Change	(74,880)	202,642	(277,522)	269,520	(56,521)	326,041
Net Pension Liability Beginning	5,034,390	2,400,023	2,634,367	4,764,870	2,456,544	2,308,326
Net Pension Liability Ending	\$ 4,959,510	\$ 2,602,665	\$ 2,356,845	\$ 5,034,390	\$ 2,400,023	\$ 2,634,367

NOTES TO THE FINANCIAL STATEMENTS

6. **Defined Benefit Pension Plan, continued:****Pension Expense**

For the years ended June 30, 2017 and June 30, 2016, the City recognized pension expense as follows (in thousands):

	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Changes for the year:		
Service Cost	\$ 75,961	\$ 68,969
Interest	331,166	379,781
Difference between Expected and Actual Experience	141,691	12,616
Differences between Projected and Actual Earnings on plan investments	32,011	57,210
Member Contributions	(15,902)	(15,874)
Net Investment Income	(164,912)	(193,157)
Administrative Expense	6,827	7,360
Assumption Changes	(724,683)	-
Other	(1,272)	(1,651)
Total Pension Expense	\$ (319,113)	\$ 315,254

The Fund's proportionate shares of pension expenses are (\$32.6) million and \$33.3 million for June 30, 2017 and June 30, 2016, respectively.

Schedule of Deferred Outflows and Inflow of Resources

Deferred outflows of resources and deferred inflows of resources by source reported by the Fund at June 30, 2017 and June 30, 2016 (in thousands).

	<u>June 30, 2017</u>		<u>June 30, 2016</u>	
	Deferred Outflows of Resources	Deferred Inflow of Resources	Deferred Outflows of Resources	Deferred Inflow of Resources
Differences between expected actual experience	\$ -	\$ 4,487	\$ -	\$ 2,526
Changes of assumptions	-	-	7,286	-
Employers contribution subsequent to measurement date	-	-	265	-
Net difference between projected and actual earnings on pension plan investments	53,848	-	21,662	-
Total	\$ 53,848	\$ 4,487	\$ 29,213	\$ 2,526

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at June 30, 2017 for the Fund will be recognized in pension expense as follows (in thousands):

Year ended June 30:	
2018	\$ 18,099
2019	18,681
2020	14,420
2021	(1,839)
2022	-
Thereafter	-
Total	\$ 49,361

NOTES TO THE FINANCIAL STATEMENTS

6. Defined Benefit Pension Plan, continued:

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability for Municipal Employees' Pension plan, calculated using the current discount rate, as well as what the Fund's net pension liability would have been if they were calculated using a discount rate that is 1-percent-point lower and 1-percent-point higher than the current rate (in thousands):

	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
	6.00%	7.00%	8.00%
Municipal Employees' Pension	\$ 2,910,598	\$ 2,356,845	\$ 1,921,993
The Fund's proportionate share of NPL	\$ 314,197	\$ 254,420	\$ 207,478

Schedule of Assumptions

Inflation	3%
Salary changes	3.25% to 5.5%
Investment rate of return	7.00%
Valuation Date	7/1/2015
Actuarial Cost Method	Entry Age Normal Cost
Amortization Method	Level Percent of Payroll
Amortization Period	30 years
Asset Valuation Method	5 Year Smoothed, direct offset of deferred gains and losses
Ad hoc OPEB and Ad Hoc COLA	3% to 6%
Mortality assumption	RP-2000 Table scaled by 125% for males and 112% for females

NOTES TO THE FINANCIAL STATEMENTS

7. **Other Employee Benefits****Post-Retirement Health Insurance Benefits**

Pursuant to a City Ordinance, the City provides certain health care benefits for retired employees. Substantially all of the City's employees become eligible for these benefits if they reach normal retirement age while working for the City. Contributions are recognized in the year paid. The cost of retiree health care premiums incurred by the City (employer and subscriber) amounted to approximately \$90,273,155 and \$82,127,507 for the years ended June 30, 2017 and June 30, 2016, respectively. Retiree health care is accounted for in the Health Benefits Fund, an Internal Service Fund. At June 30, 2017, there were 10,830 retirees including active survivors eligible to receive benefits. Effective August 1, 2011, all Medicare Eligible Retirees must enroll in an insured Medicare Advantage Program Plan.

No stand-alone financial report is issued on the plan.

The City of Houston OPEB plan is a single-employer plan, and calculations are based on the OPEB benefits provided under the terms of the plan in effect at the time of each valuation and on the pattern of sharing of costs between the employer and plan members to that point.

Actuarial valuations for OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made into the future.

The schedule of funding progress for the postemployment defined benefit plan immediately following the notes to the financial statements presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing relative to the actuarial accrued liability for benefits over time.

Airport System Fund Liability

The Fund's liability for the net OPEB obligation in the City's pension plan was allocated and reported on the statement of net position.

Annual Other Post Employment Benefits (OPEB) Cost and Net OPEB Obligation

The annual OPEB cost associated with the City's retiree health care costs for the current year is as follows (in thousands):

	OPEB		
	<u>June 30, 2017</u>	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Annual required contribution	\$ 188,579	\$ 200,034	\$ 192,519
Interest on net OPEB obligation	67,350	61,209	54,620
Adjustment to annual required contribution	<u>(66,914)</u>	<u>(60,466)</u>	<u>(54,266)</u>
Annual OPEB cost	<u>189,015</u>	<u>200,777</u>	<u>192,873</u>
Contribution made	(39,820)	(38,543)	(36,855)
Change in net OPEB Obligation	149,195	162,234	156,018
Net OPEB obligation beginning of year	<u>1,683,743</u>	<u>1,521,509</u>	<u>1,365,491</u>
Net OPEB obligation end of year	<u>\$ 1,832,938</u>	<u>\$ 1,683,743</u>	<u>\$ 1,521,509</u>

The Fund's proportionate share of the net OPEB obligation is \$74,657 and \$70,203 as of June 30, 2017 and 2016, respectively.

NOTES TO THE FINANCIAL STATEMENTS

7. Other Employee Benefits, continued:

<u>Fiscal Year Ended June 30</u>	<u>Annual OPEB Cost</u>	<u>Percentage of Annual OPEB Cost Contributed</u>	<u>Net OPEB Obligation</u>
2015	\$192,873	19.1%	\$1,521,509
2016	\$200,777	19.2%	\$1,683,743
2017	\$189,015	21.1%	\$1,832,938

Schedule of Funding Progress (in millions)

<u>Year Ended June 30</u>	<u>Actuarial Value of Assets (a)</u>	<u>Actuarial Accrued Liability (AAL) (b)</u>	<u>Unfunded AAL (b-a)</u>	<u>Funded Ratio</u>	<u>Covered Payroll (c)</u>	<u>UAAL As a % of Covered Payroll ((b-a)/c)</u>
2015	\$0	\$2,068	\$2,068	0%	\$1,266.0	163.3%
2016	\$0	\$2,055	\$2,055	0%	\$1,299.0	158.2%
2017	\$0	\$2,153	\$2,153	0%	\$1,327.4	162.2%

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as to the actuarial valuation used for purposes of the financial statements is as follows:

Valuation Date	July 1, 2016
Actuarial cost method	Entry age Normal Cost
Amortization method	Level percent of payroll over an open period of 30 years
Discount Rate	4.0%
Inflation Rate	3.0%
Annual increase attributable to seniority/ merit	2.0% to 14.0%
Medical trend rates	4.5% to 6.5%

Health Benefits Internal Service Fund

Effective May 1, 2011, the City elected to be substantially self-insured and on May 1, 2014 once again awarded CIGNA a three year contract with two (2) one-year renewal options for 4 new health plans. All have a heavy emphasis on a wellness component, and include: 1) a limited network HMO-type plan, 2) an open access PPO type plan with out-of-network coverage, 3) a consumer driven high deductible health plan, partnered with a health reimbursement account, and, 4) a specific plan for retirees, mostly those under age 65, who live outside the limited network service area but who live in Texas. Effective May 1, 2013, the City no longer purchases individual and aggregate stop-loss coverage. The City has assumed the financial risk of catastrophic and overall claim liability. The plan is administered by CIGNA.

Premiums paid (employer and subscriber) for current employees to third party administrators including claim liability totaled \$243,918,034 and \$234,737,096 for the year ended June 30, 2017 and June 30, 2016, respectively.

NOTES TO THE FINANCIAL STATEMENTS

7. Other Employee Benefits, continued:

The changes in the actuarial estimate of claims liability for the City related to the CIGNA plans are as follows (in thousands):

	Schedule of Changes in Liability	
	June 30, 2017	June 30, 2016
Beginning actuarial estimate of		
Claims liability, July 1	\$ 18,065	\$ 18,577
Catastrophic claim reserve	13,000	13,000
Incurred claims for fiscal year	294,001	276,825
Payments on claims	(293,995)	(277,337)
Actuarial adjustment	1,065	-
Ending estimate of claims liability, June 30	<u>\$ 32,136</u>	<u>\$ 31,065</u>

The City also provides one times the salary of basic life insurance, with a minimum of \$15,000, at no cost to the employee. The employee, at no cost to the City, may then obtain additional life insurance up to four times their annual salary. The current cost for active employees for both basic and voluntary life insurance totaled \$6,064,196 and \$5,989,860 for the year ended June 30, 2017 and June 30, 2016, respectively.

Long-Term Disability Plan (LTD)

The long-term disability plan, accounted for as an internal service fund of the City, is a part of the Income Protection Plan implemented effective September 1, 1985 (renamed the Compensable Sick Leave Plan (CSL) in October, 1996) and is provided at no cost to City employees who are members of CSL. Coverage is effective the later of September 1, 1985 or upon completion of one year of continuous service. When an employee cannot work because of injury or illness, the plan provides income equal to 50% of base pay plus longevity or 70% of base plus longevity when combined with income benefits available from other sources. Plan benefits may be payable after all CSL scheduled sick leave benefits, including frozen sick leave days, have been used, however, not before six months absence from work. The plan is administered by Hewitt Associates LLC, which is reimbursed from the fund for claims as they are paid along with a fee for administrative services.

	Schedule of Changes in Liability	
	(in thousands)	
	June 30, 2017	June 30, 2016
Beginning actuarial estimate of		
claims liability, July 1	\$ 8,371	\$ 8,720
Incurred claims for fiscal year	1,331	1,267
Payments on claims	(1,074)	(1,125)
Actuarial adjustment	(444)	(491)
Ending actuarial estimate of		
claims liability, June 30	<u>\$ 8,184</u>	<u>\$ 8,371</u>

Deferred Compensation Plan

The City offers its employees a deferred compensation plan (Plan), created in accordance with Internal Revenue Code Section 457 as a separately administered trust. The Plan, available to all City employees permits employees to defer a portion of their salary until future years. The deferred compensation funds are not available until termination, retirement, death or unforeseeable emergency. However, the Plan now offers loans to participant employees. The maximum amount is the lesser of \$50,000 or 50% of the total account balance, less any outstanding loans. The minimum loan amount is \$1,000. Pursuant to tax law changes, the Plan's assets are no longer subject to the City's general creditors and are not included in these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

7. **Other Employee Benefits, continued:**

Workers' Compensation Self-Insurance Plan

The City has established a Workers' Compensation Self-Insurance Plan, accounted for within the various operating funds. The plan is administered by Tristar Insurance Group, Inc. Funds are wire transferred to Tristar as needed to pay claims.

At June 30, 2017, the City has an accumulated liability in the amount of \$61 million covering estimates for approved but unpaid claims and incurred but not reported claims (calculated on an actuarial basis) recorded in the government-wide Statement of Net Position and Enterprise Funds. The amount of liability is based on an actuarial study.

	Schedule of Changes in Liability	
	(in thousands)	
	June 30, 2017	June 30, 2016
Beginning actuarial estimate of claims liability, July 1	\$ 58,761	\$ 56,932
Incurred claims for fiscal year	10,002	9,648
Payments on claims	(16,135)	(14,893)
Actuarial adjustment	8,616	7,074
Ending actuarial estimate of claims liability, June 30	<u>\$ 61,244</u>	<u>\$ 58,761</u>

8. **Transactions with City of Houston**

Interfund Services

The City charges the Fund for certain services performed by other City funds on behalf of the Airport System Fund. Such charges were as follows for the years ended June 30, 2017 and 2016 (in thousands):

	June 30, 2017	June 30, 2016
Police services	\$ 28,662	\$ 28,188
Fire services	20,048	19,943
Indirect support services	3,168	3,259
Water and sewer services	3,507	2,808
Other	10,205	10,227
Total	<u>\$ 65,590</u>	<u>\$ 64,425</u>

Indirect costs are incurred in connection with the general administration of City affairs, which cannot be directly associated with specific funds. Such costs include finance, materials management, legal, human resources, and administration. These costs are allocated to the Fund each year based on an annual indirect cost study.

The Fund also pays for services provided by other City departments and funds, including the Combined Utility Fund for water and wastewater services and the internal service funds for risk financing activities.

In FY2017 HAS started performing administrative work for vendors seeking airport related permits. Per an Memorandum of Understanding entered into between HAS and PWE, HAS began to receive proceeds from permitting revenues from PWE. HAS was reimbursed \$312,908 in permitting fees as a result of this agreement.

Due to and Due from the City of Houston

Amounts due to and due from other funds of the City at June 30, 2017 and 2016 are as follows (in thousands):

	June 30, 2017		June 30, 2016	
	Due to	Due From	Due to	Due From
General Fund	\$ 713	\$ 201	\$ 735	\$ 7,162
Grants Revenue Fund	-	-	235	1,652
Internal Service Fund	-	-	-	5,446
Nonmajor Governmental Funds	-	-	-	7,225
Debt Service	-	-	-	2,860
Capital Projects	-	-	-	7,488
Total	<u>\$ 713</u>	<u>\$ 201</u>	<u>\$ 970</u>	<u>\$ 31,833</u>

NOTES TO THE FINANCIAL STATEMENTS

9. Major Customers

In fiscal 2017, the Fund earned 42.7% of its operating revenues from two major customers, United Continental Holdings, Inc. and Southwest Airlines Company. No other company represents more than 2.4% of revenue. The two major companies and their respective percentage of revenue are as follows:

	<u>Percentage of Operating Revenue</u>	
	<u>2017</u>	<u>2016</u>
United Continental Holdings, Inc.	33.4%	33.0%
Southwest Airlines Co.	9.3%	9.2%

10. Conduit Debt

The City has authorized various issues of Special Facilities Bonds to enable United Airlines, Inc. (successor to Continental Airlines, Inc.) a private company, to construct facilities at Intercontinental that were deemed to be in the public interest (Special Facilities). These bonds are limited special obligations of the City, payable solely from and secured by a pledge of revenues generated from lease agreements with United Airlines. Collected pledged revenues are remitted directly to a trustee by United Airlines. Under the terms of the related lease agreements, United Airlines operates, maintains, and insures the terminal, and manages and retains revenues from all concessions operated in the Terminal B and E Special Facilities. The City operates, maintains, insures, and manages and retains revenues from all concessions operated in all other terminal facilities.

The City holds legal title to the completed facilities, as they are constructed on airport property, but the constructed facilities are operated and controlled by private companies through long-term leases, and the Fund will enjoy no direct financial benefit from these facilities for the term of the lease agreements. Accordingly, the Fund accounts for the United Airlines' Special Facilities Bonds shown in the following table as conduit debt, and neither the debt nor the related assets have been recorded in the accompanying financial statements.

Conduit debt outstanding at June 30, 2017 and 2016 (in thousands):

	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Airport System Special Facilities Revenue Bonds (Continental Airlines, Inc. Terminal Improvement Projects), Series 2011 (AMT), \$113,305,000 original principal, matures in 2038	\$ 113,305	\$ 113,305
Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Terminal E Project), Series 2014 (AMT), \$308,660,000 original principal, matures in 2029	308,660	308,660
Airport System Special Facilities Revenue Bonds (United Airlines, Inc. Terminal Improvement Projects), Series 2015B-1 (AMT), \$176,650,000 original principal, matures in 2035	176,650	176,650
Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Terminal Improvement Projects), Series 2015B-2 (AMT), \$47,390,000 original principal, matures in 2020	47,390	47,390
Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Airport Improvement Projects), Series 2015C (AMT), \$65,785,000 original principal, matures in 2020	65,785	65,785
Total conduit debt outstanding	<u>\$ 711,790</u>	<u>\$ 711,790</u>

On March 16, 2015, the City issued \$176,650,000 in Airport System Special Facilities Revenue Bonds (United Airlines, Inc. Terminal Improvement Projects), Series 2015B-1 (AMT) on behalf of United Airlines, to finance the construction of a new North Concourse building at Terminal B with jet bridge loading, and to make improvements to related facilities. The bonds were issued with a coupon rate of 5.00%, and a yield of 4.75%, to mature in varying amounts from 2026 to 2035.

NOTES TO THE FINANCIAL STATEMENTS

10. Conduit Debt Obligations, continued:

The Airport System Special Facilities Revenue Bonds, (Continental Airlines, Inc., Terminal Improvement Projects) Series 1997B and 1998B financed various leasehold improvements for United Airlines in Terminals B, C and D. On March 16, 2015, the City issued \$47,390,000 in Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Terminal Improvement Projects), Series 2015B-2 (AMT) on behalf of United Airlines, with a 5.00% coupon rate, to mature on July 15, 2020. Proceeds of the bonds were used to refund the outstanding Airport System Special Facilities Revenue Bonds, Series 1997B and 1998B and to pay costs of issuance. Net present value savings for United Airlines related to the refunded bonds totaled \$12,049,244 or 18.36% of the refunded bonds and reduced total debt service by \$45,281,400.

The Airport System Special Facilities Revenue Bonds, (Continental Airlines, Inc., Airport Improvement Projects) Series 1997C and 1998C, financed the construction of an aircraft hangar, maintenance and parts storage facility, mail sort facility, flight simulator, and inflight training facility. On March 26, 2015, the City issued \$65,785,000 in Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Airport Improvement Projects), Series 2015C, on behalf of United Airlines, with a coupon rate of 5.00%, to mature on July 15, 2020. Proceeds of the bonds were used to refund the outstanding Airport System Special Facilities Revenue Bonds, Series 1997C and 1998C, and to pay costs of issuance. Net present value savings for United Airlines related to the refunded bonds totaled \$14,553,627 or 20.95% of the refunded bonds and reduced total debt service by \$40,135,502.

The Airport System Special Facilities Revenue Bonds, (Continental Airlines, Inc. Terminal E Project), Series 2001, financed the construction of international Terminal E and related airport facilities for the exclusive use of United Airlines (Terminal E Special Facilities). On May 8, 2014, the City issued \$308,660,000 in Airport System Special Facilities Revenue Refunding Bonds (United Airlines, Inc. Terminal E Project) Series 2014 on behalf of United Airlines, at coupon rates ranging from 4.50% to 5.00%. The bonds mature in varying amounts from 2020 to 2029. Proceeds of the bonds were used to refund a portion of the City's outstanding Airport System Special Facilities Revenue Bonds (Continental Airlines, Inc. Terminal E project) Series 2001 and to pay costs of issuance. Net present value savings for United Airlines related to the refunded bonds totaled \$40,519,909 or 13.31% of the refunded bonds and reduced total debt service by \$58,675,823.

The Airport System Special Facilities Revenue Bonds (Continental Airlines, Inc. Terminal Improvement Projects), Series 2011 (AMT) financed the replacement of two flight stations at Terminal B with a new South Concourse building to serve United Airlines' regional jet operations (Terminal B Special Facilities). The Terminal B Special Facilities went into service in March, 2014.

11. Commitments and Contingencies**Litigation and Claims**

The City is the defendant in various lawsuits and is aware of pending claims arising in the ordinary course of its municipal and enterprise activities, certain of which seek substantial damages. These matters affecting the Airport System Fund are primarily contract and real property disputes. The status of such litigation ranges from early discovery to various levels of appeal, against which the City will continue to vigorously defend itself. Additionally, there are also various personal injury claims filed against the Airport System Fund which will also be vigorously defended. The amount of damages is limited in certain cases under the Texas Torts Claim Act and is subject to appeal. Management has determined the amounts of loss, if any, would not be material in these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

11. Commitments and Contingencies, continued:

Environmental Liabilities

Houston Airport System is aware of pollution remediation which must occur prior to the commencement of a new hangar addition project at George Bush Intercontinental Airport. Currently, third party assessments have been completed of the site with estimated costs of \$10 million. Scope of work will encompass vapor intrusion mitigation and soil & groundwater remediation. A pollution remediation liability related to the hangar expansion project has been recorded in these financial statements in accordance with GASB 49.

The Houston Airport System management is aware of additional sites polluted by asbestos, mold, and soil contamination. The assessment and remediation of asbestos, mold and groundwater contamination are ongoing and included in the costs of the capital project at the time it becomes an obligating event under GASB 49. Management has determined the costs of this additional remediation for which Houston Airport System is ultimately liable would not be material in these financial statements.

Commitments for Capital Facilities

At June 30, 2017 and 2016, the Fund had contracted for, but not spent, \$400,036,024 and \$326,962,314 respectively, for capital projects.

Risk Management

The City purchases fidelity coverage to comply with City ordinance, boiler and machinery insurance with a per occurrence loss limit of \$100 million and commercial property insurance with a per occurrence loss limit of \$175 million. The commercial property insurance sublimit for flood is \$100 million. Property insurance provides deductibles as follows: \$2.5 million per occurrence for all perils except; 3% of the damaged insured value for windstorm or hail from a named storm, subject to a \$2.5 million minimum and a \$15 million maximum deductible; and 3% of the damaged insured value for flood, subject to a \$2.5 million minimum and a \$15 million maximum deductible. Should a named storm event occur that involves both perils of windstorm and flood, the maximum deductible is \$15 million.

The City has a separate terrorism policy which covers insured property value. The policy insures up to \$250 million aggregate loss limit (including nuclear, chemical, biological and radiation coverage) with a \$500,000 deductible on all claims except a 48-hour waiting period deductible on business interruption.

Self-insured claims are reported as liabilities in the accompanying financial statements when it is probable that a loss has occurred and the amount of that loss can be reasonably estimated. This determination is based on reported pending claims, estimates of claims incurred but not yet reported, actuarial reports and historical analysis. All claims are accounted for in the Government-wide Statement of Net Position.

Claims that are expected to be paid with expendable, available financial resources are accounted for in the General Fund and the appropriate Enterprise Funds.

For unemployment claims, the City pays claims as they are settled. Unemployment claim activity is as follows:

	Unemployment Claim Activity	
	June 30, 2017	June 30, 2016
Unpaid claims, beginning of fiscal year	\$ 198,257	\$ 137,742
Incurred claims (including IBNRs)	687,143	760,324
Claim payments	(732,382)	(699,809)
Unpaid claims, end of fiscal year	<u>\$ 153,018</u>	<u>\$ 198,257</u>

NOTES TO THE FINANCIAL STATEMENTS

11. Commitments and Contingencies, continued:**Electricity Futures Contracts**

At June 30, 2017, the City had entered into agreements to lock rates for part of the natural gas component of its expected electricity use from July 1, 2017 through June 30, 2018. The total committed price is approximately \$97 million for expected usage. The City may pay a different amount if actual electricity usage varies. This amount will be appropriated in future annual budgets.

12. Subsequent Events**Hurricane Harvey Disaster**

The City of Houston experienced a substantial natural disaster on August 23 – 27, 2017 resulting from Hurricane Harvey, when up to 50 inches of rain in the Houston area caused flooding in portions of the City. Houston Airport System (The Fund) sustained water damage to various buildings and components of the airfield at all three airports. The estimate of the total damage to owned facilities is approximately \$4 million. The Fund also incurred disaster-related expenses for debris removal, protective measures, and the costs of emergency personnel overtime. The Fund anticipates most of these will be covered by insurance and grants from the Federal Emergency Management Agency (“FEMA”) and the State of Texas.

Shortly after the storm, the Fund established a “Disaster Recovery O&M Fund” in the Fund’s accounts to serve as an appropriation source for disaster related expenses, pending insurance and reimbursement by FEMA. The Fund has transferred \$5 million from the Airport Improvement Fund to the Disaster Recovery O&M Fund following the approval of City Council.

The Fund continues to evaluate the cost of damages from the storm and will submit additional requests for reimbursement to FEMA and its insurance carriers, if necessary.

Pension Reform

The Texas Legislature adopted Senate Bill 2190, which was signed by the governor on May 31, 2017 (the “Pension Reform Legislation”) to enact reforms and substantive changes to the funding and benefit structure of the Pension Systems. The Pension Reform Legislation was effective July 1, 2017 (the “Reform Effective Date”), the first day of Fiscal Year 2018. The Pension Reform Legislation is the culmination of an effort to reform the Pension Systems to control costs, reduce the unfunded liability and better manage future pension costs and liabilities. The risk-sharing corridor implemented in the Pension Reform Legislation provides the City with more budget certainty by establishing minimum and maximum City contribution rates, and mandates management of unfunded liabilities by the City and the Pension Systems.

Under the Pension Reform Legislation, the City will pay off the unfunded liability (the “Legacy Liability”) over a fixed maximum 30-year amortization period ending in 2047. The Legacy Liability is calculated using a standard actuarial cost methodology, based on the market value of each pension system’s assets as of July 1, 2016, after giving effect to the Pension Reform legislation and delivery of \$1 billion of Pension Obligation Bond proceeds by December 31, 2017 (to be contributed to HMEPS and HPOPS only), with earnings at the 7% per annum discount rates and allocable City contributions from July 1, 2016 through the Reform Effective Date. Any future actuarial loss liabilities will have an amortization period of 30 years from the date the loss is recognized, with a corresponding final payoff year and credits for any future gains.

On November 7, 2017, the voters approved a referendum authorizing the City to issue the Pension Obligation Bonds.

On November 15, 2017, City Council approved an ordinance authorizing preparation for the sale of Taxable Pension Obligation Bonds, secured by ad valorem taxes, in an amount not to exceed \$1,010,000,000 at a stated interest rate not to exceed 7%, out of which approximately \$250,000,000 could be used to fund a portion of the unfunded liability of the Houston Municipal Employees Pension System. It is not certain what amount, if any, of the debt service of these bonds, might be assigned to the Airport System Fund for future payments. The Bonds have not been issued as of the date of this report.

NOTES TO THE FINANCIAL STATEMENTS

12. Subsequent Events, continued:**Debt**

On October 4, 2017, the City extended its authorization of \$450 million in Inferior Lien Airport System Revenue Bonds through October 3, 2018, while confirming the forward delivery bond purchase agreement with the Royal Bank of Canada.

On November 15, 2017 City Council authorized the issuance of the Airport System Special Facilities Revenue Bonds (United Airlines, Inc. Technical Operations Center Project (UTOC)), Series 2017 (AMT), in an amount not to exceed \$120,000,000, and the Airport System Special Facilities Revenue Bonds (United Airlines, Inc. Airport Improvement Projects), Series 2017C (AMT), in an amount not to exceed \$60,000,000. Proceeds of the Series 2017 UTOC Bonds will be used to construct or acquire a technical operations center at George Bush Intercontinental Airport consisting of a new wide body aircraft hangar and service facility, and a storage facility for ground service equipment, with additional non-terminal improvements to be built in support. Series 2017C Bonds will be used to improve, renovate, repair or expand existing facilities. Pursuant to lease agreements between United Airlines, Inc. and the City of Houston, United shall be unconditionally obligated to pay net rent equal to all amounts to become due and owing with respect to the Series 2017 UTOC and Series 2017C Special Facilities Revenue Bonds. These Bonds will be payable solely from and secured by a pledge of revenues generated by the lease agreements. The Bonds have not been issued as of the date of this report.

On November 15, 2017, City Council approved an ordinance authorizing the issuance of one or more series of City of Houston, Texas Airport System Subordinate Lien Revenue and/or Refunding Bonds, and authorizing the Mayor, City Controller, and other designated City officials to approve the amount, interest rates, prices, and terms. The Bonds will redeem or defease outstanding bonds and other obligations, provide financing for any authorized system purposes, including reimbursement of amounts previously spent, fund capitalized interest and costs of issuance, and increase the Subordinate Lien Bond Reserve Fund. The Bonds have not been issued as of the date of this report.

REQUIRED PENSION SYSTEM SUPPLEMENTARY INFORMATION

Houston Municipal Pension System Supplementary Information (unaudited)
Schedule of Changes in the Municipal Net Pension Liability and Related Ratios for the Fiscal Years ended June 30, (in thousands)

	2017	2016	2015
Total Pension Liability			
Service Cost	\$75,961	\$68,968	\$65,810 (1)
Interest	331,166	379,781	361,007
Changes of benefit terms	(724,683)	-	-
Differences between expected and actual experience	(38,387)	(16,194)	(23,380)
Changes of assumptions	562,237	91,248	-
Benefit payments including refunds of employee contributions	(280,456)	(253,178)	(234,955)
Refunds	(718)	(1,105)	(1,549)
Net change in total pension liability	(74,880)	269,520	166,933
Total pension liability - beginning	5,034,390	4,764,870	4,597,937
Total pension liability - ending (a)	4,959,510	5,034,390	4,764,870
Plan fiduciary net position			
Contributions-employer	182,558	159,958	145,007
Contributions-employee	15,902	15,874	16,198
Net investment income	290,911	27,639	73,370
Benefit payments, including refunds of employee contributions	(280,456)	(253,178)	(234,955)
Administrative expense	(718)	(1,105)	(1,549)
Refunds	(6,827)	(7,360)	(7,007)
Other	1,272	1,651	1,041
Net change in plan fiduciary net position	202,642	(56,521)	(7,895)
Plan fiduciary net position-beginning	2,400,023	2,456,544	2,464,439
Plan fiduciary net position-ending (b)	2,602,665	2,400,023	2,456,544
City's net pension liability-ending (a)-(b)	<u>\$2,356,845</u>	<u>\$2,634,367</u>	<u>\$2,308,326</u>
Plan fiduciary net position as percentage of the total pension Liability	<u>52.48%</u>	<u>47.67%</u>	<u>51.56%</u>
Covered-employee payroll	\$607,975	\$593,285	\$580,395
Net position liability as a percentage of covered employee payroll	<u>387.65%</u>	<u>444.03%</u>	<u>397.72%</u>

1. The 2015 amounts are based on 8.0% per City actuary.

The Fund's proportionate share of NPL is as follows (in thousands):

	2017	2016	2015
Total Pension Liability	\$ 535,376	\$ 540,464	\$ 512,642
Fiduciary Net Position	(280,956)	(257,653)	(264,294)
Net Pension Liability	<u>\$ 254,420</u>	<u>\$ 282,811</u>	<u>\$ 248,348</u>
Proportionate Percentage	<u>10.79%</u>	<u>10.74%</u>	<u>10.76%</u>

Schedule is intended to show information for 10 years. 2015 is the first year for this presentation. Additional years will be included as they become available.

REQUIRED PENSION SYSTEM AND OTHER POST-EMPLOYMENT COST SUPPLEMENTARY INFORMATION

Schedule of City Contributions for Municipal Pension Plans for the Fiscal Years ended June 30, (in thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 184,733	\$ 162,230	\$ 155,299	\$ 144,953
Contributions in relation to the actuarially determined contribution	182,558	159,959	145,007	128,274
Contribution deficiency (excess)	<u>\$ 2,175</u>	<u>\$ 2,271</u>	<u>\$ 10,292</u>	<u>\$ 16,679</u>
Covered-employee payroll	607,975	593,285	580,395	557,226
Contributions as a percentage of covered-employee payroll	30.0%	27.0%	25.0%	23.0%

Schedule of the Fund's Contributions for Municipal Pension Plans for the Fiscal Years ended June 30, (in thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially determined contribution	\$ 18,898	\$ 17,148	\$ 16,306	\$ 15,626
Contributions in relation to the actuarially determined contribution	18,676	17,171	15,547	14,029
Contribution deficiency (excess)	<u>\$ 223</u>	<u>\$ (23)</u>	<u>\$ 759</u>	<u>\$ 1,597</u>
Covered-employee payroll	62,196	62,710	60,941	60,069
Contributions as a percentage of covered-employee payroll	30.0%	27.4%	25.5%	23.4%

Schedule is intended to show information for 10 years. 2014 is the first year for this presentation. Additional years will be included as they become available.

Houston Other Post Employment Benefits Supplementary Information (unaudited)
Schedule of Funding Progress (in millions)

Actuarial Valuation Date	Actuarial Value of Plan Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (Surplus UAAL) (b-a)	Funded Ratio (a/b)	Projected Annual Covered Payroll (c)	UAAL as Percentage Of Covered Payroll ((b-a)/c)
June 30, 2009	\$0.00	\$3,031	\$3,031	0%	\$1,193.5	254.1%
June 30, 2010	\$0.00	\$1,984	\$1,984	0%	\$1,208.9	164.1%
June 30, 2010	\$0.00	\$1,984	\$1,984	0%	\$1,164.5	170.4%
June 30, 2012	\$0.00	\$2,090	\$2,090	0%	\$1,178.1	177.4%
June 30, 2012	\$0.00	\$2,090	\$2,090	0%	\$1,227.2	170.3%
June 30, 2014	\$0.00	\$2,068	\$2,068	0%	\$1,266.0	163.3%
June 30, 2014	\$0.00	\$2,068	\$2,068	0%	\$1,298.0	158.2%
June 30, 2016	\$0.00	\$2,153	\$2,153	0%	\$1,327.4	162.2%

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Somewhere Between Here And There by Chris Sauter

(Unaudited) **STATISTICAL SECTION**
COMPREHENSIVE ANNUAL FINANCIAL REPORT

Statistical Section

This section contains statistical information and differs from the financial statements because it usually covers more than one fiscal year and may present non-accounting data.

This information is presented in five categories:

Financial Trend – intended to assist users in understanding and assessing how the Houston Airport System’s financial position has changed over time.

Revenue Capacity – intended to assist users in understanding and assessing the factors affecting the Houston Airport System’s ability to generate its own sources of revenues.

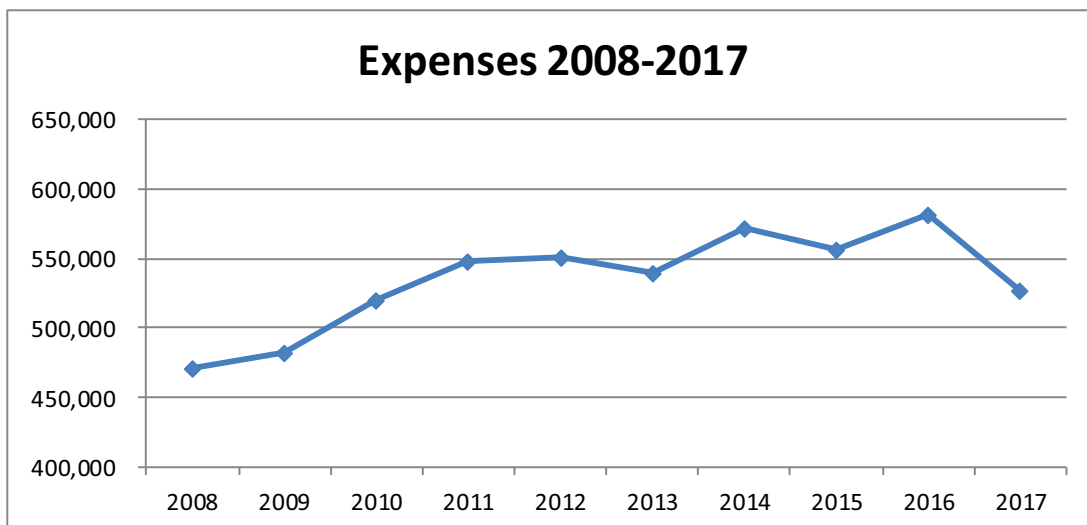
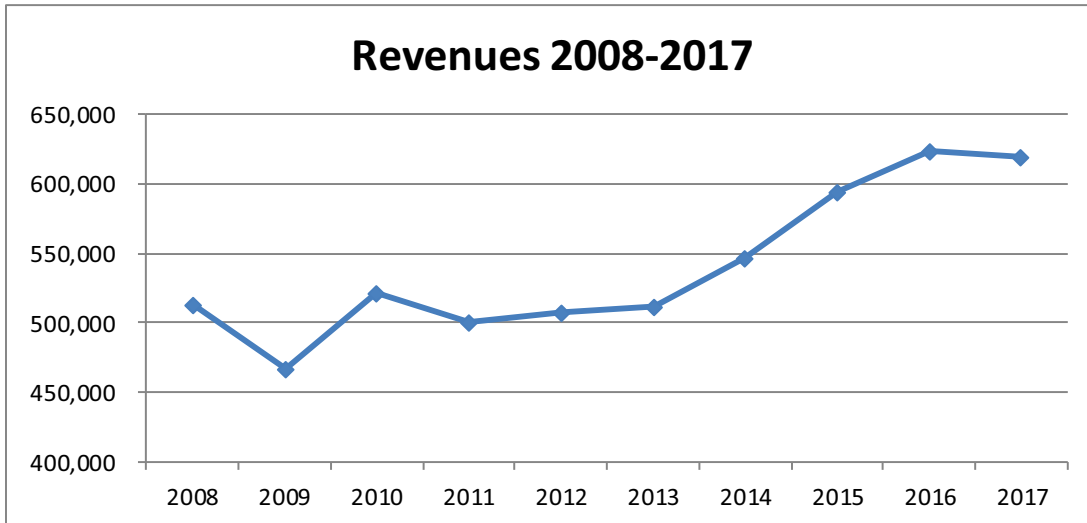
Debt Capacity – intended to assist users in understanding and assessing the Houston Airport System’s debt burden and its ability to cover and issue additional debt.

Operational Information – intended to provide contextual information about the Houston Airport System’s operations and resources to assist readers in using financial statement information to understand and assess the Houston Airport System economic condition.

Demographic and Economic – intended to assist users in understanding the socioeconomic environment within which the Houston Airport System operates and to provide information that facilitates comparisons of financial statement information over time and among similar entities.



TOTAL ANNUAL REVENUES AND TOTAL ANNUAL EXPENSES (in thousands)
STATISTICAL SECTION



TOTAL ANNUAL REVENUES AND EXPENSES (in thousands)
STATISTICAL SECTION

CHANGE IN NET POSITION	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
OPERATING REVENUES										
Landing area fees	\$ 99,017	\$ 82,823	\$ 94,165	\$ 90,384	\$ 86,935	\$ 91,059	\$ 88,342	\$ 93,575	\$ 86,870	\$ 88,046
Building and ground area fees	211,786	174,433	182,105	181,182	182,320	181,701	186,505	197,039	216,018	221,181
Concession, parking, and other revenues	136,373	128,501	130,309	138,836	148,295	160,234	177,260	185,668	186,009	184,814
TOTAL OPERATING REVENUES	447,176	385,757	406,579	410,402	417,550	432,994	452,107	476,282	488,897	494,041
NONOPERATING REVENUES										
Investment income (loss)	42,360	37,507	30,488	9,735	5,636	(1,934)	11,170	7,496	13,260	3,403
Passenger facility charges	11,608	32,398	66,383	63,138	63,550	61,195	62,602	85,392	104,230	101,539
Customer facility charges	11,197	10,171	10,981	13,478	15,904	17,104	17,152	17,535	16,417	14,200
Other nonoperating revenues	514	1,093	7,525	3,409	4,644	1,978	3,225	7,969	124	5,596
TOTAL NONOPERATING REVENUES	65,679	81,169	115,377	89,760	89,734	78,343	94,149	118,392	134,031	124,738
TOTAL REVENUES	512,855	466,926	521,956	500,162	507,284	511,337	546,256	594,674	622,928	618,779
OPERATING EXPENSES										
Maintenance and operating										
Personnel costs	102,511	105,974	109,681	111,861	107,532	104,162	108,520	114,947	123,872	56,721
Supplies	6,449	6,061	5,817	6,534	7,290	7,344	8,823	7,933	8,140	7,794
Services	119,656	126,939	128,761	143,327	139,612	140,019	149,957	159,577	177,677	184,032
Non-capital outlay	935	2,329	792	22,585	9,626	14,052	10,202	4,072	5,730	5,912
Impairment to capital assets	-	-	-	-	-	6,514	7,710	-	-	-
Total M & O Expenses	229,551	241,303	245,051	284,307	264,060	272,091	285,212	286,529	315,419	254,459
Depreciation expense	128,553	139,157	166,788	165,657	193,266	173,448	174,825	177,512	179,398	184,203
TOTAL OPERATING EXPENSES	358,104	380,460	411,839	449,964	457,326	445,539	460,037	464,041	494,817	438,662
NONOPERATING EXPENSES										
Interest expense and others	112,272	102,036	107,444	97,515	94,012	93,749	112,350	92,803	86,259	87,574
TOTAL NONOPERATING EXPENSES	112,272	102,036	107,444	97,515	94,012	93,749	112,350	92,803	86,259	87,574
TOTAL EXPENSES	470,376	482,496	519,283	547,479	551,338	539,288	572,387	556,844	581,076	526,236
CONTRIBUTIONS	91,175	70,936	51,457	44,135	15,029	12,761	44,614	36,432	22,542	35,513
TOTAL CHANGE IN NET POSITION	\$ 133,654	\$ 55,366	\$ 54,130	\$ (3,182)	\$ (29,025)	\$ (15,190)	\$ 18,483	\$ 74,262	\$ 64,394	\$ 128,056

(continued)

CHANGES IN NET POSITION AND PASSENGER FACILITY CHARGE COLLECTIONS (in thousands)
STATISTICAL SECTION

NET POSITION AT YEAR END

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net investment in capital assets	649,798	754,848	661,854	624,507	580,636	518,464	469,971	466,196	537,172	542,363
Restricted net assets										
Restricted for debt service	72,333	82,436	160,873	168,841	189,966	213,064	242,558	303,371	333,635	287,858
Restricted for maintenance and operations	41,048	41,899	42,405	43,320	44,023	46,309	49,736	53,912	54,942	54,805
Restricted for special facility	12,811	12,353	12,444	15,081	20,025	26,026	30,986	25,732	26,944	29,369
Restricted for renewal and replacement	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Restricted for capital improvement	518,536	458,356	526,446	549,091	537,165	552,762	581,857	600,159	561,071	676,360
Unrestricted (deficit)	-	-	-	-	-	-	-	(178,003)	(178,003)	(126,938)
TOTAL NET POSITION	\$ 1,304,526	\$ 1,359,892	\$ 1,414,022	\$ 1,410,840	\$ 1,381,815	\$ 1,366,625	\$ 1,385,108	\$ 1,281,367	\$ 1,345,761	\$ 1,473,817

Passenger Facility Charge Collections (in thousands)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Intercontinental	\$ -	\$ 23,046	\$ 54,284	\$ 50,982	\$ 50,358	\$ 47,464	\$ 48,181	\$ 66,491	\$ 80,574	\$ 77,351
Hobby	11,608	9,352	12,099	12,156	13,192	13,731	14,421	18,901	23,656	24,188
Total	\$ 11,608	\$ 32,398	\$ 66,383	\$ 63,138	\$ 63,550	\$ 61,195	\$ 62,602	\$ 85,392	\$ 104,230	\$ 101,539

Year-over-Year Change	77.76%	179.10%	104.90%	-4.89%	0.65%	-3.71%	2.30%	36.40%	22.06%	-2.58%
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PLEGGED REVENUES (in thousands)
STATISTICAL SECTION

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Operating revenues:										
Landing area fees:										
Landing fees	\$ 95,730	\$ 80,420	\$ 91,032	\$ 87,163	\$ 83,059	\$ 86,911	\$ 84,098	\$ 89,426	\$ 82,703	\$ 84,036
Aviation fuel	1,522	1,313	1,329	1,378	1,382	1,444	1,529	1,521	1,527	1,350
Aircraft parking	1,765	1,090	1,804	1,843	2,494	2,704	2,715	2,628	2,640	2,660
Subtotal	99,017	82,823	94,165	90,384	86,935	91,059	88,342	93,575	86,870	88,046
Building and ground area revenues:										
Terminal space rentals	193,375	155,396	161,960	160,563	160,247	158,237	\$ 163,297	\$ 173,392	\$ 191,321	\$ 196,162
Cargo building rentals	2,469	2,374	2,490	2,511	2,473	2,397	2,432	2,506	2,484	2,448
Other rentals	5,054	5,017	5,158	5,067	5,394	5,848	6,174	6,252	6,808	6,453
Hangar rental	3,473	4,051	4,920	5,446	6,165	6,675	6,605	6,355	6,577	6,813
Ground rental	7,415	7,595	7,577	7,595	8,041	8,544	7,997	8,534	8,828	9,305
Subtotal	211,786	174,433	182,105	181,182	182,320	181,701	186,505	197,039	216,018	221,181
Parking, concession, and other revenues:										
Retail concessions	29,454	27,023	27,996	34,426	38,429	41,604	41,444	41,855	35,215	39,999
Auto parking	72,958	66,565	70,127	70,681	72,833	77,596	90,173	97,515	101,650	99,752
Auto rental concession	24,529	24,389	22,889	23,932	26,771	29,522	32,783	31,991	30,737	28,735
Ground transportation	4,806	4,724	4,987	5,946	6,186	6,639	8,301	9,323	10,083	10,402
Other operating revenues	4,626	5,800	4,310	3,851	4,076	4,873	4,559	4,984	8,324	5,926
Subtotal	136,373	128,501	130,309	138,836	148,295	160,234	177,260	185,668	186,009	184,814
Total operating revenues	\$ 447,176	\$ 385,757	\$ 406,579	\$ 410,402	\$ 417,550	\$ 432,994	\$ 452,107	\$ 476,282	\$ 488,897	\$ 494,041

Gross revenues include all operating revenue of the Airport Fund, and all non-operating revenue except for revenue with legal spending restrictions. Maintenance and operating expenses include all operating expenses of the system except for depreciation and capital expenses. Net revenues in each fiscal year are required to be at least equal to the larger of either: (1) the debt service and reserve transfer requirements of each fiscal year or; (2) 125%, 110% and 100% of the debt service requirements for such fiscal year of the Senior Lien Bonds (or Commercial Paper assumed to be refinanced as Senior Lien Revenue Bonds), Subordinate Lien Revenue Bonds and Inferior Lien debt, respectively.

(continued)

**PLEGGED REVENUES (in thousands), continued:
STATISTICAL SECTION**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Net revenues										
Operating revenue	\$ 447,176	\$ 385,757	\$ 406,579	\$ 410,402	\$ 417,550	\$ 432,994	\$ 452,107	\$ 476,282	\$ 488,897	\$ 494,041
Interest on investments - revenue fund	30,064	23,664	15,988	12,889	9,826	7,029	5,499	6,014	6,986	9,306
Other nonoperating revenues	90	300	2,504	341	2,289	1,222	3,162	7,526	(52)	7,177
Gross revenues	477,330	409,721	425,071	423,632	429,665	441,245	460,768	489,822	495,831	510,524
Less: Maintenance and operating expenses	(221,309)	(242,449)	(245,147)	(262,668)	(255,507)	(252,745)	(268,745)	(283,557)	(314,715)	(254,506) *
Net pledged revenue	\$ 256,021	\$ 167,272	\$ 179,924	\$ 160,964	\$ 174,158	\$ 188,500	\$ 192,023	\$ 206,265	\$ 181,116	\$ 256,018
Debt Service										
Principal	\$ 45,996	\$ 49,692	\$ 51,832	\$ 61,136	\$ 59,575	\$ 56,800	\$ 60,419	\$ 71,999	\$ 79,093	\$ 82,707
Interest	111,250	100,746	93,298	97,546	91,736	97,138	96,005	91,320	84,811	92,316
	157,246	150,438	145,130	158,682	151,311	153,938	156,424	163,319	163,904	175,023
Less PFC revenue available for debt service	(2,690)	(15,847)	(27,087)	(38,828)	(36,619)	(34,390)	(35,614)	(38,054)	(42,320)	(54,673)
Less grant revenue available for debt service	(25,332)	(38,835)	(29,084)	(17,999)	(7,360)	-	(22,942)	(16,399)	(13,888)	-
Total debt service	\$ 129,224	\$ 95,756	\$ 88,959	\$ 101,855	\$ 107,332	\$ 119,548	\$ 97,868	\$ 108,866	\$ 107,696	\$ 120,350
Coverage of debt service	1.98	1.75	2.02	1.58	1.62	1.58	1.96	1.89	1.68	2.13
Net Required revenue per bond rate covenant	\$ 141,856	\$ 105,208	\$ 98,571	\$ 112,873	\$ 119,343	\$ 133,552	\$ 108,369	\$ 122,822	\$ 120,125	\$ 134,348
Ratio of required revenue	1.80	1.59	1.83	1.43	1.46	1.41	1.77	1.68	1.51	1.91

Debt service requirements is equal to interest expense (excluding amortization of bond discount and amounts provided for payment of interest by bond proceeds and other sources and deposited into a restricted fund for that purpose) for each respective fiscal year ended June 30, plus principal payment payable on the next July 1. Certain grant revenue and passenger facility charge revenue is available to cover net required revenue and required debt service. In FY2016, \$6,250,000 in remaining series 2009A proceeds were used to pay senior lien bond debt service.

Net revenues in each fiscal year are required to be at least equal to the larger of either: (1) the debt service and reserve transfer requirements of each fiscal year or; (2) 125%, 110% and 100% of the debt service requirements for such fiscal year of the Senior Lien Bonds (or Commercial Paper assumed to be refinanced as Senior Lien Revenue Bonds), Subordinate Lien Revenue Bonds and Inferior Lien debt, respectively.

Revenues and expenses cannot be included in net pledged revenue if they are accounted for outside of the Airport Revenue Fund, and do not affect amounts available for transfer to debt service funds.

* Operating and maintenance expense for debt coverage calculations decreased by \$60.2 million between FY17 and FY16, primarily due to a \$67.4 million decrease in pension expense associated with pension reform enacted in 2017. Without the effects of pension reform, it is estimated that debt service coverage would have been 1.63.

**PLEGGED REVENUES FOR CONSOLIDATED RENTAL CAR FACILITY
STATISTICAL SECTION**

(not rounded to the nearest thousand)	For Years Ended December 31:									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Customer facility charge collections	\$ 11,303,826	\$ 11,323,569	\$ 9,523,308	\$ 12,300,253	\$ 14,596,573	\$ 16,444,942	\$ 17,317,058	\$ 17,451,368	\$ 17,359,920	\$ 17,451,368
Interest income	303,656	146,789	8,417	7,961	475	318	731	785	3,840	29,003
Transfers from Rate Stabilization Account	-	-	1,142,458	-	-	-	-	-	-	-
Transfers from Coverage Account	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143	3,169,143
Total resources available for debt service	\$ 14,776,625	\$ 14,639,501	\$ 13,843,326	\$ 15,477,357	\$ 17,766,191	\$ 19,614,403	\$ 20,486,932	\$ 20,621,296	\$ 20,532,903	\$ 20,649,514
Total annual debt service:										
Special Facility Revenue Bonds, Series 2001:										
Principal	\$ 1,945,000	\$ 2,170,000	\$ 2,415,000	\$ 2,675,000	\$ 2,960,000	\$ 3,260,000	\$ 3,590,000	\$ -	\$ -	\$ -
Interest	8,501,952	8,386,419	8,255,351	8,108,278	7,944,033	7,759,329	7,552,645	6,006,288	4,691,128	4,691,128
Subtotal Series 2001	10,446,952	10,556,419	10,670,351	10,783,278	10,904,033	11,019,329	11,142,645	6,006,288	4,691,128	4,691,128
Special Facility Refunding Bonds, Series 2014:										
Principal	-	-	-	-	-	-	-	4,355,000	5,160,000	5,305,000
Interest	-	-	-	-	-	-	-	230,243	691,019	652,835
Subtotal Series 2014	-	-	-	-	-	-	-	4,585,243	5,851,019	5,957,835
Total annual debt service	\$ 10,446,952	\$ 10,556,419	\$ 10,670,351	\$ 10,783,278	\$ 10,904,033	\$ 11,019,329	\$ 11,142,645	\$ 10,591,531	\$ 10,542,147	\$ 10,648,963
Debt service coverage ratio	1.41	1.39	1.30	1.44	1.63	1.78	1.84	1.95	1.95	1.94

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- Customer Facility Charges are used first to pay debt service on the Airport System Special Facilities Taxable Revenue Bonds (Consolidated Rental Car Facility Project), Series 2001 and on the Airport System Special Facilities Taxable Revenue Refunding Bonds (Consolidated Rental Car Facility Project), Series 2014. Additional collections are used to pay administrative costs for the special facility agreement, and then for capital improvements and major repairs on the special facility. Customer facility charges are kept and invested separately by BNYMellon Bank as trustee, and cannot be used for any other City or Airport Fund purpose as long as any Special Facility Revenue Bonds (CRCF) remain outstanding.
- No other City or Airport Fund revenues are pledged toward the payment of Special Facility Revenue Bonds (CRCF).
- The Special Facilities Revenue Bond (CRCF) covenants require the Airport Fund to maintain a debt service coverage ratio of at least 125%
- The City imposed a \$3.00 Customer Facility Charge as of April 1, 2001, which was increased to \$3.50 effective July 1, 2003, reduced to \$3.25 effective April 1, 2005, reduced to \$3.00 effective July 1, 2006, increased to \$3.75 effective November 1, 2009, increased to \$4.25 effective April 1, 2011, reduced to \$4.00 effective April 1, 2013, and reduced again to \$3.00 effective April 1, 2016, and increased to \$4.00 effective April 1, 2017.
- For purposes of coverage calculation, collections are considered available for debt service when they are received by the trustee.
- For purposes of coverage calculation, interest and principal is calculated on the accrual basis, for instance, in 2008, funding is accumulated for payments due on 7/1/2008 and 1/1/2009.
- For more information on the Consolidated Rental Car Facility assets and debt, see Notes 1 and 5.

OUTSTANDING DEBT (in thousands)
STATISTICAL SECTION

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Outstanding debt by type (1):										
Senior lien revenue bonds, fixed rate	\$ -	\$ -	\$ 449,660	\$ 449,660	\$ 449,660	\$ 449,660	\$ 449,660	\$ 449,660	\$ 440,385	\$ 430,645
Subordinate lien revenue bonds, fixed rate	1,695,455	1,660,055	1,622,090	1,582,080	1,464,905	1,419,125	1,376,505	1,331,765	1,284,860	1,232,585
Subordinate lien revenue bonds, periodic auction rate	337,950	330,300	322,775	315,550	305,425	298,525	286,300	276,275	266,925	254,475
Subordinate lien revenue bonds, variable rate	92,900	92,900	92,900	93,730	93,630	93,505	93,305	93,105	92,905	92,705
Subtotal, revenue bonds payable	2,126,305	2,083,255	2,487,425	2,441,020	2,313,620	2,260,815	2,205,770	2,150,805	2,085,075	2,010,410
Unamortized discount	(15,686)	(15,153)	(18,071)	(16,216)	(4,176)	(3,905)	(3,619)	(3,317)	(3,016)	(2,717)
Unamortized premium	11,458	10,853	12,319	11,583	96,928	89,587	82,318	75,141	68,118	61,302
Revenue bonds payable, net	\$ 2,122,077	\$ 2,078,955	\$ 2,481,673	\$ 2,436,387	\$ 2,406,372	\$ 2,346,497	\$ 2,284,469	\$ 2,222,629	\$ 2,150,177	\$ 2,068,995
Senior lien commercial paper payable	83,000	93,000	6,000	-	-	-	1,200	49,500	87,000	87,000
Inferior lien contract payable	49,700	45,820	41,735	37,430	32,895	28,115	23,075	17,760	12,155	6,240
Pension obligation bonds payable (2)	2,006	2,006	2,006	2,006	2,006	2,006	2,006	2,006	2,006	2,006
Note payable (3)									120,439	115,421
Special facilities revenue bonds, rental car (4)	122,500	120,330	117,915	115,240	112,280	109,020	105,430	102,055	96,895	91,590
Total outstanding debt payable	\$ 2,379,283	\$ 2,340,111	\$ 2,649,329	\$ 2,591,063	\$ 2,553,553	\$ 2,485,638	\$ 2,416,180	\$ 2,393,950	\$ 2,468,672	\$ 2,371,252
Total enplaned passengers	26,202,152	24,030,602	24,531,054	24,944,816	25,303,825	25,132,792	25,944,623	26,903,969	27,813,447	27,364,057
Outstanding debt per enplaned passenger	\$ 90.80	\$ 97.38	\$ 108.00	\$ 103.87	\$ 100.92	\$ 98.90	\$ 93.13	\$ 88.98	\$ 88.76	\$ 86.66
Outstanding conduit debt:										
Special facilities revenue bonds (5)	\$ 466,265	\$ 462,940	\$ 459,395	\$ 455,895	\$ 565,500	\$ 561,500	\$ 561,470	\$ 711,790	\$ 711,790	\$ 711,790

(1) Includes both current and long-term liabilities

(2) A portion of the City of Houston Taxable General Obligation Pension Bonds, Series 2005, has been allocated to the Airport Fund for payment.

(3) The Note is payable to Southwest Airlines with rent credits over a 25 year term with interest, to reimburse Southwest for the construction of the Hobby International Terminal project.

(4) The Special Facilities Revenue and Refunding Bonds (Consolidated Rental Car Facility), Series 2001 and Series 2014, are included in the Airport Fund financial statements (See Note 1 and 5).

(5) These Special Facilities Revenue Bonds are conduit bonds secured solely by lease payments from United Airlines. No revenues of the Airport System Fund are pledged to pay these bonds.

**SUMMARY OF CERTAIN FEES AND CHARGES
STATISTICAL SECTION**

IAH	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Landing Rates (1) (5)	3.010	3.014	2.931	2.737	2.743	2.850	2.844	2.803	2.812	2.642
Terminal Space Rentals (2) (5)	25.00-87.21	25.26-83.48	24.36-82.96	23.88-80.97	21.38-79.14	21.67-78.25	20.77-72.51	21.75-75.45	22.41-75.77	22.70-74.97
Apron Rentals (2) (5)	2.480-3.050	2.166-3.223	1.926-2.626	1.841-2.613	1.712-2.612	1.927-2.702	2.051-2.576	2.114-2.597	2.326-2.854	2.289-2.832
Aircraft Parking (per day) (4)	70.00-300.00	70.00-300.00	70.00-300.00	70.00-300.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00
Cargo (per day) (3)	125.00-450.00	125.00-450.00	125.00-450.00	125.00-450.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00
Parking Rates (6)										
Economy (Ecopark) Uncovered (7)	6.00	6.00	5.00	5.00	5.00	5.00	6.00	6.00	6.00	6.00
Economy (Ecopark) Covered (7)			7.00	7.00	7.00	7.00	8.00	8.00	8.00	8.00
Economy (Ecopark2) Covered (8)	-	-	-	-	-	-	-	-	5.00	6.00
Structured (9)	15.00	15.00	17.00	17.00	17.00	17.00	19.00	19.00	20.00	22.00
Sure Park (10)	17.00	17.00	20.00	20.00	20.00	20.00	23.00	23.00	24.00	24.00
Valet (10)	-	-	-	-	-	23.00	25.00	25.00	26.00	26.00

HOU	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Landing Rates (1) (5)	2.013	2.202	2.568	2.227	1.941	1.925	1.768	2.113	1.835	1.982
Terminal Space Rentals (2) (5)	88.69-90.10	84.82-103.79	88.95-110.29	96.91-99.41	90.77-93.27	85.95-88.45	87.73-90.23	92.77-95.27	87.62-90.12	64.79-67.29
Apron Rentals (2) (5)	1.884	2.004	2.355	1.973	1.787	1.815	1.891	2.209	1.765	1.652-1.853
Aircraft Parking (per day) (4)	70.00-300.00	70.00-300.00	70.00-300.00	70.00-300.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00	100.00-400.00
Cargo (per day) (3)	125.00-450.00	125.00-450.00	125.00-450.00	125.00-450.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00	200.00-600.00
Parking Rates (6)										
Economy (Ecopark) (11)	6.00	6.00	8.00	8.00	10.00	10.00	12.00	-	-	-
Economy (Ecopark2) (12)	-	-	6.00	6.00	6.00	6.00	10.00	10.00	10.00	10.00
Structured (9)	15.00	15.00	17.00	17.00	17.00	17.00	19.00	19.00	20.00	22.00
Valet (10)	-	-	-	-	-	23.00	25.00	25.00	26.00	26.00

- (1) Per 1,000 pounds of landing weight
- (2) Range per square foot
- (3) Daily cargo rates increased on August 1, 2011 at Intercontinental and Hobby to a range of \$200-\$600
- (4) Daily aircraft parking rates increased on August 1, 2011 at Intercontinental and Hobby to a range of \$100-\$400
- (5) 2008-2016 actual rates provided versus budgeted, as reported in CAFR 2016 & prior; 2017 budgeted rates provided.
- (6) Maximum per day
- (7) New rates effective September 1, 2013
- (8) New rates effective October 1, 2016
- (9) New rates effective May 1, 2017
- (10) New rates effective July 1, 2015
- (11) Ecopark 1 at Hobby closed March 18, 2014
- (12) New rates effective May 5, 2014

**PASSENGER STATISTICS
LAST TEN YEARS**

Domestic Passengers								
Intercontinental			Hobby		Ellington Airport		Total	
Fiscal Year	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change
2008	35,200	-0.2%	9,097	5.3%	-	-	44,297	0.9%
2009	31,995	-9.1%	8,286	-8.9%	-	-	40,281	-9.1%
2010	32,093	0.3%	8,755	5.7%	-	-	40,848	1.4%
2011	31,666	-1.3%	9,434	7.8%	-	-	41,100	0.6%
2012	31,778	0.4%	10,192	8.0%	-	-	41,970	2.1%
2013	30,830	-3.0%	10,690	4.9%	-	-	41,520	-1.1%
2014	30,832	0.0%	11,609	8.6%	-	-	42,441	2.2%
2015	31,968	3.7%	11,837	2.0%	-	-	43,805	3.2%
2016	31,959	0.0%	12,208	3.1%	-	-	44,167	0.8%
2017	30,809	-3.6%	12,423	1.8%	-	-	43,232	-2.1%

International Passengers							HAS Passengers	
Intercontinental			Hobby		Total		Total	
Fiscal Year	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change	Enplanements & Deplanements (in thousands)	Percentage Change
2008	7,976	5.6%	-	-	7,976	5.6%	52,273	1.6%
2009	7,642	-4.2%	-	-	7,642	-4.2%	47,923	-8.3%
2010	8,138	6.5%	-	-	8,138	6.5%	48,986	2.2%
2011	8,732	7.3%	-	-	8,732	7.3%	49,832	1.7%
2012	8,686	-0.5%	-	-	8,686	-0.5%	50,656	1.7%
2013	8,795	1.3%	-	-	8,795	1.3%	50,315	-0.7%
2014	9,470	7.7%	-	-	9,470	7.7%	51,911	3.2%
2015	10,018	5.8%	4	-	10,022	5.8%	53,827	3.7%
2016	10,901	8.8%	519	12875.0%	11,420	13.9%	55,587	3.3%
2017	10,606	-2.7%	860	65.7%	11,466	0.4%	54,698	-1.6%

**PASSENGER STATISTICS BY CARRIER
FOR YEARS ENDED JUNE 30, 2017 AND 2016**

Airlines	Intercontinental				Hobby				Airlines	Houston Airport System			
	Fiscal Year 2016		Fiscal Year 2017		Fiscal Year 2016		Fiscal Year 2017			Fiscal Year 2016		Fiscal Year 2017	
	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share		Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share
Alaska Airlines	137,433	0.3%	185,191	0.5%	-	0.0%	-	0.0%	Alaska Airlines	137,433	0.2%	185,191	0.3%
American Airlines, Inc.	1,475,647	3.5%	1,749,382	4.2%	-	0.0%	17,213	0.1%	American Airlines, Inc.	1,475,647	2.7%	1,766,595	3.2%
Compass Airlines - AE	139,995	0.3%	147,057	0.4%	-	0.0%	-	0.0%	Compass Airlines - AE	139,995	0.3%	147,057	0.3%
EpressJet Airlines Inc. - AE	254	0.0%	70	0.0%	44,520	0.4%	25,307	0.2%	EpressJet Airlines Inc. - AE	44,774	0.1%	25,377	0.0%
Mesa Airlines, Inc. - AE	173,746	0.4%	70,301	0.2%	-	0.0%	146,187	1.1%	Mesa Airlines, Inc. - AE	173,746	0.3%	216,488	0.4%
Republic Airlines - AE	147,419	0.3%	122,752	0.3%	-	0.0%	-	0.0%	Republic Airlines - AE	147,419	0.2%	122,752	0.2%
SkyWest Airlines -AE	-	0.0%	91,704	0.2%	-	0.0%	-	0.0%	SkyWest Airlines -AE	-	0.0%	91,704	0.2%
Envoy (American Eagle) - AA	45,614	0.1%	63,960	0.1%	116,741	0.8%	107,094	0.8%	Envoy (American Eagle) - AA	162,355	0.3%	171,054	0.3%
American Airlines, Inc. Subtotal	1,982,675	4.6%	2,245,226	5.4%	161,261	1.2%	295,801	2.2%	American Airlines, Inc. Subtotal	2,143,936	3.9%	2,541,027	4.6%
Delta	713,550	1.7%	733,804	1.8%	365,340	2.9%	408,046	3.1%	Delta	1,078,890	1.9%	1,141,850	2.0%
Atlantic Southeast - DL	15,085	0.0%	-	0.0%	63,893	0.5%	39,345	0.3%	Atlantic Southeast - DL	78,978	0.1%	39,345	0.1%
Compass Airlines - DL	11,335	0.0%	24,988	0.1%	-	0.0%	-	0.0%	Compass Airlines - DL	11,335	0.0%	24,988	0.0%
ExpressJet Airlines Inc. - DL	165,258	0.4%	88,483	0.2%	-	0.0%	-	0.0%	ExpressJet Airlines Inc. - DL	165,258	0.3%	88,483	0.2%
GO JET - DL	11,857	0.0%	48,881	0.1%	-	0.0%	-	0.0%	GO JET - DL	11,857	0.0%	48,881	0.1%
Endeavor (Pinnacle Airlines, Inc.) - DL	235,024	0.5%	155,063	0.4%	-	0.0%	-	0.0%	Endeavor (Pinnacle Airlines, Inc.) - DL	235,024	0.5%	155,063	0.3%
Republic Airlines Inc. - DL	-	0.0%	67,960	0.2%	-	0.0%	-	0.0%	Republic Airlines Inc. - DL	-	0.0%	67,960	0.1%
Shuttle America Corporation - DL	77,399	0.2%	88,748	0.2%	-	0.0%	-	0.0%	Shuttle America Corporation - DL	77,399	0.1%	88,748	0.2%
SkyWest Airlines - DL	230,974	0.6%	267,422	0.6%	-	0.0%	38	0.0%	SkyWest Airlines - DL	230,974	0.5%	267,460	0.5%
Delta Subtotal	1,460,482	3.4%	1,475,349	3.6%	429,233	3.4%	447,429	3.4%	Delta Subtotal	1,889,715	3.4%	1,922,778	3.5%
Frontier	494,804	1.2%	421,582	1.0%	-	0.0%	-	0.0%	Frontier	494,804	0.9%	421,582	0.8%
JetBlue	-	0.0%	-	0.0%	165,993	1.3%	190,099	1.4%	JetBlue	165,993	0.2%	190,099	0.4%
Kalitta Charters, LLC	-	0.0%	1	0.0%	20	0.0%	22	0.0%	Kalitta Charters, LLC	20	0.0%	23	0.0%
Seaport	3,195	0.0%	-	0.0%	-	0.0%	-	0.0%	Seaport	3,195	0.0%	-	0.0%
Southwest Airlines Company	-	0.0%	-	0.0%	11,271,835	88.5%	11,484,628	86.5%	Southwest Airlines Company	11,271,835	20.3%	11,484,628	21.0%
Southwest Airlines Company Subtotal	-	0.0%	-	0.0%	11,271,835	88.5%	11,484,628	86.5%	Southwest Airlines Company Subtotal	11,271,835	20.3%	11,484,628	21.0%
Spirit Airlines	1,678,712	3.9%	1,769,051	4.3%	-	0.0%	-	0.0%	Spirit Airlines	1,678,712	3.1%	1,769,051	3.2%
United Airlines Inc.	16,487,410	38.5%	16,252,312	39.2%	-	0.0%	-	0.0%	United Airlines Inc.	16,487,410	29.7%	16,252,312	29.7%
Mesa Airlines, Inc. - UA	2,290,086	5.2%	2,820,852	6.8%	-	0.0%	-	0.0%	Mesa Airlines, Inc. - UA	2,290,086	4.1%	2,820,852	5.2%
Republic Airlines Inc. - UA	179,327	0.4%	1,015,256	2.4%	-	0.0%	-	0.0%	Republic Airlines Inc. - UA	179,327	0.3%	1,015,256	1.8%
Trans States - UA	371,322	0.9%	44,096	0.1%	-	0.0%	-	0.0%	Trans States - UA	371,322	0.7%	44,096	0.1%
ExpressJet Airlines, Inc. - UA	3,894,897	9.1%	3,544,987	8.6%	-	0.0%	-	0.0%	ExpressJet Airlines, Inc. - UA	3,894,897	7.0%	3,544,987	6.5%
Shuttle America Corporation - UA	508,631	1.2%	4,083	0.0%	-	0.0%	-	0.0%	Shuttle America Corporation - UA	508,631	0.9%	4,083	0.0%
SkyWest Airlines - UA	1,829,778	4.3%	1,016,617	2.5%	-	0.0%	-	0.0%	SkyWest Airlines - CO	1,829,778	3.3%	1,016,617	1.9%
United Airlines Inc. Subtotal	25,561,451	59.6%	24,698,203	59.6%	-	0.0%	-	0.0%	United Airlines Inc. Subtotal	25,561,451	46.0%	24,698,203	45.2%
US Airways	587,593	1.4%	-	0.0%	-	0.0%	-	0.0%	US Airways	587,593	1.1%	-	0.0%
Mesa Airlines, Inc. - US	16,820	0.0%	-	0.0%	171,325	1.4%	-	0.0%	Mesa Airlines, Inc. - US	188,145	0.3%	-	0.0%
Republic Airlines - US	31,025	0.1%	-	0.0%	-	0.0%	-	0.0%	Republic Airlines - US	31,025	0.1%	-	0.0%
US Airways Subtotal	635,438	1.5%	-	0.0%	171,325	1.4%	-	0.0%	US Airways Subtotal	806,763	1.5%	-	0.0%
Charter Airlines	5,173	0.0%	14,185	0.0%	8,475	0.1%	5,379	0.0%	Charter Airlines	13,648	0.0%	19,564	0.0%
Total Domestic	31,959,363	74.5%	30,808,788	74.4%	12,208,142	95.9%	12,423,358	93.5%	Total Domestic	44,167,505	79.5%	43,232,146	79.0%

**PASSENGER STATISTICS BY CARRIER TOTAL
FOR YEARS ENDED JUNE 30, 2017 AND 2016**

International	Intercontinental				Hobby				International	Houston Airport System			
	Fiscal Year 2016		Fiscal Year 2017		Fiscal Year 2016		Fiscal Year 2017			Fiscal Year 2016		Fiscal Year 2017	
	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)	Market Share		Airlines	Total Passengers (in thousands)	Market Share	Total Passengers (in thousands)
AeroMexico	255,215	0.5%	255,782	0.6%	-	0.0%	-	0.0%	AeroMexico	255,215	0.5%	255,782	0.5%
All Nippon Airways Company, Ltd. - ANA	140,370	0.3%	147,727	0.4%	-	0.0%	-	0.0%	All Nippon Airways Company, Ltd. - ANA	140,370	0.3%	147,727	0.3%
American	545	0.0%	1,304	0.0%	-	0.0%	-	0.0%	American	545	0.0%	1,304	0.0%
Mesa Airlines - AE	-	0.0%	154	0.0%	-	0.0%	-	0.0%	Mesa Airlines - AE	-	0.0%	154	0.0%
American Airlines, Inc. Subtotal	545	0.0%	1,458	0.0%	-	0.0%	-	0.0%	American Airlines, Inc. Subtotal	545	0.0%	1,458	0.0%
Air China	132,565	0.3%	117,743	0.3%	-	0.0%	-	0.0%	Air China	132,565	0.2%	117,743	0.2%
Air France	144,162	0.3%	152,537	0.4%	-	0.0%	-	0.0%	Air France	144,162	0.3%	152,537	0.3%
Air New Zealand	72,132	0.2%	141,272	0.3%	-	0.0%	-	0.0%	Air New Zealand	72,132	0.1%	141,272	0.3%
Atlas Air	22,599	0.1%	16,131	0.0%	-	0.0%	-	0.0%	Atlas Air	22,599	0.0%	16,131	0.0%
British Airways	243,464	0.6%	240,874	0.6%	-	0.0%	-	0.0%	British Airways	243,464	0.4%	240,874	0.4%
Emirates	253,140	0.6%	202,812	0.5%	-	0.0%	-	0.0%	Emirates	253,140	0.5%	202,812	0.4%
EVA Airways Corporation	120,942	0.3%	175,392	0.4%	-	0.0%	-	0.0%	EVA Airways Corporation	120,942	0.2%	175,392	0.3%
Interjet	132,349	0.3%	136,881	0.3%	-	0.0%	-	0.0%	Interjet	132,349	0.2%	136,881	0.2%
Jazz Air - AC	290,184	0.7%	302,752	0.7%	-	0.0%	-	0.0%	Jazz Air - AC	290,184	0.5%	302,752	0.6%
KLM	156,409	0.4%	165,431	0.4%	-	0.0%	-	0.0%	KLM	156,409	0.3%	165,431	0.3%
Kalitta Charters, LLC	-	0.0%	-	0.0%	3	0.0%	1	0.0%	Kalitta Charters, LLC	3	0.0%	1	0.0%
Korean Air Lines Co., Ltd.	99,933	0.2%	79,779	0.2%	-	0.0%	-	0.0%	Korean Air Lines Co., Ltd.	99,933	0.2%	79,779	0.1%
Lufthansa	278,409	0.6%	291,713	0.7%	-	0.0%	-	0.0%	Lufthansa	278,409	0.5%	291,713	0.5%
Qatar Airways	159,583	0.4%	154,652	0.4%	-	0.0%	-	0.0%	Qatar Airways	159,583	0.3%	154,652	0.3%
Scandinavian Airlines	5,090	0.0%	-	0.0%	-	0.0%	-	0.0%	Scandinavian Airlines	5,090	0.0%	-	0.0%
Singapore Airlines	79,342	0.2%	83,037	0.2%	-	0.0%	-	0.0%	Singapore Airlines	79,342	0.1%	83,037	0.2%
Spirit Airlines	217,865	0.5%	120,767	0.3%	-	0.0%	-	0.0%	Spirit Airlines	217,865	0.5%	120,767	0.2%
Southwest Airlines Company	-	0.0%	-	0.0%	519,473	4.1%	860,206	6.5%	Southwest Airlines Company	519,473	0.9%	860,206	1.6%
TACA	57,093	0.1%	63,924	0.2%	-	0.0%	-	0.0%	TACA	57,093	0.1%	63,924	0.1%
Turkish Airlines	193,892	0.6%	167,402	0.4%	-	0.0%	-	0.0%	Turkish Airlines	193,892	0.3%	167,402	0.3%
United Airlines Inc.	6,467,458	15.1%	6,229,253	15.0%	-	0.0%	-	0.0%	United Airlines Inc.	6,467,458	11.6%	6,229,253	11.4%
ExpressJet Airlines, Inc. - UA	451,177	1.1%	281,987	0.7%	-	0.0%	-	0.0%	ExpressJet Airlines, Inc.	451,177	0.8%	281,987	0.5%
Mesa Airlines - UA	124,619	0.3%	844,395	2.0%	-	0.0%	-	0.0%	Mesa Airlines - UA	124,619	0.2%	844,395	1.6%
Republic Airlines Inc. - UA	565	0.0%	1,177	0.0%	-	0.0%	-	0.0%	Republic Airlines Inc. - UA	565	0.0%	1,177	0.0%
Shuttle America Corporation - UA	1,108	0.0%	-	0.0%	-	0.0%	-	0.0%	Shuttle America Corporation - UA	1,108	0.0%	-	0.0%
SkyWest Airlines - UA	645,101	1.5%	75,915	0.2%	-	0.0%	-	0.0%	SkyWest Airlines - UA	645,101	1.2%	75,915	0.1%
United Airlines Inc. Subtotal	7,690,028	18.0%	7,432,727	17.9%	-	0.0%	-	0.0%	United Airlines Inc. Subtotal	7,690,028	13.8%	7,432,727	13.6%
WestJet Airlines	45,055	0.1%	61,524	0.2%	-	0.0%	-	0.0%	WestJet Airlines	45,055	0.1%	61,524	0.1%
Viva Aerobus	63,103	0.1%	40,879	0.1%	-	0.0%	-	0.0%	Viva Aerobus	63,103	0.1%	40,879	0.1%
Volaris Airline	40,550	0.1%	48,660	0.1%	-	0.0%	-	0.0%	Volaris Airline	40,550	0.1%	48,660	0.1%
Charter Airlines	6,634	0.0%	4,599	0.0%	-	0.0%	-	0.0%	Charter Airlines	6,634	0.0%	4,599	0.0%
Total International	10,900,653	25.5%	10,606,455	25.6%	519,476	4.1%	860,207	6.5%	Total International	11,420,129	20.5%	11,466,662	21.0%
Total Airlines	42,860,016	100.0%	41,415,243	100.0%	12,727,618	100.0%	13,283,565	100.0%	Total Airlines	55,587,634	100.0%	54,698,808	100.0%

**ORIGINATING PASSENGER ENPLANEMENTS
STATISTICAL SECTION**

George Bush Intercontinental Airport

Fiscal Year	Originating Enplanements	Connecting Enplanements	Total Enplaned Passengers	Originating Enplanement Percentage
2008	10,449,631	11,190,625	21,640,256	48.3%
2009	9,190,724	10,680,955	19,871,679	46.3%
2010	9,278,705	10,854,946	20,133,651	46.1%
2011	9,696,972	10,508,661	20,205,633	48.0%
2012	9,926,431	10,249,285	20,175,716	49.2%
2013	9,235,098	10,521,105	19,756,203	46.7%
2014	9,653,120	10,452,170	20,105,290	48.0%
2015	10,453,670	10,504,885	20,958,555	49.9%
2016	11,128,767	10,301,326	21,430,093	51.9%
2017	11,105,026	9,598,774	20,703,800	53.6%

William P. Hobby Airport

Fiscal Year	Originating Enplanements	Connecting Enplanements	Total Enplaned Passengers	Originating Enplanement Percentage
2008	3,605,540	956,631	4,562,171	79.0%
2009	3,322,678	836,245	4,158,923	79.9%
2010	3,343,393	1,054,010	4,397,403	76.0%
2011	3,617,541	1,121,642	4,739,183	76.3%
2012	3,906,900	1,221,209	5,128,109	76.2%
2013	3,959,666	1,416,922	5,376,588	73.6%
2014	4,134,726	1,701,165	5,835,891	70.8%
2015	4,271,166	1,674,247	5,945,413	71.8%
2016	4,695,633	1,687,702	6,383,335	73.6%
2017	4,852,811	1,807,446	6,660,257	72.9%

Houston Airport System

Fiscal Year	Originating Enplanements	Connecting Enplanements	Total Enplaned Passengers	Originating Enplanement Percentage
2008	14,055,171	12,147,256	26,202,427	53.6%
2009	12,513,402	11,517,200	24,030,602	52.1%
2010	12,622,098	11,908,956	24,531,054	51.5%
2011	13,314,513	11,630,303	24,944,816	53.4%
2012	13,833,331	11,470,494	25,303,825	54.7%
2013	13,194,764	11,938,027	25,132,791	52.5%
2014	13,787,846	12,153,335	25,941,181	53.2%
2015	14,724,836	12,179,132	26,903,968	54.7%
2016	15,824,400	11,989,028	27,813,428	56.9%
2017	15,957,837	11,406,220	27,364,057	58.3%

**AIRCRAFT OPERATIONS, LANDING WEIGHT AND CARGO ACTIVITY
STATISTICAL SECTION**

Fiscal Year	Aircraft Operations (in thousands)			Aircraft Landed Weight (in million pounds)		
	Total	Increase (Decrease)	Percentage Change	Total	Increase (Decrease)	Percentage Change
2008	974	(9)	-0.88%	34,096	166	0.49%
2009	892	(82)	-8.42%	31,907	(2,189)	-6.42%
2010	858	(34)	-3.86%	31,707	(200)	-0.63%
2011	861	3	0.34%	32,564	857	2.70%
2012	838	(23)	-2.65%	32,844	280	0.86%
2013	799	(39)	-4.62%	33,041	197	0.60%
2014	811	12	1.44%	33,878	837	2.53%
2015	816	5	0.64%	31,894	(1,984)	-5.86%
2016	787	(29)	-3.55%	35,517	3,623	11.36%
2017	760	(27)	-3.43%	34,644	(873)	-2.46%

Fiscal Year	Cargo Activity (in metric tons)				
	Domestic Freight	International Freight	Mail	Total Cargo	Year-over-Year Change
2008	210,532	181,091	34,957	426,580	1.0%
2009	186,085	164,840	36,082	387,007	-9.3%
2010	195,617	181,453	37,011	414,081	7.0%
2011	205,174	208,748	33,897	447,819	8.1%
2012	200,619	219,318	33,253	453,190	1.2%
2013	201,464	218,311	27,142	446,917	-1.4%
2014	193,054	226,123	27,333	446,510	-0.1%
2015	192,169	253,039	30,026	475,234	6.4%
2016	195,644	205,381	25,693	426,718	-10.2%
2017	210,730	220,172	24,903	455,805	6.8%

**PERFORMANCE MEASURES
STATISTICAL SECTION**

Performance Measures	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Revenue per Enplaned Passenger	\$ 19.57	\$ 19.43	\$ 21.28	\$ 20.05	\$ 20.05	\$ 20.35	\$ 21.05	\$ 22.10	\$ 22.40	\$ 22.61
Maintenance and Operations Expenses per Enplaned Passenger	\$ 8.76	\$ 10.04	\$ 9.99	\$ 11.40	\$ 10.44	\$ 10.83	\$ 10.99	\$ 10.65	\$ 11.34	\$ 9.30
Debt Service per Enplaned Passenger	\$ 6.41	\$ 6.71	\$ 6.37	\$ 6.81	\$ 6.43	\$ 6.58	\$ 6.47	\$ 6.54	\$ 6.69	\$ 7.04
Outstanding Debt per Enplaned Passenger (1)	\$ 90.97	\$ 97.56	\$ 108.23	\$ 104.06	\$ 97.25	\$ 95.49	\$ 90.10	\$ 86.31	\$ 86.42	\$ 84.51
Intercontinental Budgeted Airline Cost per Est. Enplaned Passenger (2)	\$ 11.26	\$ 11.04	\$ 11.06	\$ 10.42	\$ 10.79	\$ 10.72	\$ 11.21	\$ 11.28	\$ 10.94	\$ 11.31
Intercontinental Actual Airline Cost per Enplaned Passenger (2)	\$ 11.03	\$ 11.53	\$ 10.52	\$ 10.52	\$ 10.39	\$ 10.52	\$ 10.61	\$ 10.56	\$ 10.62	\$ 11.10
Hobby Budgeted Airline Cost per Est. Enplaned Passenger (2)	\$ 8.40	\$ 8.20	\$ 9.44	\$ 7.99	\$ 7.24	\$ 7.34	\$ 7.37	\$ 6.99	\$ 6.76	\$ 6.48
Hobby Actual Airline Cost per Enplaned Passenger (2)	\$ 7.79	\$ 8.64	\$ 8.75	\$ 7.68	\$ 6.63	\$ 6.64	\$ 6.19	\$ 6.43	\$ 7.15	\$ 6.15

(1) The calculation of outstanding debt per enplaned passenger does not include unamortized discount and premium.

(2) Airline Costs include terminal building charges, aircraft parking apron charges and landing fees only for passenger carriers. The costs are calculated during the rates and charges process based on budget and estimated passengers. They are then recalculated, after the annual audit, during the rates and charges reconciliation process. The estimated costs utilized are based on projected results and are subjected to change.

CASH AVAILABLE BY DAYS FUNDED (in thousands)
STATISTICAL SECTION

	2010	2011	2012	2013	2014	2015	2016	2017
Airport System Revenue Fund (1) (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operating & Maintenance Reserve (3)	41,417	42,643	43,630	46,397	49,633	50,754	51,615	51,807
Renewal & Replacement Fund (4)	19,194	19,777	20,876	11,822	11,822	10,011	10,001	10,514
Airports Improvement Fund (4)	403,564	438,368	455,030	460,634	487,974	396,631	449,768	417,930
Total cash available for operations	\$ 464,175	\$ 500,788	\$ 519,536	\$ 518,853	\$ 549,429	\$ 457,396	\$ 511,384	\$ 480,251
Maintenance and operating expense (5)(6)	\$ 245,147	\$ 262,668	\$ 255,507	\$ 252,745	\$ 268,745	\$ 283,557	\$ 314,715	\$ 254,506
Days in fiscal year	365	365	366	365	365	365	366	365
Daily cash requirement	\$ 672	\$ 720	\$ 698	\$ 692	\$ 736	\$ 777	\$ 860	\$ 697
Days funded	691	696	744	749	746	589	595	689
Total Airport System Cash and Investments	\$ 1,045,347	\$ 1,057,458	\$ 1,034,122	\$ 1,087,394	\$ 1,139,956	\$ 1,222,307	\$ 1,248,346	\$ 1,259,622

- (1) The funds are listed in order of availability; each fund must be fully depleted before the next can be used.
- (2) Available funding in the Airport System Revenue Fund on June 30th is transferred to the Airports Improvement Fund to comply with airport bond ordinances.
- (3) Excludes operating grant included in amount restricted for maintenance and operations on Statement of Net Position.
- (4) Excludes cash required for accrued liabilities and capital appropriations.
- (5) Excludes asset impairments and write-offs and expense incurred on cancelled capital projects. Includes interest expense for pension obligation bonds and the note payable to Southwest Airlines.
- (6) Maintenance and operating expense funded by cash available for operations decreased by \$60.2 million between FY2017 and FY2016, primarily due to a \$67.4 million decrease in pension expense associated with pension reform enacted in 2017. Without the reform, it is estimated that days funded at 6/30/2017 would be 557.**

All of the necessary appropriation data for years before FY2010 is not readily available; this table will be expanded to cover ten years as soon as data is available.

**AIRPORT INFORMATION
STATISTICAL SECTION**

	IAH		HOU		EFD (1)	
Location	22 miles N of downtown Houston		7 miles SE of downtown Houston		15 miles SE of downtown Houston	
Area	10,080.10 acres		1,501.9 acres		1,944.60 acres	
Elevation	97 MSL		46 MSL		32 MSL	
Airport Code	IAH		HOU		EFD	
Runways	8R-26L	9,402x150 ft	13L-31R	5,148x100 ft	17L-35R	4,609x 80 ft
	9-27	10,000x150 ft	13R-31L	7,602x150 ft	17R-35L	9,001x150 ft
	15L-33R	12,001x150 ft	17-35	6,000x150 ft	4-22	8,001x150 ft
	15R-33L	10,000x150 ft	4-22	7,602x150 ft		
	8L-26R	9,000x150 ft				
Terminal Space	Airlines	2,942,710 sf	Airlines	537,790 sf		
	Tenants	188,306 sf	Tenants	63,672 sf		
	Public/Common	769,716 sf	Public/Common	147,287 sf		n/a
	Mechanical	278,048 sf	Mechanical	115,815 sf		
	Other	<u>198,289</u> sf	Other	<u>47,615</u> sf		
	Total	4,377,069 sf	Total	912,179 sf		
Number of Gates/Hardstand Positions	128/7		30/n/a		n/a	
Commercial Airlines Apron	4,023,940 sf		681,239 sf		n/a	
Rental Car Facility	10 Rental Car Agencies		12 Rental Car Agencies		n/a	
Parking Spaces	S-T Hourly	15,320	S-T Hourly	5,601		
	L-T ECO	8,612	L-T ECO	934		n/a
	Employee	<u>2,030</u>	Employee	<u>871</u>		
	Total	25,962	Total	7,406		

Note 1: No scheduled commercial flights.

**EMPLOYEE STAFFING BY FUNCTION
STATISTICAL SECTION**

**Full time Equivalent (FTE)
Number of Employees (1)**

Department	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Administration	331.5	343.8	347.8	361.0	329.6	292.3	303.5	314.3	343.0	321.1
George Bush Intercontinental (IAH) Operations (2)	916.9	898.7	851.7	833.9	789.9	755.8	775.6	704.4	630.5	620.4
William P. Hobby (HOU) Operations (2)	309.9	331.6	314.7	300.8	266.6	264.1	260.1	245.6	246.3	244.2
Ellington Airport Operations (2)	28.9	30.7	30.5	30.8	28.9	27.3	29.5	27.7	25.4	25.8
Total FTE Employees	1,587.2	1,604.8	1,544.7	1,526.5	1,415.0	1,339.5	1,368.7	1,292.0	1,245.2	1,211.5

Note 1: A full-time employee is scheduled to work 2,080 hours per year (including vacation and sick leave). Full time equivalent employment is calculated by dividing total labor hours including overtime by 2,080. Human Resources, Police and Fire Operations are not included in employee counts for the Houston Airport System. They are provided by the City of Houston and paid for through interfund service charges. See Note #8 in the Notes to the Financial Statements.

Note 2: Includes Airside, Landside, Communication Center and Ground Transportation.

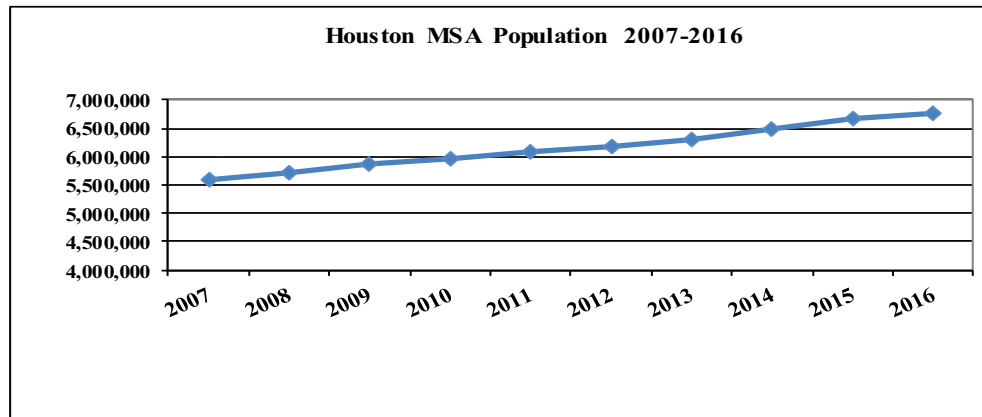
**SERVICE AREA/SERVICE AREA POPULATION/PRINCIPAL EMPLOYERS
STATISTICAL SECTION**

The primary service region for the Houston Airport System, the 9-county Houston-The Woodlands-Sugar Land Metropolitan Statistical Area ("MSA"), has a diverse economic base and is recognized as a major national and international energy, financial, medical, transportation, retail, and distribution center. The MSA extends out five additional counties of Matagorda, Trinity, Walker, Washington, and Wharton for the broader The Houston-The Woodlands Combined Statistical Area ("CSA"). According to U.S. Bureau of the Census, the population estimate was 6.77 million for the MSA and 6.97 million for the CSA as of July 1, 2016.

Houston, the nation's fourth most populous city, is the largest in the South and Southwest. The Houston MSA ranks fifth in population among the nation's metropolitan areas.

Service Area Population

<u>Year</u>	<u>Houston MSA Population</u>
2007	5,597,674
2008	5,726,705
2009	5,867,489
2010	5,946,800
2011	6,086,538
2012	6,177,035
2013	6,313,158
2014	6,490,180
2015	6,656,947
2016	6,772,470



**PRINCIPAL EMPLOYERS
Current Year and Nine Years Ago**

Employer	June 30, 2017			June 30, 2008		
	Employees	Rank	Percentage of Total City Employment	Employees	Rank	Percentage of Total City Employment
Walmart	37,000	1	3.18%			
Memorial Hermann Health System	24,108	2	2.07%	19,000	1	1.90%
HEB	23,732	3	2.04%			
University of Texas MD Anderson Cancer Center	21,086	4	1.81%	15,000	3	1.50%
McDonald's Corp	20,918	5	1.80%			
Houston Methodist	20,000	6	1.72%	9,991	7	1.00%
Kroger Company	16,000	7	1.38%	12,000	6	1.20%
United Airlines	14,941	8	1.28%			
Schlumberger Limited	12,069	9	1.04%			
Shell Oil Company	11,507	10	0.99%	13,000	4	1.30%
Continental Airlines, Inc.				16,000	2	1.60%
ARAMARK Corp.				8,500	10	0.85%
Baylor College of Medicine				9,143	8	0.91%
Hewlett-Packard Corporation				9,000	9	0.90%
University of Tx Medical Branch at Galveston				12,318	5	1.23%
Total :	201,361		17.31%	123,952		12.39%

SOURCE: GHP Houston Facts-2017; Here is Houston Facts (9/6/2017)

Employers excludes school districts and city, county, state and federal governments.
Employee numbers are for the ten-county region, not the city only.
Employee may live outside the City.

Total Houston Residents employed regardless of where they work:

June 2017 Local Area Unemployment Statistics, Bureau of Labor Statistics	2017	1,163,299
June 2008 Texas Workplace Commission	2008	999,582

**DEMOGRAPHIC AND ECONOMIC
STATISTICAL SECTION**

Fiscal Year	Population (1)	Personal Income (in thousands) (2)	Per Capital Personal Income (2)	Median Age (2)	Education Level in Years of Formal Schooling (2)	School Enrollment (2)	Average Unemployment Rate (percentage) (3)
2008	2,208,180	\$ 54,306,140	\$ 26,836	32.8	Not available	811,154 (5)	4.2 (2)
2009	2,244,615	\$ 57,795,120	\$ 25,563	32.9	13.2	520,118 (6)	5.9 (2)
2010	2,257,926	\$ 51,886,111	\$ 24,623	32.8	12.4	525,506 (6)	7.0 (2)
2011	2,099,451 (11)	Not available	\$ 26,109	32.2	12.7	560,316 (6)	8.2 (7)
2012	2,145,146	Not available	\$ 26,179 (8)	33.2 (9)	13.0 (9)	576,020 (8)	7.5 (10)
2013	2,160,821	Not available	\$ 26,849 (8)	32.1 (8)	13.0 (6), (8)	548,061 (6)	6.5 (7)
2014	2,195,914	Not available	\$ 27,029 (8)	32.3 (8)	13.0 (8)	557,780 (8)	9.0 (8)
2015	2,239,558	Not available	\$ 27,305 (11)	32.4 (11)	13.0 (6), (8)	564,871 (8)	4.4 (12)
2016	2,296,224 (8)	Not available	\$ 27,938 (8)	32.6 (8)	13.0 (6), (8)	580,250 (8)	5.8 (10)
2017	2,303,482 (8)	Not available	\$ 28,503 (8)	32.6 (8)	13.1 (6), (8)	594,377 (8)	5.7 (10)

(1) Source: Population Estimate program, U. S. Census Bureau, as of the beginning of the fiscal year. (Fiscal year 2016 is as of July 1, 2015.)

(2) Source: American Community Survey, U. S. Census Bureau. (Fiscal year 2016 data is for calendar year 2015.)

(4) Source: Texas Workforce Commission

(5) School enrollment for the City of Houston is not available. The number reflects the Houston metropolitan area.

(6) School enrollment includes nursery school through graduate school.

(7) Source: Local Area Unemployment Statistics, Bureau of Labor Statistics Texas Workforce Commission

(8) Source: U. S. Census Bureau FactFinder

(9) This is the average for the MSA (Metropolitan Service Area).

(10) Source: Bureau of Labor Statistics

(11) Source: American FactFinder

(12) Source: Texas Labor Market TRACER

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Take-Off by Carter Ernst & Paul Kittelson

COMPLIANCE SECTION

COMPREHENSIVE ANNUAL FINANCIAL REPORT



**INDEPENDENT AUDITORS' REPORT ON COMPLIANCE WITH
REQUIREMENTS APPLICABLE TO THE PASSENGER FACILITY
CHARGE PROGRAM AND ON INTERNAL CONTROL OVER
COMPLIANCE IN ACCORDANCE WITH REQUIREMENTS ISSUED BY
THE FEDERAL AVIATION ADMINISTRATION**

To the Honorable Mayor, Members of City Council
and City Controller of the City of Houston, Texas

Report on Compliance

We have audited the City of Houston, Texas ("the City") compliance with the types of compliance requirements described in the *Passenger Facility Charge Audit Guide for Public Agencies*, issued by the Federal Aviation Administration ("the Guide"), that could have a direct and material effect on its Passenger Facility Charge ("PFC") Program for the year ended June 30, 2017.

Management's Responsibility

Management is responsible for compliance with the requirements of laws, regulations, contracts and grants applicable to its PFC.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for the City's PFC program based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the Guide. Those standards and the Guide require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on the PFC program occurred. An audit includes examining, on a test basis, evidence about the City's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for the PFC program; however, our audit does not provide a legal determination on the City's compliance.

To the Honorable Mayor, Members of City Council
and City Controller of the City of Houston, Texas
November 20, 2017

Opinion

In our opinion, the City complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on the PFC program for the year ended June 30, 2017.

Report on Internal Control over Compliance

Management of the City is responsible for establishing and maintaining effective internal control over compliance with the requirements referred to above. In planning and performing our audit of compliance, we considered the City's internal control over compliance with the types of requirements that could have a direct and material effect on the PFC program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for the PFC program and to test and report on internal control over compliance in accordance with the Guide, but not for the purpose of expressing an opinion of the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the City's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or to detect and correct, noncompliance with a type of compliance requirement of the Guide on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of the Guide will not be prevented, or detected and corrected, on a timely basis. *A significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a PFC program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.


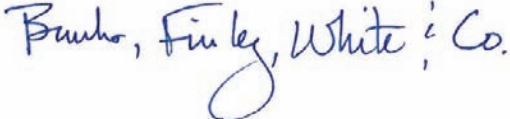
Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weakness or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Guide. Accordingly, this report is not suitable for any other purpose.

To the Honorable Mayor, Members of City Council
and City Controller of the City of Houston, Texas
November 20, 2017

Report on Passenger Facility Charge Revenues and Disbursements Schedules

We have audited the basic financial statements of the City, as of and for the year ended June 30, 2017, and have issued our report thereon dated November 20, 2017, which contained an unmodified opinion on those financial statements and a reference to other auditors. Our audit was performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying passenger facility charge revenues and disbursements schedules are presented for purposes of additional analysis as required by the Guide and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the passenger facility charge revenues and disbursements schedules are fairly stated in all material respects in relation to the financial statements as a whole.

November 20, 2017

CITY OF HOUSTON, TEXAS
PASSENGER FACILITY CHARGE REVENUES AND DISBURSEMENTS SCHEDULE
CITY OF HOUSTON AIRPORT SYSTEM
WILLIAM P. HOBBY AIRPORT (HOU)
For the Year Ended June 30, 2017

	June 30, 2016	Quarter 1	Quarter 2	Quarter 3	Quarter 4	FY 2017	June 30, 2017
	Program Total	Jul-Sept	Oct-Dec	Jan-Mar	Apr-Jun	Total	Program Total
REVENUES							
Collections (Note 3)	\$ 133,432,136	6,182,224	5,654,398	5,763,785	6,463,188	24,063,595	\$ 157,495,731
Interest	2,377,197	119,323	146,352	139,622	93,016	498,313	2,875,510
Total Revenues	<u>135,809,333</u>	<u>6,301,547</u>	<u>5,800,750</u>	<u>5,903,407</u>	<u>6,556,204</u>	<u>24,561,908</u>	<u>160,371,241</u>
DISBURSEMENTS							
1.01 Rehab Runways	2,857,271	-	29,676	-	161,028	190,704	3,047,975
1.02 Rehab & Modification to Taxiways	13,429,853	-	72,462	-	342,696	415,158	13,845,011
1.03 Expand Taxiway Electrical System	3,220,026	-	-	-	-	-	3,220,026
1.04 Arpt Drainage & Stormwater Improvs	3,366,230	-	73,830	-	196,732	270,562	3,636,792
1.05 Acquire Runway 17 Protection Zone	487,746	-	6,047	-	23,968	30,015	517,761
1.06 Airfield Lighting & Control	7,062,960	-	30,010	-	35,020	65,030	7,127,990
1.07 Central Terminal Expansion	25,224,594	-	279,037	-	1,084,292	1,363,329	26,587,923
1.08 Conduct Master Plan	393,948	-	-	-	-	-	393,948
1.09 Central Concourse Equipment	12,541,851	-	106,035	-	200,936	306,971	12,848,822
1.10 Apron Reconstruction	2,505,217	-	129,987	-	221,388	351,375	2,856,592
1.11 Taxiway & Taxilane Reconstruction	5,244,390	-	272,112	-	463,452	735,564	5,979,954
1.12 Overlay Runway 12R/30L	5,047,388	-	33,092	-	52,231	85,323	5,132,711
1.13 Perimeter Fencing & Obstruction	1,509,231	-	1,266	-	1,999	3,265	1,512,496
1.14 Access Controls & Telecom	479,939	-	37,288	-	58,856	96,144	576,083
1.15 Environmental Impact Statement	200,576	-	5,737	-	15,081	20,818	221,394
1.16 Land Acquisition RW4 RPZ	565,283	-	1,877	-	8,878	10,755	576,038
1.17 Drainage/Stormwater Plan	1,375,000	-	-	-	-	-	1,375,000
1.18 PFC Consulting, Admin, Audit	97,621	-	-	-	-	-	97,621
Subtotal HOU 1.00 Projects	<u>85,609,124</u>	<u>-</u>	<u>1,078,456</u>	<u>-</u>	<u>2,866,557</u>	<u>3,945,013</u>	<u>89,554,137</u>
2.03 International Terminal - Roadways	-	-	-	3,295,421	-	3,295,421	3,295,421
2.04 Elevated passenger walkway	-	-	-	449,304	-	449,304	449,304
2.05 Satellite utilities plant - Phase I	-	-	-	1,458,059	-	1,458,059	1,458,059
2.07 Central concourse expansion	-	-	-	25,815,725	9,662,512	35,478,237	35,478,237
2.08 Explosive detection baggage equip.	-	-	-	5,295,282	-	5,295,282	5,295,282
2.09 Partial reconstruction R/W 4-22	-	-	-	-	1,407,091	1,407,091	1,407,091
2.10 Partial reconstruction Taxiway C	-	-	-	-	356,727	356,727	356,727
2.11 Partial reconstruct NE perimeter rd	-	-	-	-	218,000	218,000	218,000
Subtotal HOU 2.00 Projects	<u>-</u>	<u>-</u>	<u>-</u>	<u>36,313,791</u>	<u>11,644,330</u>	<u>47,958,121</u>	<u>47,958,121</u>
Total Disbursements	<u>85,609,124</u>	<u>-</u>	<u>1,078,456</u>	<u>36,313,791</u>	<u>14,510,887</u>	<u>51,903,134</u>	<u>137,512,258</u>
Net PFC Revenues	\$ 50,200,209	6,301,547	4,722,294	(30,410,384)	(7,954,683)	(27,341,226)	\$ 22,858,983
PFC Account Balance	\$ 50,200,209	56,501,756	61,224,050	30,813,666	22,858,983	22,858,983	\$ 22,858,983

See Notes to the Passenger Facility Charge Revenues and Disbursements Schedules.

CITY OF HOUSTON, TEXAS
PASSENGER FACILITY CHARGE REVENUES AND DISBURSEMENTS SCHEDULE
CITY OF HOUSTON AIRPORT SYSTEM
GEORGE BUSH INTERCONTINENTAL AIRPORT (IAH)
For the Year Ended June 30, 2017

	<u>June 30, 2016</u> <u>Program Total</u>	<u>Quarter 1</u> <u>Jul-Sept</u>	<u>Quarter 2</u> <u>Oct-Dec</u>	<u>Quarter 3</u> <u>Jan-Mar</u>	<u>Quarter 4</u> <u>Apr-Jun</u>	<u>FY 2017</u> <u>Total</u>	<u>June 30, 2017</u> <u>Program Total</u>
REVENUES							
Collections (Note 3)	\$ 414,050,383	20,243,899	18,318,552	18,337,414	14,746,122	71,645,987	\$ 485,696,370
Interest	5,534,572	335,480	414,520	426,512	396,201	1,572,713	7,107,285
Total Revenues	<u>419,584,955</u>	<u>20,579,379</u>	<u>18,733,072</u>	<u>18,763,926</u>	<u>15,142,323</u>	<u>73,218,700</u>	<u>492,803,655</u>
DISBURSEMENTS							
1.01 Automated People Mover System	135,387,173	256,026	4,709,961	171,600	16,092,071	21,229,658	156,616,831
1.02 Terminal B Expansion & Improvements	33,539,948	-	866,512	51,667,000	5,043,499	57,577,011	91,116,959
1.03 Central FIS Facility	66,759,283	-	2,370,715	-	6,612,291	8,983,006	75,742,289
1.04 North Parallel Runway 8L/26R	23,925,688	-	1,008,486	-	2,012,648	3,021,134	26,946,822
1.05 Administrative Costs	112,917	-	-	-	-	-	112,917
1.06 Central Plant HVAC Upgrades	8,261,805	-	377,579	-	4,859,401	5,236,980	13,498,785
1.07 Terminal A/B South Taxiways	10,457,702	-	404,715	-	1,087,999	1,492,714	11,950,416
Total Disbursements	<u>278,444,516</u>	<u>256,026</u>	<u>9,737,968</u>	<u>51,838,600</u>	<u>35,707,909</u>	<u>97,540,503</u>	<u>375,985,019</u>
Net PFC Revenues	<u>\$ 141,140,439</u>	<u>20,323,353</u>	<u>8,995,104</u>	<u>(33,074,674)</u>	<u>(20,565,586)</u>	<u>(24,321,803)</u>	<u>\$ 116,818,636</u>
PFC Account Balance	<u>\$ 141,140,439</u>	<u>161,463,792</u>	<u>170,458,896</u>	<u>137,384,222</u>	<u>116,818,636</u>	<u>116,818,636</u>	<u>\$ 116,818,636</u>

See Notes to the Passenger Facility Charge Revenues and Disbursements Schedules.

CITY OF HOUSTON, TEXAS
NOTES TO THE PASSENGER FACILITY CHARGE REVENUES
AND DISBURSEMENTS SCHEDULES
For the year ended June 30, 2017

NOTE 1 - PASSENGER FACILITY CHARGE PROGRAM

The Passenger Facility Charge ("PFC") was established by Title 49, United States Code ("U.S.C."), Section 40117, which authorizes the Secretary of Transportation (further delegated to the FAA Administrator) to approve the local imposition of an airport PFC of \$1, \$2, \$3, \$4, or \$4.50 per enplaned passenger for use on certain airport projects. Under Part 158, public agencies (as defined in the statute and regulation) controlling commercial service airports can apply to the FAA for authority to impose a PFC for use on eligible projects.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting - The accompanying passenger facility charge revenues and disbursements schedules present revenues received on a cash basis, while expenditures are reported based upon the allocation of costs to approved projects.

NOTE 3 - RECONCILIATION TO STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

Passenger facility charges are reported on an accrual basis in the City of Houston Airport System Fund Statement of Revenues, Expenses and changes in Net Position in the Comprehensive Annual Financial Report. Reporting standards adopted by the FAA require for purposes of the PFC Revenues and Disbursements Schedule such charges be reported on a cash basis. A reconciliation between cash collections and revenue reported on the accrual basis is as follows:

<u>Fiscal year 2017</u>	<u>William P. Hobby Airport</u>	<u>George Bush Intercontinental</u>	<u>Airport System Total</u>
Passenger Facility Charges:			
Cash collections per Revenues and Disbursements Schedule	\$ 24,063,595	\$ 71,645,987	\$ 95,709,582
Less prior year accrual	(2,213,634)	(7,330,056)	(9,543,690)
Add current year accrual	<u>2,338,353</u>	<u>13,034,554</u>	<u>15,372,907</u>
 Amounts per Statement of Revenues, Expenses and Changes in Net Position	 <u>\$ 24,188,314</u>	 <u>\$ 77,350,485</u>	 <u>\$ 101,538,799</u>

CITY OF HOUSTON, TEXAS
PASSENGER FACILITY CHARGE PROGRAM AUDIT SUMMARY
For the year ended June 30, 2017

- | | | |
|-----|---|---------------------------------|
| 1. | Type of report issued on PFC financial statements. | Unmodified |
| 2. | Type of report on PFC compliance. | Unmodified |
| 3. | Quarterly Revenues and Disbursements reconcile with submitted quarterly reports and reported un-liquidated revenue matches actual amounts. | ___ <u>X</u> ___ Yes ___ ___ No |
| 4. | PFC Revenues and Interest are accurately reported. | ___ <u>X</u> ___ Yes ___ ___ No |
| 5. | The Public Agency maintains a separate financial accounting record for each application. | ___ <u>X</u> ___ Yes ___ ___ No |
| 6. | Funds disbursed were for PFC-eligible items as identified in the FAA Decision to pay only for the allowable costs of the projects. | ___ <u>X</u> ___ Yes ___ ___ No |
| 7. | Monthly carrier receipts were reconciled with quarterly carrier reports. | ___ <u>X</u> ___ Yes ___ ___ No |
| 8. | PFC revenues were maintained in a separate interest-bearing capital account or commingled only with other interest-bearing airport capital funds. | ___ <u>X</u> ___ Yes ___ ___ No |
| 9. | Serving carriers were notified of PFC program actions/changes approved by the FAA. | ___ <u>X</u> ___ Yes ___ ___ No |
| 10. | Quarterly Reports were transmitted (or available via website) to remitting carriers. | ___ <u>X</u> ___ Yes ___ ___ No |
| 11. | The Public Agency is in compliance with Assurances 5, 6, 7 and 8. | ___ <u>X</u> ___ Yes ___ ___ No |
| 12. | Project design and implementation are carried out in accordance with Assurance 9. | ___ <u>X</u> ___ Yes ___ ___ No |
| 13. | Program administration is carried out in accordance with Assurance 10. | ___ <u>X</u> ___ Yes ___ ___ No |
| 14. | For those public agencies with excess revenue, a plan for the use of this revenue has been submitted to the FAA for review and concurrence. | ___ <u>X</u> ___ Yes ___ ___ No |

**CITY OF HOUSTON, TEXAS
PASSENGER FACILITY CHARGE PROGRAM
SCHEDULE OF FINDINGS AND QUESTIONED COSTS
For the year ended June 30, 2017**

A. SUMMARY OF AUDITORS' RESULTS

- 1) There were no material weaknesses identified during the audit of the passenger facility charge program.
- 2) There were no significant deficiencies identified during the audit of the passenger facility charge program.
- 3) The auditors' report on compliance for the passenger facility charge program expresses an unmodified opinion.

B. FINDINGS AND QUESTIONED COSTS

None

APPENDIX C-1

GLOSSARY OF TERMS AND EXCERPTS OF THE MASTER ORDINANCE

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APPENDIX C-1

GLOSSARY OF TERMS AND EXCERPTS OF THE MASTER ORDINANCE

Glossary of Terms

“Act” means, collectively, Chapters 1201-1205, 1207, 1371, and 1503, Texas Government Code, as amended.

“Additional Senior Lien Bonds” means the additional senior lien revenue bonds and obligations permitted to be issued by the City pursuant to Section 5.01 of the Master Ordinance.

“Additional Senior Lien Notes” means the additional senior lien revenue notes permitted to be issued by the City pursuant to Section 5.01 of the Master Ordinance.

“Additional Senior Lien Obligations” means Additional Senior Lien Bonds and/or Additional Senior Lien Notes.

“Additional Subordinate Lien Bonds” means the additional subordinate lien revenue bonds, notes and obligations permitted to be issued by the City pursuant to Section 5.01 of the Master Ordinance.

“Airports Improvement Fund” means the fund described in Section 3.14 of the Master Ordinance.

“Airport Management Consultant” means a nationally recognized independent firm, person or corporation having a widely known and favorable reputation for special skill, knowledge and experience in methods of development, operation, financing and management of airports of approximately the same size as the properties constituting the Airport System.

“Airport Obligations” means any or all of the Bonds and Inferior Lien Bonds.

“Airport System” means all airport, heliport and aviation facilities, or any interest therein, now or from time to time hereafter owned, operated or controlled in whole or in part by the City, together with all properties, facilities and services thereof, and all additions, extensions, replacements and improvements thereto, and all services provided or to be provided by the City in connection therewith, but expressly excluding Special Facilities. The Airport System currently includes the present airports of the City, known as “George Bush Intercontinental Airport/Houston,” “William P. Hobby Airport,” and “Ellington Airport” (formerly known as “Ellington Field”).

“Authorized System Purposes” means, collectively, the purposes of establishing, improving, enlarging, extending and repairing the airports of the City or buildings, improvements, landing fields or other facilities or services which are necessary, desirable or convenient for the efficient operation and maintenance of the airports of the City, and acquiring land for the airports of the City, as further described by the Act.

“Aviation Director” means the Director of the Houston Airport System (a department of the City that operates the Airport System), or his successor or person acting in such capacity.

“Bonds” means any or all of the Senior Lien Bonds, Senior Lien Notes, and the Subordinate Lien Bonds, as the context may indicate, including Completion Bonds and Short Term/Demand Obligations.

“Business Day” means any day other than a Saturday, Sunday or other day on which the New York Stock Exchange is closed or on which banks are authorized or required to be closed in any of the City of Houston, Texas, the City of New York, New York, or any other municipality in which the principal office of the applicable Paying Agent/Registrar is located.

“City” means the City of Houston, Texas, and, where appropriate, the City Council thereof, or any successor thereto as the owner and operator of the Airport System.

“Completion Bonds” means each series of Bonds permitted to be issued by the City pursuant to Section 5.03 of the Master Ordinance.

“Credit Agreement” means any agreement between the City and a third party financial institution pursuant to which such third party financial institution issues a letter of credit, municipal bond insurance policy, line of credit, standby bond purchase agreement, surety policy, surety bond or other guarantee for the purpose of enhancing the creditworthiness or liquidity of any of the City’s obligations pursuant to any Airport Obligations or Qualified Hedge Agreements and in consideration for which the City may agree to pay, but solely from Net Revenues as provided herein, (i) periodic payments for the availability of such Credit Agreement and/or (ii) reimbursements or repayments of any amounts advanced under such Credit Agreement, together with interest and other stipulated costs and charges related to such amounts advanced. Obligations of the City pursuant to a Credit Agreement shall be deemed to be, and shall be included within, the Debt Service Requirements for the series of Airport Obligations to which the Credit Agreement relates. Further, obligations of the City to make payments under a Credit Agreement as reimbursements or repayments of amounts paid or advanced under such Credit Agreement for interest on or principal of any Airport Obligations (including interest and other stipulated costs and charges related to such amounts advanced) shall be deemed to be payments of interest on or principal of such Airport Obligations. Each Credit Agreement (and related Credit Agreement Obligations) shall be deemed to be a part of the Airport Obligations of the series to which it relates for the purpose of securing its payment or repayment by the pledge of Net Revenues as provided in Articles III, V and VI of the Master Ordinance. However, unless otherwise provided in any Supplemental Ordinance, issuers of Credit Agreements shall not be treated as Owners of Airport Obligations for purposes of any voting rights to approve amendments or to direct the exercise of any remedies under the Master Ordinance.

“Credit Agreement Obligations” means Airport Obligations held by or on behalf of the provider of a credit or liquidity facility in the form of a credit agreement loan, credit agreement note or other obligation of a provider of a Credit Agreement.

“Debt Service Requirements” means, as of any date of calculation, an amount equal to the sum of the following for any period and with respect to all or any portion of the Airport Obligations:

A. Current interest scheduled to accrue during such period on such Airport Obligations, except to the extent that provision for the payment of such interest has been made by (i) appropriating for such purpose amounts sufficient to provide for the full and timely payment of such interest either from proceeds of Airport Obligations, from interest earned or to be earned thereon, from other Airport System funds other than Net Revenues, or from any combination of such sources and (ii) depositing such amounts (except in the case of interest to be earned, which shall be deposited as received) into a fund or account for capitalized interest, the proceeds of which are required to be transferred as needed into the Senior Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Interest and Sinking Fund or the Inferior Lien Bond Interest and Sinking Fund, as the case may be;

Plus

B. That portion of the principal amount of, or compounded interest on, such Airport Obligations scheduled to be payable on or before the next July 1 (either at maturity, by reason of amortization of bank bonds, or by reason of scheduled mandatory redemptions, but after taking into account all prior optional and mandatory bond redemptions) which would accrue if such principal amount were deemed to accrue daily in equal amounts from the next preceding July 1;

Less

C. In addition to (and without duplicating) the amounts credited under paragraph A. above, any portion or all of the interest on or principal of Airport Obligations which has been irrevocably committed by the City to be paid from other Airport System funds other than Net Revenues, including but not limited to PFC Revenues or Excluded Fee and Charge Revenues;

provided, however, that the following rules shall apply to the computation of Debt Service Requirements on certain series of Short Term/Demand Obligations and on any series of Airport Obligations bearing interest at a floating or variable rate:

For any series of Short Term/Demand Obligations issued pursuant to a commercial paper program or similar program, Debt Service Requirements shall be computed on the assumption that the principal amount shall continuously be refinanced under such program and remain outstanding until the first Fiscal Year for which interest on such Short Term/Demand Obligations has not been capitalized or otherwise funded or provided for, at which time (which shall not be beyond the term of such program) it shall be assumed that the outstanding principal amount thereof shall be refinanced with a series of Airport Obligations which shall be assumed to be amortized over a period not to exceed 25 years and shall be assumed to be amortized in such a manner that the maximum Debt Service Requirements in any twelve (12) month period shall not exceed 110% of the minimum Debt Service Requirements for any other twelve (12) month period, and shall be assumed to bear interest at a fixed interest rate estimated by the City's financial advisor or underwriter to be the interest rate such series of Airport Obligations would bear if issued on such terms on the date of such estimate;

For any series of Airport Obligations bearing interest at a variable or adjustable rate or a rate to be negotiated or revised from time to time such that the actual future rate of interest thereon cannot be ascertained at the time of calculation, it shall be assumed that such Airport Obligations will bear interest at the higher of (1) a long-term interest rate estimated by the City's financial advisor or underwriter to be the average rate of interest such Airport Obligations would bear if issued as long-term bonds bearing interest at fixed interest rates to be amortized over 30 years with level debt service or (2) a short-term interest rate calculated as follows: (a) for any series of Airport Obligations then Outstanding, at the greater of (i) the average interest rate derived from the variable or adjustable interest rate formula or computation applicable to, or average interest rate borne by, such series of Airport Obligations during a twelve (12) month period ending within 30 days prior to the date of computation or (ii) the actual interest rate derived from such variable or adjustable interest rate formula or computation, or the actual interest rate payable on such series of Airport Obligations, on the date of such calculation, and (b) for any series of Airport Obligations then proposed to be issued, at an interest rate estimated by the City's financial advisor or underwriter to be the average rate of interest such series of Airport Obligations will bear during the period or periods for which the Debt Service Requirements are being calculated.

Debt Service Requirements shall be calculated on the assumption that no Airport Obligations Outstanding on the date of calculation will cease to be Outstanding except by reason of the payment of scheduled principal maturities or scheduled mandatory redemptions of such Airport Obligations, except as provided above for Short Term/Demand Obligations.

Credit Agreements shall cause Debt Service Requirements to be increased only to the extent of scheduled payments and charges for the availability of the Credit Agreement without regard to any repayment or reimbursement obligations or interest thereon or other stipulated costs or charges related thereto.

Qualified Hedge Agreements shall cause Debt Service Requirements to be (i) increased by the amount of any scheduled payments and charges for the availability of the Qualified Hedge Agreement, (ii) decreased by the amount of any scheduled interest payments on the related Airport Obligations which the City's financial advisor certifies to be substantially hedged pursuant to the Qualified Hedge Agreement, and (iii) increased by the gross payments of the City under the Qualified Hedge Agreement (without regard to netting); provided, however, that any variable or adjustable payment obligation of the City under the Qualified Hedge Agreement shall be deemed to be a fixed rate obligation based upon the provisions contained in paragraph (ii) of the definition of Debt Service Requirements, as certified by the City's financial advisor.

"Excluded Fee and Charge Revenues" means all income and revenues derived from fees and charges imposed by any City ordinance adopted after July 1, 2007 and declared in such ordinance to constitute fees and charges of the kind that will generate Excluded Fee and Charge Revenues. Such Excluded Fee and Charge Revenues may be authorized pursuant to any federal, state or local authority and may include, but not be limited to,

any charge or fee relating to providing, enhancing or maintaining security for the Airport System or any fee or charge imposed on any commercial cargo activity of the Airport System.

“Federal Payments” means those funds received by the Airport System from the federal government or any agency thereof as payments for the use of any facilities or services of the Airport System.

“Fiscal Year” means the City’s fiscal year as from time to time designated by the City, which is currently July 1 to June 30.

“Funds” means any fund or account established or maintained under the Master Ordinance, including but not limited to the Revenue Fund, the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund and the accounts created therein, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund and the accounts created therein, the Inferior Lien Bond Interest and Sinking Fund, the Inferior Lien Bond Reserve Fund and the accounts created therein, the Operation and Maintenance Reserve Fund, the Renewal and Replacement Fund and the Airports Improvement Fund.

“Gross Revenues” means all income and revenues derived directly or indirectly by the City from the operation and use of and otherwise pertaining to the Airport System, or any part thereof, whether resulting from extensions, enlargements, repairs, betterments or other improvements to the Airport System, or otherwise, and includes, except to the extent hereinafter expressly excluded, all revenues received by the City from the Airport System, including, without limitation, all rentals, rates, fees and other charges for the use of the Airport System, or for any service rendered by the City in the operation thereof, interest and other income realized from the investment or deposit of amounts credited to any fund required to be maintained pursuant to the Master Ordinance or any other ordinance authorizing the issuance of Airport Obligations. Gross Revenues expressly exclude:

- (i) proceeds of any Airport Obligations;
- (ii) interest or other investment income derived from Airport Obligation proceeds deposited to the credit of any construction fund, or applied to fund capitalized interest, or interest or investment income required to be retained in the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Reserve Fund, the Operation and Maintenance Reserve Fund or any escrow fund in order to accumulate therein any amount or balance required to be accumulated or maintained therein pursuant to any ordinance authorizing any series of Airport Obligations;
- (iii) any monies received as grants, appropriations, or gifts, the use of which is limited by the grantor or donor to the construction or acquisition of Airport System facilities, except to the extent any such monies shall be received as payments for the use of the Airport System facilities;
- (iv) any revenues derived from any Special Facilities which are pledged to the payment of Special Facilities Bonds;
- (v) insurance proceeds other than loss of use or business interruption insurance proceeds;
- (vi) the proceeds of any passenger facility charge or other per-passenger charge as may be hereafter authorized under federal law, including, but not limited to, those revenues defined as PFC Revenues;
- (vii) sales and other taxes collected by the Airport System on behalf of the State of Texas and any other taxing entities;
- (viii) Federal Payments received by the Airport System unless the City first receives an opinion from nationally recognized bond counsel to the effect that such payments, if included in Gross Revenues, would not cause the interest on the Airport Obligations to be includable within the gross income of the Owners thereof for federal income tax purposes;

(ix) the net proceeds received by the City from the disposition of any Airport System property;

(x) any Excluded Fee and Charge Revenues; and

(xi) any Taxable Bond Credit Revenues.

“Inferior Lien Bonds” means each series of inferior lien bonds Outstanding from time to time issued pursuant to the Prior Ordinances or any additional Inferior Lien Bonds issued pursuant to a Supplemental Ordinance payable from and secured in whole or in part by a lien on and pledge of Net Revenues junior and subordinate to the lien on Net Revenues securing payment of the Senior Lien Obligations and Subordinate Lien Bonds.

“Net Revenues” means that portion of the Gross Revenues remaining after the deduction of the Operation and Maintenance Expenses.

“Operation and Maintenance Expenses” means all reasonable and necessary current expenses of the City, paid or accrued, of operating, maintaining and repairing the Airport System, including, without limitation, those reasonably allocated City overhead expenses relating to the administration, operation and maintenance of the Airport System; insurance and fidelity bond premiums; payments to pension and other funds and to any self insurance fund not in excess of premiums which would otherwise be required for such insurance; any general and excise taxes or other governmental charges imposed by entities other than the City; costs of contractual and professional services, labor, materials and supplies for current operations, including the costs of such direct City services rendered to the Airport System as are requested from the City by the Airport System and as are reasonably necessary for the operation of the Airport System; costs of issuance of Airport Obligations for the Airport System (except to the extent paid from the proceeds thereof); fiduciary costs; costs of collecting and refunding Gross Revenues; utility costs; any lawful refunds of any Gross Revenues; and all other administrative, general and commercial expenses, but excluding:

(a) any allowance for depreciation;

(b) costs of capital improvements;

(c) reserves for major capital improvements, Airport System operations, maintenance or repair;

(d) any allowance for redemption of, or payment of interest or premium on, Airport Obligations;

(e) any liabilities incurred in acquiring or improving properties of the Airport System;

(f) expenses of lessees under Special Facilities Leases and operation and maintenance expenses pertaining to Special Facilities to the extent they are required to be paid by such lessees pursuant to the terms of the Special Facilities Leases;

(g) any charges or obligations incurred in connection with any lawful Airport System purpose, including the lease, acquisition, operation or maintenance of any facility or property benefiting the Airport System, provided that the payment of such charges or obligations is expressly agreed by the payee to be payable solely from proceeds of the Airports Improvement Fund;

(h) liabilities based upon the City’s negligence or other grounds not based on contract; and

(i) so long as Federal Payments are excluded from Gross Revenues, an amount of expenses that would otherwise constitute Operation and Maintenance Expenses for such period equal to the Federal Payments for such period.

Operation and Maintenance Expenses shall only include those current expenses due or payable within the next 30 days.

“Outstanding” when used with reference to the Senior Lien Bonds, Senior Lien Notes, Subordinate Lien Bonds, or Inferior Lien Bonds, as the case may be, means, as of a particular date, all such bonds or notes theretofore and thereupon delivered except: (a) any such bond or note cancelled by or on behalf of the City at or before said date; (b) any such bond or note defeased pursuant to the defeasance provisions of the ordinance authorizing its issuance, or otherwise defeased as permitted by applicable law; and (c) any such bond or note in lieu of or in substitution for which another bond or note shall have been delivered pursuant to the ordinance authorizing the issuance of such bond or note.

“Owner” or “Registered Owner,” when used with respect to any Airport Obligation, means the person or entity in whose name such bond or note is registered in the register maintained by the paying agent for such series of bonds or notes. Any reference to a particular percentage or proportion of the Owners shall mean the Owners at a particular time of the specified percentage or proportion in aggregate principal amount of all Senior Lien Bonds, Senior Lien Notes, Subordinate Lien Bonds or Inferior Lien Bonds then Outstanding under the Master Ordinance and any Supplemental Ordinance authorizing their issuance.

“PFC Revenues” means, during any Fiscal Year, proceeds of any charges and fees collected by the Airport System, including passenger facility 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 to any component of the Airport System, and interest earnings thereon.

“Prior Ordinances” means City Ordinance Nos: 98-904, 2000-878, 2002-656, 2007-287, 2009-600, 2010-893, 2011-484, 2012-100, 2013-1064 and 2015-1004, pursuant to which the City has previously issued certain bonds, notes and obligations secured by and payable from the Net Revenues.

“Qualified Hedge Agreement” means any agreement between the City and a qualifying financial institution (as described in the following sentence) for the purpose of providing an interest rate swap, exchange, cap, collar, floor, forward or other hedging mechanism, arrangement or security, however denominated, expressly identified pursuant to its terms as being entered into in connection with and in order to hedge interest rate fluctuations on any portion of any Airport Obligations and in consideration for which the City may agree to pay, but solely from Net Revenues as herein provided, (i) periodic payments for the availability of such Qualified Hedge Agreement and/or (ii) net amounts as a result of fluctuation in hedged interest rates or in the value of any index of payment and/or (iii) termination charges. A Qualified Hedge Agreement may only be entered into with a financial institution that has long-term credit ratings or the obligations of which are unconditionally guaranteed by a financial institution with long-term credit ratings in one of the two highest generic rating categories by two of the nationally recognized rating services then rating the Airport Obligations. Obligations of the City pursuant to a Qualified Hedge Agreement shall be included within the definition of Debt Service Requirements for the series of Airport Obligations to which the Qualified Hedge Agreement relates. Further, obligations of the City to make payments under a Qualified Hedge Agreement derived from or resulting from a fluctuation in hedged interest rates or in the value of any index of payment shall be deemed to be payments of interest on the Airport Obligations so hedged. Each Qualified Hedge Agreement shall be deemed to be a part of the Airport Obligations of the series to which it relates for the purpose of securing its payment by the pledge of Net Revenues as provided in Articles III, V and VI of the Master Ordinance. However, issuers of and counterparties to Qualified Hedge Agreements shall not be treated as Owners of Airport Obligations for purposes of any voting rights to approve amendments or direct the exercise of any remedies under the Master Ordinance.

“Renewal and Replacement Fund” means the fund described in Section 3.13 of the Master Ordinance.

“Renewal and Replacement Fund Requirement” means Ten Million Dollars (\$10,000,000) or any greater amount required by any Supplemental Ordinance.

“Reserve Fund Non-Participants” means, with respect to any Airport Obligations, any series designated as “Reserve Fund Non-Participants” and secured by a lien on an account of the applicable reserve fund that is created and held for the sole benefit of that series of Airport Obligations.

“Reserve Fund Participants” means:

(i) with respect to Senior Lien Bonds, any series of Senior Lien Bonds designated by the City as “Reserve Fund Participants” and secured by a lien on the Senior Lien Bond Reserve Fund Participant Account of the Senior Lien Bond Reserve Fund, and

(ii) with respect to Senior Lien Notes, any series of Senior Lien Notes secured by a lien on the Senior Lien Note Reserve Fund Participant Account of the Senior Lien Bond Reserve Fund, and

(iii) with respect to the Subordinate Lien Bonds, any series of Subordinate Lien Bonds designated by the City as “Reserve Fund Participants” and secured by a lien on the Subordinate Lien Bond Reserve Fund Participant Account of the Subordinate Lien Bond Reserve Fund, and

(iv) with respect to the Inferior Lien Bonds, any series of Inferior Lien Bonds designated by the City as “Reserve Fund Participants” and secured by a lien on the Inferior Lien Bond Reserve Fund Participant Account of the Inferior Lien Bond Reserve Fund.

“Reserve Fund Requirement” means the amount required to be maintained in the Senior Lien Bond Reserve Fund (and the accounts therein), the Subordinate Lien Bond Reserve Fund (and the accounts therein), or the Inferior Lien Bond Reserve Fund (and the accounts therein), as the case may be, as further set forth in the applicable Supplemental Ordinance and/or officers pricing certificate authorizing one or more series of Airport Obligations. Upon the issuance of any series of Airport Obligations, the amount of the Reserve Fund Requirement for such Airport Obligations shall be as set forth in the related Supplemental Ordinance or officers pricing certificate.

A. For Senior Lien Notes, such amount shall be computed and recomputed upon the issuance of each series of Senior Lien Notes to be the arithmetic average of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Senior Lien Notes then Outstanding, including the series of Senior Lien Notes then being issued.

B. For Senior Lien Bonds that are Reserve Fund Participants, such amount shall be computed upon the issuance of each series of Senior Lien Bonds that are Reserve Fund Participants and on each date on which Senior Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Senior Lien Bonds then Outstanding that are Reserve Fund Participants.

C. For any series of Senior Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Senior Lien Bonds and on each date on which any of such series of Senior Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for such Senior Lien Bonds then Outstanding.

D. For Subordinate Lien Bonds that are Reserve Fund Participants, such amount shall be computed and recomputed upon the issuance of each series of Subordinate Lien Bonds that are Reserve Fund Participants and on each date on which Subordinate Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Subordinate Lien Bonds then Outstanding that are Reserve Fund Participants, including any series of Subordinate Lien Bonds then being issued that are Reserve Fund Participants.

E. For any series of Subordinate Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Subordinate Lien Bonds and on each date on which any of such series of Subordinate Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for such series of Subordinate Lien Bonds then Outstanding.

F. For Inferior Lien Bonds that are Reserve Fund Participants, such amount shall be computed and recomputed upon the issuance of each series of Inferior Lien Bonds that are Reserve Fund Participants and on each date on which Inferior Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Inferior Lien Bonds then Outstanding that are Reserve Fund Participants, including any series of Inferior Lien Bonds then being issued that are Reserve Fund Participants.

G. For any series of Inferior Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Inferior Lien Bonds and on each date on which any of such series of Inferior Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for such series of Inferior Lien Bonds then Outstanding.

“Senior Lien Bonds” means each series of senior lien bonds Outstanding from time to time issued pursuant to the Prior Ordinances or any Additional Senior Lien Bonds issued pursuant to a Supplemental Ordinance payable from and secured by a lien on and pledge of Net Revenues.

“Senior Lien Notes” means each series of senior lien notes Outstanding from time to time issued pursuant to the Prior Ordinances or any Additional Senior Lien Notes issued pursuant to a Supplemental Ordinance payable from and secured by a lien on and pledge of Net Revenues.

“Senior Lien Obligations” means either or both of the Senior Lien Bonds and the Senior Lien Notes, as applicable.

“Short Term/Demand Obligations” means each series of bonds, notes and other obligations issued pursuant to Section 5.02 of the Master Ordinance, (a) the payment of principal of which is either (i) payable on demand by or at the option of the holder at a time sooner than a date on which such principal is deemed to be payable for purposes of computing Debt Service Requirements, or (ii) scheduled to be payable within one year from the date of issuance and is contemplated to be refinanced for a specified period or term through the issuance of additional Short Term/Demand Obligations pursuant to a commercial paper or other similar financing program, and (b) the purchase price, payment or refinancing of which is additionally secured by a letter of credit, line of credit, standby bond purchase agreement, bond insurance, surety bond or other credit or liquidity facility which does not impose upon the City a reimbursement obligation payable over a period shorter than three years.

“Special Facilities” means structures, hangars, aircraft overhaul, maintenance or repair shops, heliports, hotels, storage facilities, garages, in-flight kitchens, training facilities, consolidated rental car facilities, terminal facilities, cargo facilities and any and all other facilities and appurtenances being a part of or related to the Airport System, the cost of the construction or other acquisition of which is financed with the proceeds of Special Facilities Bonds.

“Special Facilities Bonds” means any bonds heretofore or from time to time hereafter issued by the City pursuant to Section 5.05 of the Master Ordinance.

“Special Facilities Lease” means any lease or agreement, howsoever denominated, pursuant to which Special Facilities are leased by the City to the lessee in consideration for which the lessee agrees to pay (i) all debt service on the Special Facilities Bonds issued to finance the Special Facilities (which payments are pledged to secure the Special Facilities Bonds) and (ii) the operation and maintenance expenses of the Special Facilities.

“Subordinate Lien Bond Interest and Sinking Fund” means the fund established pursuant to the Prior Ordinances and ratified, confirmed and maintained pursuant to Sections 3.04 and 3.08 of the Master Ordinance.

“Subordinate Lien Bond Reserve Fund” means the fund, including the accounts established therein, established pursuant to the Prior Ordinances and ratified, confirmed and maintained pursuant to Sections 3.04 and 3.09 of the Master Ordinance.

“Subordinate Lien Bond Reserve Fund Participant Account” means the account within the Subordinate Lien Bond Reserve Fund established pursuant to the Prior Ordinances and ratified, confirmed and maintained pursuant to Sections 3.04 and 3.09 of the Master Ordinance.

“Subordinate Lien Bond Reserve Fund Surety Policy” means, whether heretofore or hereafter acquired, for the purpose of satisfying all or any part of the Reserve Fund Requirement for the Subordinate Lien Bonds, any one or more of a surety bond, insurance policy or letter of credit in a principal amount equal to the amount required to be funded, provided that, at the time of deposit, either the rating for the long-term unsecured debt of the issuer of such surety bond, insurance policy or letter of credit or the rating for obligations insured, secured or guaranteed by such issuer are required to be in one of the two highest letter categories by at least one major municipal securities evaluation service (or, if such entities are no longer in existence, by comparable services) and which surety bond, insurance policy or letter of credit shall be payable on demand of the City for the benefit of the Owners of the Subordinate Lien Bonds that are secured thereby.

“Subordinate Lien Bonds” means each series of subordinate lien bonds Outstanding from time to time issued pursuant to the Prior Ordinances or any Additional Subordinate Lien Bonds issued pursuant to a Supplemental Ordinance payable from and secured by a lien on and pledge of Net Revenues junior and subordinate to the lien and pledge securing the Senior Lien Obligations.

“Taxable Bond Credit Revenues” means payments made to the City from the federal government or any agency or department thereof with respect to the return to the City of a portion of the interest paid by the City on any taxable Bonds, including but not limited to any such payments received pursuant to the American Recovery and Reinvestment Act of 2009 or any legislation in amendment or succession thereto.

Excerpts of the Master Ordinance

ARTICLE II

ESTABLISHMENT OF THE FINANCING PROGRAM

SECTION 2.01 MASTER ORDINANCE. This Master Ordinance hereby sets forth the terms, conditions, covenants and provisions for the security of obligations to be issued hereafter by the City for Authorized System Purposes and secured by a senior, subordinate or inferior lien on Net Revenues.

SECTION 2.02 SUPPLEMENTAL ORDINANCES. Each series of Airport Obligations issued hereafter shall be issued pursuant to the terms and conditions of this Master Ordinance and a Supplemental Ordinance that shall provide the specific terms, conditions, covenants and provisions relating to each such series of Airport Obligations, including, without limitation, (i) the authorization, issuance, sale, delivery, form, title, characteristics, interest rate(s) (which may be fixed, variable, adjustable or computed by any other method), (ii) the provisions for payment, redemption, transfer and exchange and any other matters related thereto (including, without limitation, matters related to the delegation of the sale to an authorized representative of the City and the execution and delivery of a Credit Agreement or Qualified Hedge Agreement, if any), (iii) the application of proceeds, (iv) the funding of any Reserve Fund Requirement and the designation of Reserve Fund Participants, if any, and (v) covenants relating to the federal income tax status.

ARTICLE III

SECURITY AND SOURCE OF PAYMENT FOR ALL BONDS

SECTION 3.01 PLEDGE AND SOURCE OF PAYMENT.

(a) The City hereby covenants and agrees that all Gross Revenues shall be deposited and paid into the special funds established under the Prior Ordinances and incorporated and confirmed herein for all purposes, and

shall be applied in the manner hereinafter set forth to provide for the payment of all Operation and Maintenance Expenses of the Airport System and all principal, interest and any redemption premiums on the Airport Obligations and all expenses of providing for their full and timely payment in accordance with their terms.

(b) The Senior Lien Obligations shall constitute special obligations of the City that shall be payable from, and shall be equally and ratably secured by a lien on, the Net Revenues. Such Net Revenues, together with certain proceeds of the Senior Lien Obligations or other lawfully available funds of the City, shall, in the manner herein provided, be set aside for and pledged to the payment of the Senior Lien Obligations in the Senior Lien Bond Interest and Sinking Fund and the Senior Lien Bond Reserve Fund as hereinafter provided. For the benefit of the Owners of the Senior Lien Obligations, the City hereby grants a lien on the Net Revenues and further grants a lien on the Senior Lien Bond Interest and Sinking Fund to secure the payment of principal of, redemption premium, if any, and interest on the Senior Lien Obligations and all expenses of providing for their full and timely payment in accordance with their terms. Additionally, to further assure the payment of principal of, redemption premium, if any, and interest on the Senior Lien Obligations:

(i) the City hereby grants a lien on the Senior Lien Note Reserve Fund Participant Account of the Senior Lien Bond Reserve Fund for the additional benefit of Owners of the Senior Lien Notes;

(ii) the City hereby grants a lien on the Senior Lien Bond Reserve Fund Participant Account of the Senior Lien Bond Reserve Fund for the additional benefit of Owners of the Senior Lien Bonds that are Reserve Fund Participants; and

(iii) the City has created a separate account and shall create one or more additional separate accounts within the Senior Lien Bond Reserve Fund and has granted and shall grant a lien on such account(s) for the additional benefit of the Owners of any one or more series of Senior Lien Bonds that are Reserve Fund Non-Participants.

Except with respect to the separate accounts of the Senior Lien Bond Reserve Fund described in this Section 3.01(b), all Senior Lien Obligations shall be in all respects on a parity with and of equal dignity with one another. The Owners of the Senior Lien Obligations shall never have the right to demand payment of either the principal of, interest on or any redemption premium on the Senior Lien Obligations out of any funds raised or to be raised by taxation.

(c) The Subordinate Lien Bonds shall constitute special obligations of the City that shall be payable from, and, subject to the prior and superior lien of the Senior Lien Obligations, shall be equally and ratably secured by a lien on, the Net Revenues. Such Net Revenues, together with certain proceeds of the Subordinate Lien Bonds or other lawfully available funds of the City, shall, in the manner herein provided, be set aside for and pledged to the payment of the Subordinate Lien Bonds in the Subordinate Lien Bond Interest and Sinking Fund and the Subordinate Lien Bond Reserve Fund as hereinafter provided. For the benefit of the Owners of the Subordinate Lien Bonds, the City hereby grants a lien on the Net Revenues (subject to the prior and superior lien of the Senior Lien Obligations) and further grants a lien on the Subordinate Lien Bond Interest and Sinking Fund to secure the payment of principal of, redemption premium, if any, and interest on the Subordinate Lien Bonds and all expenses of providing for their full and timely payment in accordance with their terms. Additionally, to further assure the payment of principal of, redemption premium, if any, and interest on the Subordinate Lien Bonds:

(i) the City hereby grants a lien on the Subordinate Lien Bond Reserve Fund Participant Account of the Subordinate Lien Bond Reserve Fund for the additional benefit of Owners of the Subordinate Lien Bonds that are Reserve Fund Participants; and

(ii) the City shall create one or more separate accounts within the Subordinate Lien Bond Reserve Fund and grant a lien on such account(s) for the additional benefit of the Owners of any one or more series of Subordinate Lien Bonds that are Reserve Fund Non-Participants.

Except with respect to the separate accounts of the Subordinate Lien Bond Reserve Fund described in this Section 3.01(c), all Subordinate Lien Bonds shall be in all respects on a parity with and of equal dignity with one another.

The Owners of the Subordinate Lien Bonds shall never have the right to demand payment of either the principal of, interest on or any redemption premium on the Subordinate Lien Bonds out of any funds raised or to be raised by taxation.

SECTION 3.02 ANNUAL BUDGET. So long as any Airport Obligations remain Outstanding, the Aviation Director shall, prior to the commencement of each Fiscal Year, prepare and deliver to the Mayor, for submission to the City Council, a recommended annual budget for the Airport System for such Fiscal Year which contains detailed estimates of Gross Revenues, Operation and Maintenance Expenses, Net Revenues and Debt Service Requirements for such Fiscal Year, classified in a manner consistent with the definitional and accounting requirements contained herein, and which contains a computation demonstrating that the estimate of Net Revenues set forth therein is in compliance with the rate covenant contained in Section 3.03 below. The City shall adopt annual budgets for the Airport System for each Fiscal Year, each of which shall contain an estimate of revenues and only such budgeted expenditures as will produce Net Revenues in an amount not less than the Net Revenues necessary to comply with the rate covenant in Section 3.03 below. After the adoption of the annual Airport System budget by the City, the total expenditures for Operation and Maintenance Expenses will not exceed the total expenditures authorized for such purposes by such budget, as it may from time to time be amended.

SECTION 3.03 RATE COVENANT.

(a) The City covenants that it will at all times fix, charge, impose and collect rentals, rates, fees and other charges for the use of the Airport System, and, to the extent it legally may do so, revise the same as may be necessary or appropriate, in order that in each Fiscal Year the Net Revenues will at all times be at least sufficient to equal the larger of either:

(i) all amounts required to be deposited in such Fiscal Year to the credit of the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund and the Inferior Lien Bond Reserve Fund; or

(ii) an amount not less than (1) 125% of the Debt Service Requirements for the Outstanding Senior Lien Obligations for such Fiscal Year, plus (2) 110% of the Debt Service Requirements for the Outstanding Subordinate Lien Bonds for such Fiscal Year, plus (3) 100% of the Debt Service Requirements for the Outstanding Inferior Lien Bonds for such Fiscal Year.

(b) If the Net Revenues in any Fiscal Year are less than the amounts specified above, the City, promptly upon receipt of the annual audit for such Fiscal Year, must request an Airport Management Consultant to make its recommendations, if any, as to a revision of the City's rentals, rates, fees and other charges, its Operation and Maintenance Expenses or the method of operation of the Airport System in order to satisfy as quickly as practicable the foregoing requirements. Copies of such request and the recommendations of the Airport Management Consultant, if any, shall be filed with the City Secretary. So long as the City substantially complies in a timely fashion with the recommendations of the Airport Management Consultant, the City will not be deemed to have defaulted in the performance of its duties under this Master Ordinance even if the resulting Net Revenues are not sufficient to be in compliance with the covenant set forth above, so long as there is no other default hereunder.

SECTION 3.04 SPECIAL FUNDS.

(a) The following special funds have been established pursuant to the Prior Ordinances and are hereby ratified and confirmed, and shall be maintained and accounted for as hereinafter provided so long as any of the Airport Obligations remain Outstanding:

(i) Revenue Fund;

(ii) Senior Lien Bond Interest and Sinking Fund;

- (iii) Senior Lien Bond Reserve Fund;
- (iv) Subordinate Lien Bond Interest and Sinking Fund;
- (v) Subordinate Lien Bond Reserve Fund;
- (vi) Inferior Lien Bond Interest and Sinking Fund;
- (vii) Inferior Lien Bond Reserve Fund;
- (viii) Operation and Maintenance Reserve Fund;
- (ix) Renewal and Replacement Fund; and
- (x) Airports Improvement Fund.

(b) The Revenue Fund, the Operation and Maintenance Reserve Fund, the Renewal and Replacement Fund and the Airports Improvement Fund shall be maintained as separate funds or accounts on the books of the City, and all amounts credited to such Funds shall be maintained in an official depository bank of the City or in a trustee bank designated by the City. The Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund and the Inferior Lien Bond Reserve Fund shall be maintained at an official depository bank of the City or in a trustee bank designated by the City separate and apart from all other funds and accounts of the City.

(e) Subordinate Lien Bond Interest and Sinking Fund. The Subordinate Lien Bond Interest and Sinking Fund shall constitute a trust fund which shall be held in trust for the Owners of the Subordinate Lien Bonds to which they are pledged and the proceeds of which (other than the interest income thereon, which may be transferred to the Revenue Fund or, if such interest income is earned on amounts that are capitalized interest financed with proceeds of Subordinate Lien Bonds, to such other Fund as permitted under federal tax law) shall be pledged to the payment of such Subordinate Lien Bonds.

(f) Subordinate Lien Bond Reserve Fund. The Subordinate Lien Bond Reserve Fund and any accounts created therein shall constitute trust funds which shall be held in trust for the Owners of the particular Subordinate Lien Bonds to which they are pledged and the proceeds of which (other than the interest income thereon, which shall be transferred to the extent provided in Section 3.09(c)) shall be pledged to the payment of the Subordinate Lien Bonds. Within the Subordinate Lien Bond Reserve Fund, there has been established and there is hereby ratified and confirmed a Subordinate Lien Bond Reserve Fund Participant Account, and there may be created other designated accounts therein.

(i) Subordinate Lien Bond Reserve Fund Participant Account. The Subordinate Lien Bond Reserve Fund Participant Account shall constitute a trust fund and shall be held in trust for Owners of the Subordinate Lien Bonds that are Reserve Fund Participants. The proceeds of the Subordinate Lien Bond Reserve Fund Participant Account (other than the interest income thereon, which shall be transferred to the extent provided in Section 3.09(c)) shall be pledged to the payment of the Subordinate Lien Bonds that are Reserve Fund Participants.

(ii) Additional Subordinate Lien Bonds May Be Participants or Non-Participants. The City may issue Additional Subordinate Lien Bonds which may be designated as Reserve Fund Participants. The City also reserves the right to issue Additional Subordinate Lien Bonds which may be designated as Reserve Fund Non-Participants and are not secured by the Subordinate Lien Bond Reserve Fund Participant Account; provided that the City shall create a separate account(s) within the Subordinate Lien Bond Reserve Fund for the benefit of any such series that is a Reserve Fund Non-Participant, the proceeds

of which account (other than the interest income thereon, which shall be transferred to the extent provided in Section 3.09(c)) shall be pledged to the payment of such Reserve Fund Non-Participant.

(j) The City reserves the right to create additional funds and additional accounts within any Fund as necessary or desirable in furtherance of the intent and purpose of this Master Ordinance, including the purpose of causing the supplemental funding of any reserve fund.

SECTION 3.05 REVENUE FUND; FLOW OF FUNDS. All Gross Revenues shall be deposited as received into the Revenue Fund. In addition, the City may deposit into the Revenue Fund any Federal Payments, provided that, so long as such Federal Payments are excluded from the definition of Gross Revenues, such Federal Payments shall be applied solely to the payment of Operation and Maintenance Expenses. Moneys from time to time credited to the Revenue Fund shall be applied in the following order of priority:

(a) First, to pay and to provide by encumbrance for the payment of all current Operation and Maintenance Expenses;

(b) Second, to transfer all amounts to the Senior Lien Bond Interest and Sinking Fund required by this Master Ordinance and any Supplemental Ordinance;

(c) Third, to transfer all amounts to the Senior Lien Bond Reserve Fund required by this Master Ordinance and any Supplemental Ordinance;

(d) Fourth, to transfer all amounts to the Subordinate Lien Bond Interest and Sinking Fund required by this Master Ordinance and any Supplemental Ordinance;

(e) Fifth, to transfer all amounts to the Subordinate Lien Bond Reserve Fund required by this Master Ordinance and any Supplemental Ordinance;

(f) Sixth, to transfer all amounts to the Inferior Lien Bond Interest and Sinking Fund required by this Master Ordinance and any Supplemental Ordinance;

(g) Seventh, to transfer all amounts to the Inferior Lien Bond Reserve Fund required by this Master Ordinance and any Supplemental Ordinance;

(h) Eighth, to transfer all amounts to the Operation and Maintenance Reserve Fund required by this Master Ordinance and any Supplemental Ordinance;

(i) Ninth, to transfer all amounts to the Renewal and Replacement Fund required by this Master Ordinance and any Supplemental Ordinance; and

(j) Tenth, the balance shall be transferred to the Airports Improvement Fund.

SECTION 3.06 SENIOR LIEN BOND INTEREST AND SINKING FUND.

(a) On or before the last Business Day of each month so long as any Senior Lien Obligations remain Outstanding, after making all required payments and provision for payment of Operation and Maintenance Expenses, there shall be transferred to the Senior Lien Bond Interest and Sinking Fund from the Revenue Fund the following amounts:

(i) Such amounts as shall be necessary so that the balance in the Senior Lien Bond Interest and Sinking Fund equals the Debt Service Requirements on all Senior Lien Obligations accrued to the end of the current month; plus

(ii) Such amounts as shall be necessary to enable the City to pay when due all expenses of providing for the full and timely payment of the principal of, premium, if any, and interest on the Senior Lien Obligations in accordance with their terms, including without limitation, all fees charged or obligations incurred in connection with any Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with the Senior Lien Obligations.

(b) Whenever the total amounts on deposit to the credit of the Senior Lien Bond Interest and Sinking Fund and the Senior Lien Bond Reserve Fund shall be equivalent to the sum of the aggregate principal amount of all Outstanding Senior Lien Obligations plus the aggregate amount of all interest accrued and to accrue thereon, no further transfers need be made into the Senior Lien Bond Interest and Sinking Fund or the Senior Lien Bond Reserve Fund, and such Senior Lien Obligations shall not be regarded as being Outstanding except for the purpose of being paid with the moneys credited to such Funds. Moneys credited to the Senior Lien Bond Interest and Sinking Fund shall be used solely for the purpose of paying principal (at maturity or prior redemption or to purchase Senior Lien Obligations issued as term bonds in the open market to be credited against mandatory redemption requirements), interest and redemption premiums on the Senior Lien Obligations, plus all bank charges and other costs and expenses relating to such payment, including those described in clause (a)(ii) above. On or before each principal and/or interest payment date on the Senior Lien Obligations, the City shall transfer from the Senior Lien Bond Interest and Sinking Fund to the Paying Agent/Registrar(s) for the Senior Lien Obligations an amount equal to the principal, interest and redemption premiums payable on the Senior Lien Obligations on such date, including all amounts due and payable on Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with such Senior Lien Obligations.

SECTION 3.07 SENIOR LIEN BOND RESERVE FUND.

(a) Maintenance of Reserve Fund Requirement for Participants and Non-Participants. The City shall establish and maintain as hereinafter provided a balance in the Senior Lien Bond Reserve Fund Participant Account and a balance in the Senior Lien Note Reserve Fund Participant Account equal to the Reserve Fund Requirement for the Senior Lien Bonds and the Senior Lien Notes, respectively, that are secured thereby. Each Supplemental Ordinance authorizing Senior Lien Obligations shall designate such series of Senior Lien Obligations authorized thereby as "Reserve Fund Participants" or "Reserve Fund Non-Participants." With respect to any series of Senior Lien Bonds that are Reserve Fund Non-Participants, pursuant to the Supplemental Ordinance authorizing such Senior Lien Bonds, the City shall establish an account within the Senior Lien Bond Reserve Fund for the benefit of such Senior Lien Bonds and shall maintain an amount in such account equal to the Reserve Fund Requirement for each such series of Senior Lien Bonds secured thereby.

(b) Reserve Fund Requirement at Issuance. Each increase in the Reserve Fund Requirement resulting from the issuance of any Additional Senior Lien Obligations shall be satisfied at the time of issuance and delivery of such series of Additional Senior Lien Obligations. The Reserve Fund Requirement shall be satisfied by depositing to the credit of the Senior Lien Bond Reserve Fund Participant Account (in the case of Additional Senior Lien Bonds that are Reserve Fund Participants) or the Senior Lien Note Reserve Fund Participant Account (in the case of Additional Senior Lien Notes) or such other designated accounts (in the case of Additional Senior Lien Bonds that are Reserve Fund Non-Participants) of the Senior Lien Bond Reserve Fund either:

(i) proceeds of such Additional Senior Lien Obligations or other lawfully appropriated funds in not less than the amount which, together with investment earnings thereon as estimated by the City, will be sufficient to fund fully the Reserve Fund Requirement by no later than the end of the period of time for which the payment of interest on such Additional Senior Lien Obligations has been provided out of proceeds of such Additional Senior Lien Obligations or investment earnings thereon as estimated by the City or from other lawfully available funds other than Net Revenues; or

(ii) a Senior Lien Bond Reserve Fund Surety Policy.

(c) Deficiencies and Excess in the Senior Lien Bond Reserve Fund. In any month in which any account of the Senior Lien Bond Reserve Fund contains less than the applicable Reserve Fund Requirement (or so much thereof as shall then be required to be therein if the City has elected to accumulate the Reserve Fund Requirement for any series of Additional Senior Lien Obligations as above provided), then on or before the last

Business Day of such month, after making all required payments and provision for payment of Operation and Maintenance Expenses, and after making all required transfers to the Senior Lien Bond Interest and Sinking Fund, there shall be transferred on a pro rata basis into the Senior Lien Bond Reserve Fund Participant Account (in the case of Senior Lien Bonds that are Reserve Fund Participants) and the Senior Lien Note Reserve Fund Participant Account (in the case of Senior Lien Notes) and such other designated accounts (in the case of Senior Lien Bonds that are Reserve Fund Non-Participants) of the Senior Lien Bond Reserve Fund from the Revenue Fund, such amounts as shall be required to permit the City to pay all reimbursement obligations under the Senior Lien Bond Reserve Fund Surety Policies allocable to the Senior Lien Bond Reserve Fund Participant Account or Senior Lien Note Reserve Fund Participant Account or such other designated accounts, as applicable, within a twelve (12) month period and such additional amounts as shall be sufficient to enable the City within a twelve (12) month period to reestablish in the Senior Lien Bond Reserve Fund Participant Account or Senior Lien Note Reserve Fund Participant Account or such other designated accounts, as applicable, the Reserve Fund Requirement for the Senior Lien Bonds or Senior Lien Notes secured thereby; provided, however, that in the event that such monthly transfer requirements ever exceed one-twelfth (1/12th) of the maximum Debt Service Requirements scheduled to occur in any future Fiscal Year on all Senior Lien Obligations then Outstanding, any remaining required transfers shall be accomplished pursuant to Section 3.15 below. After such amounts have been accumulated in the Senior Lien Bond Reserve Fund Participant Account and Senior Lien Note Reserve Fund Participant Account and such other designated accounts (as described above), and so long thereafter as such accounts contain such amounts, no further transfers shall be required to be made into the Senior Lien Bond Reserve Fund Participant Account or Senior Lien Note Reserve Fund Participant Account or such other designated accounts, and, to the extent any excess is attributable to the portion of the Senior Lien Bond Reserve Fund allocable to any tax-exempt Senior Lien Obligations, any excess amounts in such accounts shall be transferred to the Senior Lien Bond Interest and Sinking Fund or such other Fund as may be permitted by federal tax law, and otherwise shall be transferred to the Revenue Fund. But, if and whenever the balance in the Senior Lien Bond Reserve Fund Participant Account or Senior Lien Note Reserve Fund Participant Account or such other designated accounts is reduced below such amount, monthly transfers to such accounts shall be resumed and continued in such amounts as shall be required to restore the Senior Lien Bond Reserve Fund Participant Account and the Senior Lien Note Reserve Fund Participant Account or such other designated accounts, as applicable, to the applicable Reserve Fund Requirement within a twelve (12) month period.

(d) Account for Senior Lien Bond Reserve Fund Participants. The Senior Lien Bond Reserve Fund Participant Account shall be used to pay the principal of and interest on the Senior Lien Bonds that are Reserve Fund Participants at any time when there is not sufficient money available in the Senior Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Senior Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Senior Lien Bond Reserve Fund Surety Policies allocable to the Senior Lien Bond Reserve Fund Participant Account) and to repay amounts drawn under any Senior Lien Bond Reserve Fund Surety Policy allocable to the Senior Lien Bond Reserve Fund Participant Account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Senior Lien Bond Reserve Fund Surety Policy. The Senior Lien Bond Reserve Fund Participant Account may also be used to make the final payments for the retirement or defeasance of all Senior Lien Bonds then Outstanding that are secured thereby.

(e) Account for Senior Lien Note Reserve Fund Participants. The Senior Lien Note Reserve Fund Participant Account shall be used to pay the principal of and interest on the Senior Lien Notes at any time when there is not sufficient money available in the Senior Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Senior Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Senior Lien Bond Reserve Fund Surety Policies allocable to the Senior Lien Note Reserve Fund Participant Account) and to repay amounts drawn under any Senior Lien Bond Reserve Fund Surety Policy allocable to the Senior Lien Note Reserve Fund Participant Account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Senior Lien Bond Reserve Fund Surety Policy. The Senior Lien Note Reserve Fund Participant Account may also be used to make the final payments for the retirement or defeasance of all Senior Lien Notes then Outstanding that are secured thereby.

(f) Accounts for Senior Lien Bond Reserve Fund Non-Participants. With respect to any series of Senior Lien Bonds that are Reserve Fund Non-Participants, any account created within the Senior Lien Bond Reserve Fund for the benefit of such series of Senior Lien Bonds shall be used to pay the principal of and interest on

such series of Senior Lien Bonds at any time when there is not sufficient money available if the Senior Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Senior Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Senior Lien Bond Reserve Fund Surety Policies allocable to such account) and to repay amounts drawn under any Senior Lien Bond Reserve Fund Surety Policy allocable to such account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Senior Lien Bond Reserve Fund Surety Policy. Any such account may also be used to make the final payments for the retirement and defeasance of the series of Senior Lien Bonds then Outstanding that are secured thereby.

(g) Draws on Senior Lien Bond Reserve Fund Surety Policies. The City directs and requires the Paying Agent/Registrar for any series of Senior Lien Obligations to ascertain the necessity for a claim or draw upon the applicable Senior Lien Bond Reserve Fund Surety Policy, and to provide notice to the issuer thereof in accordance with its terms, and to make such claims or draws thereon as may be necessary to provide for the timely payment of principal of and interest on the Senior Lien Obligations to which it pertains.

SECTION 3.08 SUBORDINATE LIEN BOND INTEREST AND SINKING FUND.

(a) On or before the last Business Day of each month so long as any Subordinate Lien Bonds remain Outstanding, after making all required payments and provision for payment of Operation and Maintenance Expenses and making all required transfers to the Senior Lien Bond Interest and Sinking Fund and the Senior Lien Bond Reserve Fund, there shall be transferred into the Subordinate Lien Bond Interest and Sinking Fund from the Revenue Fund the following amounts:

(i) Such amounts as shall be necessary so that the balance in the Subordinate Lien Bond Interest and Sinking Fund equals the Debt Service Requirements on all Subordinate Lien Bonds accrued to the end of the current month; plus

(ii) Such amounts as shall be necessary to enable the City to pay when due all expenses of providing for the full and timely payment of the principal of, premium, if any, and interest on the Subordinate Lien Bonds in accordance with their terms, including without limitation, all fees charged or obligations incurred in connection with any Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with the Subordinate Lien Bonds.

(b) Whenever the total amounts on deposit to the credit of the Subordinate Lien Bond Interest and Sinking Fund and the Subordinate Lien Bond Reserve Fund shall be equivalent to the sum of the aggregate principal amount of all Outstanding Subordinate Lien Bonds plus the aggregate amount of all interest accrued and to accrue thereon, no further transfers need be made into the Subordinate Lien Bond Interest and Sinking Fund or the Subordinate Lien Bond Reserve Fund, and such Subordinate Lien Bonds shall not be regarded as being Outstanding except for the purpose of being paid with the moneys credited to such Funds. Moneys credited to the Subordinate Lien Bond Interest and Sinking Fund shall be used solely for the purpose of paying principal (at maturity or prior redemption or to purchase Subordinate Lien Bonds issued as term bonds in the open market to be credited against mandatory redemption requirements), interest and redemption premiums on the Subordinate Lien Bonds, plus all bank charges and other costs and expenses relating to such payment, including those described in clause (a)(ii) above. On or before each principal and/or interest payment date on the Subordinate Lien Bonds, the City shall transfer from the Subordinate Lien Bond Interest and Sinking Fund to the Paying Agent/Registrar(s) for the Subordinate Lien Bonds an amount equal to the principal, interest and redemption premiums payable on the Subordinate Lien Bonds on such date, including all amounts due and payable on Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with such Subordinate Lien Bonds.

SECTION 3.09 SUBORDINATE LIEN BOND RESERVE FUND.

(a) Maintenance of Reserve Fund Requirement for Participants and Non-Participants. The City shall establish and maintain as hereinafter provided a balance in the Subordinate Lien Bond Reserve Fund Participant Account equal to the Reserve Fund Requirement for the Subordinate Lien Bonds that are secured thereby. Each Supplemental Ordinance authorizing Subordinate Lien Bonds shall designate such series of Subordinate Lien Bonds

authorized thereby as “Reserve Fund Participants” or “Reserve Fund Non-Participants.” With respect to any series of Subordinate Lien Bonds that are Reserve Fund Non-Participants, pursuant to the Supplemental Ordinance authorizing such Subordinate Lien Bonds, the City shall establish an account within the Subordinate Lien Bond Reserve Fund for the benefit of such Subordinate Lien Bonds and shall maintain an amount in such account equal to the Reserve Fund Requirement for each such series of Subordinate Lien Bonds secured thereby.

(b) Reserve Fund Requirement at Issuance. Each increase in the Reserve Fund Requirement resulting from the issuance of any Additional Subordinate Lien Bonds shall be satisfied at the time of issuance and delivery of such series of Additional Subordinate Lien Bonds. The Reserve Fund Requirement shall be satisfied by depositing to the credit of the Subordinate Lien Bond Reserve Fund Participant Account (in the case of Additional Subordinate Lien Bonds that are Reserve Fund Participants) or such other designated accounts (in the case of Additional Subordinate Lien Bonds that are Reserve Fund Non-Participants) of the Subordinate Lien Bond Reserve Fund either:

(i) proceeds of such Additional Subordinate Lien Bonds or other lawfully appropriated funds in not less than the amount which, together with investment earnings thereon as estimated by the City, will be sufficient to fund fully the Reserve Fund Requirement by no later than the end of the period of time for which the payment of interest on such Additional Subordinate Lien Bonds has been provided out of proceeds of such Additional Subordinate Lien Bonds or investment earnings thereon as estimated by the City or from other lawfully available funds other than Net Revenues; or

(ii) a Subordinate Lien Bond Reserve Fund Surety Policy.

(c) Deficiencies and Excess in the Subordinate Lien Bond Reserve Fund. In any month in which any account of the Subordinate Lien Bond Reserve Fund contains less than the applicable Reserve Fund Requirement (or so much thereof as shall then be required to be therein if the City has elected to accumulate the Reserve Fund Requirement for any series of Additional Subordinate Lien Bonds as above provided), then on or before the last Business Day of such month, after making all required payments and provision for payment of Operation and Maintenance Expenses, and after making all required transfers to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund and the Subordinate Lien Bond Interest and Sinking Fund, there shall be transferred on a pro rata basis into the Subordinate Lien Bond Reserve Fund Participant Account (in the case of Subordinate Lien Bonds that are Reserve Fund Participants) and such other designated accounts (in the case of Subordinate Lien Bonds that are Reserve Fund Non-Participants) of the Subordinate Lien Bond Reserve Fund from the Revenue Fund, such amounts as shall be required to permit the City to pay all reimbursement obligations under the Subordinate Lien Bond Reserve Fund Surety Policies allocable to the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, within a twelve (12) month period and such additional amounts as shall be sufficient to enable the City within a twelve (12) month period to reestablish in the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, the Reserve Fund Requirement for the Subordinate Lien Bonds secured thereby; provided, however, that in the event that such monthly transfer requirements ever exceed one-twelfth (1/12th) of the maximum Debt Service Requirements scheduled to occur in any future Fiscal Year on all Subordinate Lien Bonds then Outstanding, any remaining required transfers shall be accomplished pursuant to Section 3.15 below. After such amounts have been accumulated in the Subordinate Lien Bond Reserve Fund Participant Account and such other designated accounts (as described above), and so long thereafter as such accounts contain such amounts, no further transfers shall be required to be made into the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts, and, to the extent any excess is attributable to the portion of the Subordinate Lien Bond Reserve Fund allocable to any tax-exempt Subordinate Lien Bonds, any excess amounts in such accounts shall be transferred to the Subordinate Lien Bond Interest and Sinking Fund or such other Fund as may be permitted by federal tax law, and otherwise shall be transferred to the Revenue Fund. But, if and whenever the balance in the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts is reduced below such amount, monthly transfers to such accounts shall be resumed and continued in such amounts as shall be required to restore the Subordinate Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, to such amount within a twelve (12) month period.

(d) Account for Subordinate Lien Bond Reserve Fund Participants. The Subordinate Lien Bond Reserve Fund Participant Account shall be used to pay the principal of and interest on the Subordinate Lien Bonds that are Reserve Fund Participants at any time when there is not sufficient money available in the Subordinate Lien

Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Subordinate Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Subordinate Lien Bond Reserve Fund Surety Policies allocable to the Subordinate Lien Bond Reserve Fund Participant Account) and to repay amounts drawn under any Subordinate Lien Bond Reserve Fund Surety Policy allocable to such Subordinate Lien Bond Reserve Fund Participant Account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Subordinate Lien Bond Reserve Fund Surety Policy. The Subordinate Lien Bond Reserve Fund Participant Account may also be used to make the final payments for the retirement or defeasance of all Subordinate Lien Bonds then Outstanding that are secured thereby.

(e) Accounts for Subordinate Lien Bond Reserve Fund Non-Participants. With respect to any series of Subordinate Lien Bonds that are Reserve Fund Non-Participants, any account created within the Subordinate Lien Bond Reserve Fund for the benefit of such series of Subordinate Lien Bonds shall be used to pay the principal of and interest on such series of Subordinate Lien Bonds at any time when there is not sufficient money available if the Subordinate Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Subordinate Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Subordinate Lien Bond Reserve Fund Surety Policies allocable to such account) and to repay amounts drawn under any Subordinate Lien Bond Reserve Fund Surety Policy allocable to such account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Subordinate Lien Bond Reserve Fund Surety Policy. Any such account may also be used to make the final payments for the retirement and defeasance of the series of Subordinate Lien Bonds then Outstanding that are secured thereby.

(f) Draws on Subordinate Lien Bond Reserve Fund Surety Policies. The City directs and requires the Paying Agent/Registrar for any series of Subordinate Lien Bonds to ascertain the necessity for a claim or draw upon the applicable Subordinate Lien Bond Reserve Fund Surety Policy, and to provide notice to the issuer thereof in accordance with its terms, and to make such claims or draws thereon as may be necessary to provide for the timely payment of principal of and interest on the Subordinate Lien Bonds to which it pertains.

SECTION 3.10 INFERIOR LIEN BOND INTEREST AND SINKING FUND.

(a) On or before the last Business Day of each month so long as any Inferior Lien Bonds remain Outstanding, after making all required payments and provision for payment of Operation and Maintenance Expenses and making all required transfers to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund and the Subordinate Lien Bond Reserve Fund, there shall be transferred into the Inferior Lien Bond Interest and Sinking Fund from the Revenue Fund the following amounts:

(i) Such amounts as shall be necessary so that the balance in the Inferior Lien Bond Interest and Sinking Fund equals the Debt Service Requirements on all Inferior Lien Bonds accrued to the end of the current month; plus

(ii) Such amounts as shall be necessary to enable the City to pay when due all expenses of providing for the full and timely payment of the principal of, premium, if any, and interest on the Inferior Lien Bonds in accordance with their terms, including without limitation, all fees charged or obligations incurred in connection with any Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with the Inferior Lien Bonds.

(b) Whenever the total amounts on deposit to the credit of the Inferior Lien Bond Interest and Sinking Fund and the Inferior Lien Bond Reserve Fund shall be equivalent to the sum of the aggregate principal amount of all Outstanding Inferior Lien Bonds plus the aggregate amount of all interest accrued and to accrue thereon, no further transfers need be made into the Inferior Lien Bond Interest and Sinking Fund or the Inferior Lien Bond Reserve Fund, and such Inferior Lien Bonds shall not be regarded as being Outstanding except for the purpose of being paid with the moneys credited to such Funds. Moneys credited to the Inferior Lien Bond Interest and Sinking Fund shall be used solely for the purpose of paying principal (at maturity or prior redemption or to purchase Inferior Lien Bonds issued as term bonds in the open market to be credited against mandatory redemption requirements),

interest and redemption premiums on the Inferior Lien Bonds, plus all bank charges and other costs and expenses relating to such payment, including those described in clause (a)(ii) above. On or before each principal and/or interest payment date on the Inferior Lien Bonds, the City shall transfer from the Inferior Lien Bond Interest and Sinking Fund to the Paying Agent/Registrar(s) for the Inferior Lien Bonds an amount equal to the principal, interest and redemption premiums payable on the Inferior Lien Bonds on such date including all amounts due and payable on Credit Agreements, Qualified Hedge Agreements and other related agreements in connection with such Inferior Lien Bonds.

SECTION 3.11 INFERIOR LIEN BOND RESERVE FUND.

(a) Maintenance of Reserve Fund Requirement for Participants and Non-Participants. The City shall establish and maintain as hereinafter provided a balance in the Inferior Lien Bond Reserve Fund Participant Account equal to the Reserve Fund Requirement for the Inferior Lien Bonds that are secured thereby. Each Supplemental Ordinance authorizing Inferior Lien Bonds shall designate such series of Inferior Lien Bonds authorized thereby as “Reserve Fund Participants” or “Reserve Fund Non-Participants.” With respect to any series of Inferior Lien Bonds that are Reserve Fund Non-Participants, pursuant to the Supplemental Ordinance authorizing such Inferior Lien Bonds, the City shall establish an account within the Inferior Lien Bond Reserve Fund for the benefit of such Inferior Lien Bonds and shall maintain an amount in such account equal to the Reserve Fund Requirement for each such series of Inferior Lien Bonds secured thereby.

(b) Reserve Fund Requirement at Issuance. Each increase in the Reserve Fund Requirement resulting from the issuance of any additional Inferior Lien Bonds shall be satisfied at the time of issuance and delivery of such series of additional Inferior Lien Bonds. The Reserve Fund Requirement shall be satisfied by depositing to the credit of the Inferior Lien Bond Reserve Fund Participant Account (in the case of additional Inferior Lien Bonds that are Reserve Fund Participants) or such other designated accounts (in the case of additional Inferior Lien Bonds that are Reserve Fund Non-Participants) of the Inferior Lien Bond Reserve Fund either:

(i) proceeds of such additional Inferior Lien Bonds or other lawfully appropriated funds in not less than the amount which, together with investment earnings thereon as estimated by the City, will be sufficient to fund fully the Reserve Fund Requirement by no later than the end of the period of time for which the payment of interest on such additional Inferior Lien Bonds has been provided out of proceeds of such additional Inferior Lien Bonds or investment earnings thereon as estimated by the City or from other lawfully available funds other than Net Revenues; or

(ii) an Inferior Lien Bond Reserve Fund Surety Policy.

(c) Deficiencies and Excess in the Inferior Lien Bond Reserve Fund. In any month in which any account of the Inferior Lien Bond Reserve Fund contains less than the applicable Reserve Fund Requirement (or so much thereof as shall then be required to be therein if the City has elected to accumulate the Reserve Fund Requirement for any series of additional Inferior Lien Bonds as above provided), then on or before the last Business Day of such month, after making all required payments and provision for payment of Operation and Maintenance Expenses, and after making all required transfers to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund and the Inferior Lien Bond Interest and Sinking Fund, there shall be transferred on a pro rata basis into the Inferior Lien Bond Reserve Fund Participant Account (in the case of Inferior Lien Bonds that are Reserve Fund Participants) and such other designated accounts (in the case of Inferior Lien Bonds that are Reserve Fund Non-Participants) of the Inferior Lien Bond Reserve Fund from the Revenue Fund, such amounts as shall be required to permit the City to pay all reimbursement obligations under the Inferior Lien Bond Reserve Fund Surety Policies allocable to the Inferior Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, within a twelve (12) month period and such additional amounts as shall be sufficient to enable the City within a twelve (12) month period to reestablish in the Inferior Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, the Reserve Fund Requirement for the Inferior Lien Bonds secured thereby. After such amounts have been accumulated in the Inferior Lien Bond Reserve Fund Participant Account and such other designated accounts (as described above), and so long thereafter as such accounts contain such amounts, no further transfers shall be required to be made into the Inferior Lien Bond Reserve Fund Participant Account or such other designated accounts, and, to the extent any excess is attributable to the portion of the Inferior

Lien Bond Reserve Fund allocable to any tax-exempt Inferior Lien Bonds, any excess amounts in such accounts shall be transferred to the Inferior Lien Bond Interest and Sinking Fund or such other Funds as may be permitted by federal tax law, and otherwise shall be transferred to the Revenue Fund. But, if and whenever the balance in the Inferior Lien Bond Reserve Fund Participant Account or such other designated accounts is reduced below such amount, monthly transfers to such accounts shall be resumed and continued in such amounts as shall be required to restore the Inferior Lien Bond Reserve Fund Participant Account or such other designated accounts, as applicable, to such amount within a twelve (12) month period.

(d) Account for Inferior Lien Bond Reserve Fund Participants. The Inferior Lien Bond Reserve Fund Participant Account shall be used to pay the principal of and interest on the Inferior Lien Bonds that are Reserve Fund Participants at any time when there is not sufficient money available in the Inferior Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Inferior Lien Bond Reserve Fund Surety Policies, unless provided otherwise in each of the Inferior Lien Bond Reserve Fund Surety Policies allocable to the Inferior Lien Bond Reserve Fund Participant Account) and to repay amounts drawn under any Inferior Lien Bond Reserve Fund Surety Policy allocable to such Inferior Lien Bond Reserve Fund Participant Account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Inferior Lien Bond Reserve Fund Surety Policy. The Inferior Lien Bond Reserve Fund Participant Account may also be used to make the final payments for the retirement or defeasance of all Inferior Lien Bonds then Outstanding that are secured thereby.

(e) Accounts for Inferior Lien Bond Reserve Fund Non-Participants. With respect to any series of Inferior Lien Bonds that are Reserve Fund Non-Participants, any account created within the Inferior Lien Bond Reserve Fund for the benefit of such series of Inferior Lien Bonds shall be used to pay the principal of and interest on such series of Inferior Lien Bonds at any time when there is not sufficient money available in the Inferior Lien Bond Interest and Sinking Fund for such purpose (with the requirement that all cash and investments on deposit in such account be depleted before drawing upon any Inferior Lien Bond Reserve Fund Surety Policy, unless provided otherwise in each of the Inferior Lien Bond Reserve Fund Surety Policies allocable to such account) and to repay amounts drawn under any Inferior Lien Bond Reserve Fund Surety Policy allocable to such account for such purpose, together with interest thereon, in accordance with the terms of the City's reimbursement obligations incurred in connection with such Inferior Lien Bond Reserve Fund Surety Policy. Any such account may also be used to make the final payments for the retirement and defeasance of the series of Inferior Lien Bonds then Outstanding that are secured thereby.

(f) Draws on Inferior Lien Bond Reserve Fund Surety Policies. The City directs and requires the Paying Agent/Registrar for any series of Inferior Lien Bonds to ascertain the necessity for a claim or draw upon the applicable Inferior Lien Bond Reserve Fund Surety Policy, and to provide notice to the issuer thereof in accordance with its terms, and to make such claims or draws thereon as may be necessary to provide for the timely payment of principal of and interest on the Inferior Lien Bonds to which it pertains.

SECTION 3.12 OPERATION AND MAINTENANCE RESERVE FUND. The City shall fund and maintain as hereinafter provided a balance of money and investments in the Operation and Maintenance Reserve Fund at least equal to two (2) months' current Operation and Maintenance Expenses, which amount shall annually be redetermined by the Aviation Director at the time the department submits its recommended budget for the Airport System pursuant to Section 3.02 based upon either such official's recommended budget for Operation and Maintenance Expenses or such official's estimate of actual Operation and Maintenance Expenses for the then current Fiscal Year.

On or before the last Business Day of each month, after making all required payments and provision for payment of Operation and Maintenance Expenses and all required transfers to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund, and the Inferior Lien Bond Reserve Fund, there shall be transferred from the Revenue Fund, to the extent amounts are available therein, to the Operation and Maintenance Reserve Fund the amount required to reestablish the required balance in the Operation and Maintenance Reserve Fund. Amounts from time to time credited to the Operation and Maintenance Reserve Fund may be used at any time first, to pay for any Operation and Maintenance Expenses for which amounts are not

otherwise available in the Revenue Fund; second, to pay any costs or expenses payable from the Renewal and Replacement Fund for which there are insufficient amounts in the Renewal and Replacement Fund; and third, to the extent any amounts are remaining, to be transferred to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund or the Inferior Lien Bond Reserve Fund, to the extent of any deficiency therein.

SECTION 3.13 RENEWAL AND REPLACEMENT FUND. The City shall fund and maintain as hereinafter provided a balance of money and investments in the Renewal and Replacement Fund at least equal to the Renewal and Replacement Fund Requirement. On or before the last Business Day of each month, if the Renewal and Replacement Fund contains less than the Renewal and Replacement Fund Requirement, then after making all required payments and provision for payment of Operation and Maintenance Expenses and all required transfers to the Senior Lien Bond Interest and Sinking Fund, to the Senior Lien Bond Reserve Fund, to the Subordinate Lien Bond Interest and Sinking Fund, to the Subordinate Lien Bond Reserve Fund, to the Inferior Lien Bond Interest and Sinking Fund, to the Inferior Lien Bond Reserve Fund, and to the Operation and Maintenance Reserve Fund, there shall be transferred from the Revenue Fund, to the extent funds are available therein, an amount equal to one-twelfth (1/12th) of the deficiency (being the amount by which the Renewal and Replacement Fund Requirement exceeded the unappropriated balance therein) as of the last day of the previous Fiscal Year, to the Renewal and Replacement Fund and, at the discretion of the City, to pay directly from the Revenue Fund any other costs that could be paid from amounts on deposit in the Renewal and Replacement Fund. Such transfers shall be required to be made into the Renewal and Replacement Fund until such time as the Renewal and Replacement Fund Requirement has again been accumulated in the Renewal and Replacement Fund.

Amounts from time to time credited to the Renewal and Replacement Fund may be used at any time:

(a) First, to pay for any costs of replacing depreciable property and equipment of the Airport System and making repairs, replacements or renovations of the Airport System;

(b) Second, to pay any Operation and Maintenance Expenses for which insufficient amounts are available in the Revenue Fund and the Operation and Maintenance Reserve Fund; and

(c) Third, to the extent any amounts are remaining, to be transferred to the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund, or the Inferior Lien Bond Reserve Fund, to the extent of any deficiency therein.

SECTION 3.14 AIRPORTS IMPROVEMENT FUND.

(a) After making all payments and transfers hereinabove required, all amounts remaining in the Revenue Fund shall be transferred to the Airports Improvement Fund. Amounts credited to the Airports Improvement Fund may be used only for lawful Airport System purposes, including without limitation, to pay for any capital expenditures, to pay costs of replacing any depreciable property or equipment of the Airport System, to make any major or extraordinary repairs, replacements or renewals of the Airport System, to acquire land or any interest therein, to pay any lease or contractual obligations not paid as Operation and Maintenance Expenses, and to make any transfers required to cure any deficiencies in the Renewal and Replacement Fund; provided, however, that any unappropriated, unbudgeted, unreserved or otherwise unencumbered amounts in the Airports Improvement Fund in excess of (i) the unfunded portion of the Airport System's capital improvement program for the next 24 months as approved by the City Council or as proposed by the Aviation Director or (ii) \$50,000,000, whichever is greater, may be used by the City for any lawful purpose permitted by the laws of the United States of America and the State of Texas and not inconsistent with the terms and provisions of any federal grants or aid or any contracts to which the City is a party.

(b) The Airport System may create, within the Airports Improvement Fund, additional sub-accounts and funds, including a Capital Outlay Fund. All such sub-accounts and funds may be established and used for the purposes of the Airports Improvement Fund as above provided in subsection (a).

SECTION 3.15 DEFICIENCIES IN FUNDS. If in any month there shall not be transferred into any Fund maintained pursuant to this Article the full amounts required herein, amounts equivalent to such deficiency shall be set apart and transferred to such Fund or Funds from the first available and unallocated moneys in the Revenue Fund, and such transfer shall be in addition to the amounts otherwise required to be transferred to such Funds during any succeeding month or months.

SECTION 3.16 INVESTMENT OF FUNDS; TRANSFER OF INVESTMENT INCOME.

(a) Money in the Revenue Fund, the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund, the Inferior Lien Bond Reserve Fund, the Operation and Maintenance Reserve Fund, the Renewal and Replacement Fund and the Airports Improvement Fund shall, at the option of the City, be invested in time deposits or certificates of deposit secured in the manner required by law for public funds, or be invested in direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, in obligations of any agencies or instrumentalities of the United States of America or in any other investments authorized by Texas law; provided that all such deposits and investments shall be made in such manner that the money required to be expended from any Fund will be available at the proper time or times. All such investments shall be valued no less frequently than the last Business Day of the City's Fiscal Year at their market value, except that any direct obligations of the United States of America - State and Local Government Series shall be continuously valued at their par value or principal face amount. For purposes of maximizing investment returns, money in such Funds may be invested, together with money in other Funds or with other money of the City, in common investments of the kind described above, or in a common pool of such investments maintained by the City which shall be kept and held at an official depository of the City, which shall not be deemed to be a loss of the segregation of such money or Funds provided that safekeeping receipts, certificates of participation or other documents clearly evidencing the investment or investment pool in which such money is invested and the share thereof purchased with such money or owned by such Fund are held by or on behalf of each such Fund. If and to the extent necessary, such investments or participations therein shall be promptly sold to prevent any default.

(b) All interest and income derived from deposits and investments credited to the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Reserve Fund and the Operation and Maintenance Reserve Fund shall remain in such funds to the extent necessary to accumulate the Reserve Fund Requirements or other required balance therein.

(c) All interest and income derived from deposits and investments of any amounts held in any construction fund, including amounts held therein as capitalized interest, created by any Supplemental Ordinance authorizing the issuance of Airport Obligations, shall remain in such construction fund for application in the manner provided in such Supplemental Ordinance.

(d) To the extent not otherwise provided for above in this Article III (including Section 3.04) or specifically excluded from the definition of Gross Revenues, all interest and income derived from deposits and investments credited to the Revenue Fund, the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund, the Inferior Lien Bond Reserve Fund, the Operation and Maintenance Reserve Fund, the Renewal and Replacement Fund and the Airports Improvement Fund, shall be transferred or credited monthly to the Revenue Fund or to such other Funds as may be required under federal tax law.

(e) Notwithstanding anything to the contrary contained herein, any interest and income derived from deposits and investments of any amounts credited to any fund or account may be paid to the federal government if, in the opinion of nationally recognized bond counsel, such payment is required in order to prevent interest on any Airport Obligations from being includable within the gross income of the owners thereof for federal income tax purposes, if such Airport Obligations were issued on a tax-exempt basis.

SECTION 3.17 SECURITY FOR UNINVESTED FUNDS. So long as any Airport Obligations remain Outstanding, all uninvested moneys on deposit in, or credited to, the Revenue Fund, the Senior Lien Bond Interest and Sinking Fund, the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Interest and Sinking Fund, the

Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Interest and Sinking Fund and the Inferior Lien Bond Reserve Fund shall be secured by the pledge of security, as provided by law for cities in the State of Texas.

SECTION 3.18 DETERMINATION OF RESERVE FUND PARTICIPANTS. The determination of whether any series of Airport Obligations issued pursuant to the terms of this Master Ordinance shall be Reserve Fund Participants shall be made in the related Supplemental Ordinance or, as the case may be, the applicable officers pricing certificate.

ARTICLE IV

PFC REVENUES

SECTION 4.01 PURPOSE. The City hereby reserves the right to commit, pledge, encumber or otherwise use all or any portion of PFC Revenues solely for the purposes of the Airport System, including, but not limited to: (a) committing all or any portion of PFC Revenues to the payment of debt service for any Airport Obligations; (b) pledging all or any portion of PFC Revenues to the payment of certain obligations secured by a pledge of all or a designated portion of PFC Revenues; or (c) using all or any portion of PFC Revenues for payment of certain projects of the Airport System or other purposes that benefit the Airport System.

SECTION 4.02 PFC ORDINANCE; COMMITTING OR PLEDGING PFC REVENUES. Prior to committing or pledging PFC Revenues under subparagraphs 4.01(a) and (b) above, the City shall adopt one or more ordinances (which may be in the form of a Supplemental Ordinance to the Master Ordinance, a separate ordinance or a combination of both) to determine, as appropriate, (i) the eligible PFC Revenues available for such purpose and the manner by which such available PFC Revenues may be committed or pledged for the purposes described in such subparagraphs; (ii) the disposition of available PFC Revenues during a given Fiscal Year(s); (iii) the flow of funds of such PFC Revenues for the purposes described such subparagraphs; and (iv) any determinations, findings, appropriations, reservations, and covenants that are appropriate and necessary to give effect to such ordinance. Any such ordinances shall be accompanied by an opinion of bond counsel to the Airport System to the effect that the ordinance is not in conflict with any provisions or covenants of this Master Ordinance or any other ordinance authorizing the issuance of Airport Obligations.

ARTICLE V

ADDITIONAL BONDS

SECTION 5.01 SENIOR LIEN OBLIGATIONS AND SUBORDINATE LIEN BONDS.

(a) The City reserves the right to issue, for any lawful Airport System purpose, one or more installments of Additional Senior Lien Obligations and Additional Subordinate Lien Bonds; provided, however, that no such Additional Senior Lien Obligations or Additional Subordinate Lien Bonds shall be issued unless:

(i) No Default. The Mayor and the Aviation Director certify that, upon the issuance of such series of Bonds, the City will not be in default under any term or provision of any Bonds then Outstanding or any ordinance pursuant to which any of such Bonds were issued;

(ii) Proper Fund Balances. The City Controller shall certify that, upon the issuance of such series of Bonds, the Senior Lien Bond Interest and Sinking Fund and the Subordinate Lien Bond Interest and Sinking Fund will have the required amounts on deposit therein and that the Senior Lien Bond Reserve Fund and the Subordinate Lien Bond Reserve Fund will contain the applicable Reserve Fund Requirement or so much thereof as is required to be funded at such time;

(iii) Historical Coverage on Outstanding Bonds. The City Controller shall certify that, for either the City's most recent complete Fiscal Year or for any consecutive 12 out of the most recent 18 months, the Net Revenues were equal to at least:

(A) 125% of the Debt Service Requirements on all Senior Lien Obligations for such period, plus

(B) 110% of the Debt Service Requirements on all Subordinate Lien Bonds for such period;

(iv) Projected Coverage for Additional Bonds. An Airport Management Consultant provides a written report setting forth projections which indicate that the estimated Net Revenues for each of the three consecutive Fiscal Years beginning in the earlier of:

(A) the first Fiscal Year following the estimated date of completion and initial use of all revenue-producing facilities to be financed with such series of Bonds, based upon a certified written estimated completion date by the consulting engineer for such facility or facilities, or

(B) the first Fiscal Year in which the City will have scheduled payments of interest on or principal of the series of Bonds to be issued for the payment of which provision has not been made as indicated in the report of such Airport Management Consultant from proceeds of such series of Bonds, investment income thereon or from other appropriated sources (other than Net Revenues),

are equal to at least:

(1) 125% of the Debt Service Requirements on all Senior Lien Obligations, plus

(2) 110% of the Debt Service Requirements on all Subordinate Lien Bonds,

scheduled to occur during each such respective Fiscal Year after taking into consideration the additional Debt Service Requirements for the additional series of Bonds to be issued;

(v) Alternate Coverage for Additional Bonds. In lieu of the certification described in (iv) above, the City Controller may provide a certificate showing that, for either the City's most recent complete Fiscal Year or for any consecutive 12 out of the most recent 18 months, the Net Revenues were equal to at least:

(A) 125% of the maximum Debt Service Requirements on all Senior Lien Obligations, plus

(B) 110% of the maximum Debt Service Requirements on all Subordinate Lien Bonds

scheduled to occur in the then current or any future Fiscal Year after taking into consideration the issuance of the series of Bonds proposed to be issued;

(vi) Refunding Bonds. If Bonds are being issued for the purpose of refunding less than all previously issued Bonds which are then Outstanding, none of the certifications described in (iii), (iv) or (v) above are required (except in the event Senior Lien Obligations are issued to refund Subordinate Lien Bonds) so long as the Debt Service Requirements in any Fiscal Year after the issuance of such Bonds will not exceed the scheduled Debt Service Requirements in the same Fiscal Year prior to the issuance of such Bonds; and

(vii) Supplemental Ordinance Requirements. Provision is made in the Supplemental Ordinance authorizing the series of Bonds proposed to be issued for:

(A) additional payments into the Senior Lien Bond Interest and Sinking Fund or the Subordinate Lien Bond Interest and Sinking Fund (as the case may be) sufficient to provide for any principal and interest requirements resulting from the issuance of the Bonds including, in the event that interest on the additional series of Bonds is capitalized and/or to be paid from investment earnings, a requirement for the transfer from the capitalized interest fund or account and/or from the construction fund to the Senior Lien Bond Interest and Sinking Fund or the Subordinate Lien Bond Interest and Sinking Fund (as the case may be) of amounts fully sufficient to pay interest on such series of Bonds during the period specified in the ordinance; and

(B) satisfaction of the Reserve Fund Requirement by not later than the date required by this Master Ordinance or any Supplemental Ordinance authorizing any Additional Senior Lien Obligations or Additional Subordinate Lien Bonds, as applicable.

(b) Special Provisions for Refunding Short Term/Demand Obligations. The provisions of paragraphs (iv), (v) and (vi) above shall not apply to the issuance of Additional Senior Lien Obligations or Additional Subordinate Lien Bonds for the purpose of refunding Short Term/Demand Obligations.

(c) Special Provisions for Completion Bonds. The provisions of paragraphs (iii), (iv) and (v) above shall not apply to the issuance of Completion Bonds in accordance with Section 5.03 hereof.

(d) Special Provisions for Credit Agreements. The City may enter into Credit Agreements with respect to any Bonds or Qualified Hedge Agreements if:

(i) prior to entering into such Credit Agreement, the City, to the extent required by law, shall cause the proceedings authorizing the Credit Agreement and any contracts or reimbursement agreements relating thereto to be submitted to and approved by the Attorney General of Texas;

(ii) for any Credit Agreement that obligates the City to make any future payments for the availability of such Credit Agreement, the City's financial advisor must certify that the inclusion of such payments within the Debt Service Requirements on the Bonds or Qualified Hedge Agreement to which the Credit Agreement relates will not cause such Bonds or Qualified Hedge Agreement to fail to comply with the applicable coverage requirements for their issuance or incurrence; and

(iii) to the extent that Bonds are issued with a credit facility or a liquidity facility, the City authorizes the inclusion of additional provisions in a Supplemental Ordinance, as needed, to provide security for the payment of the principal and interest when due on Credit Agreement Obligations.

The issuer of any Credit Agreement shall be entitled to be subrogated to the rights of the Owners of the Bonds or the counterparty to the Qualified Hedge Agreement secured by such Credit Agreement, and the City's reimbursement and repayment obligations to the issuer of the Credit Agreement shall be secured by Net Revenues as herein provided.

(e) Special Provisions for Qualified Hedge Agreements. The City may enter into Qualified Hedge Agreements contemporaneously with or following the issuance of any Bonds or in conjunction with the payment, sale, resale or exchange of any Bonds for any purpose authorized by law if the following requirements are satisfied:

(i) the proceedings authorizing the Qualified Hedge Agreement and any contracts or reimbursement agreements relating thereto shall, to the extent required by law, be submitted to and approved by the Attorney General of Texas;

(ii) the City shall have received written confirmations from each rating agency then rating the Bonds that entering into such Qualified Hedge Agreement will not, in and of itself, result in a withdrawal or reduction of any rating assigned to the Bonds; and

(iii) the City's financial advisor shall certify that the Bonds to which the Qualified Hedge Agreement relates could have been issued in satisfaction of all of the coverage requirements of this Article V if the Debt Service Requirements with respect to such Bonds are recalculated (as provided in the definition of Debt Service Requirements) to take into account payments due under the Qualified Hedge Agreement.

SECTION 5.02 SHORT TERM/DEMAND OBLIGATIONS. The City reserves the right to issue, from time to time, one or more series of Additional Senior Lien Obligations and/or Additional Subordinate Lien Bonds as "Short Term/Demand Obligations" provided that the aggregate principal amount of Short Term/Demand Obligations Outstanding at any time may not exceed the greater of \$150,000,000 or 30% of the aggregate principal amount of Bonds Outstanding at the time of issuance of the last series of Short Term/Demand Obligations; provided, however, that no such Short Term/Demand Obligations may be issued without satisfying the applicable provisions of Section 5.01 above; provided further, however, that no Short Term/Demand Obligation shall be subject to the limitations as to maximum principal amount as set forth above during any period of time that the City's financial advisor certifies that the City's variable or adjustable interest rate exposure under such Short Term/Demand Obligation is substantially hedged pursuant to an interest rate swap, interest rate cap or other interest rate hedging mechanism with a counterparty having a rating in one of the two highest credit rating categories by at least two major rating agencies (or with a counterparty whose payment obligations under such interest rate swap, interest rate cap or other interest rate hedging mechanism are insured or guaranteed by an entity having such rating) pursuant to which the maximum net rate of interest that the City is obligated to pay (after taking into account all payments to be made by such counterparty) does not exceed the interest rate certified with respect to such Short Term/Demand Obligation by such financial advisor pursuant to paragraph (ii) clause (2) of the definition of Debt Service Requirements.

SECTION 5.03 COMPLETION BONDS.

(a) The City reserves the right to issue one or more series of either: (i) Additional Senior Lien Obligations to pay the cost of completing any Airport Project (as defined in this Section below) for which Senior Lien Obligations have previously been issued or (ii) Additional Subordinate Lien Bonds to pay the cost of completing any Airport Project for which Subordinate Lien Bonds have previously been issued.

(b) Prior to the issuance of any series of Completion Bonds the City must provide, in addition to all of the applicable certificates required by Section 5.01, the following documents:

(i) a certificate of the consulting engineer engaged by the City to design the Airport Project for which the Completion Bonds are to be issued stating that such Airport Project has not materially changed in scope since the issuance of the most recent series of Bonds for such purpose (except as permitted in the applicable ordinance authorizing such Bonds) and setting forth the aggregate cost of the Airport Project which, in the opinion of such consulting engineer, has been or will be incurred; and

(ii) a certificate of the Aviation Director (i) stating that all amounts allocated to pay costs of the Airport Project from the proceeds of the most recent series of Bonds issued in connection with the Airport Project for which the Completion Bonds are being issued were used or are still available to be used to pay costs of such Airport Project; (ii) containing a calculation of the amount by which the aggregate cost of that Airport Project (furnished in the consulting engineer's certificate described above) exceeds the sum of the costs of the Airport Project paid to such date plus the moneys available at such date within any construction fund established therefor or other like account applicable to the Airport Project plus any other moneys which the Aviation Director, in his discretion, has determined are available to pay such costs in any other fund; and

(iii) certifying that, in the opinion of the Aviation Director, the issuance of the Completion Bonds is necessary to provide funds for the completion of the Airport Project.

(c) For purposes of this Section, the term "Airport Project" shall mean any Airport System facility or project which shall be defined as an Airport Project in any Supplemental Ordinance authorizing the issuance of Additional Senior Lien Obligations or Additional Subordinate Lien Bonds for the purpose of financing such Airport

Project. Any such Supplemental Ordinance may contain such further provisions as the City shall deem appropriate with regard to the use, completion, modification or abandonment of such Airport Project.

SECTION 5.04 INFERIOR LIEN OBLIGATIONS. The City reserves the right to issue or incur, for any lawful Airport System purpose, bonds, notes or other obligations secured in whole or in part by liens on the Net Revenues that are junior and subordinate to the lien on Net Revenues securing payment of the Senior Lien Obligations and Subordinate Lien Bonds. Such Inferior Lien Bonds may be further secured by any other source of payment lawfully available for such purposes.

SECTION 5.05 SPECIAL FACILITIES BONDS. The City reserves the right to issue, from time to time, in one or more series, Special Facilities Bonds as herein provided to finance and refinance the cost of any Special Facilities, including all reserves required therefor, all related costs of issuance and other amounts reasonably relating thereto, provided that such Special Facilities Bonds shall be payable solely from payments by Special Facilities lessees and/or other security not provided by the City. In no event shall any Gross Revenues or any other amounts held in any other fund or account maintained by the City as security for the Bonds or for the construction, operation, maintenance or repair of the Airport System be pledged to the payment of Special Facilities Bonds or to the payment of any expenses of maintenance and operation of Special Facilities.

SECTION 5.06 PFC OBLIGATIONS. The City reserves the right to issue or incur, for any lawful Airport System purpose, bonds, notes or other obligations secured in whole or in part by a lien on all or any designated portion of the PFC Revenues. Such PFC obligations may be further secured by any other source of payment lawfully available for such purposes.

SECTION 5.07 EXCLUDED FEE AND CHARGE REVENUES OBLIGATIONS. The City reserves the right to issue or incur, for any lawful Airport System purpose, bonds, notes or other obligations secured in whole or in part by a lien on all or any designated portion of Excluded Fee and Charge Revenues. Such obligations may be further secured by any other source of payment lawfully available for such purposes.

ARTICLE VI

COVENANTS AND PROVISIONS RELATING TO ALL BONDS

SECTION 6.01 PUNCTUAL PAYMENT OF OBLIGATIONS. The City will punctually pay or cause to be paid the interest on and principal of all Airport Obligations according to the terms thereof and will faithfully do and perform, and at all times fully observe, any and all covenants, undertakings, stipulations and provisions contained in this Master Ordinance and in any Supplemental Ordinance.

SECTION 6.02 MAINTENANCE OF AIRPORT SYSTEM. The City covenants that it will at all times maintain and operate the Airport System, or, within the limits of its authority, cause the same to be maintained and operated, in good and serviceable condition.

SECTION 6.03 LIMITATION ON CITY CHARGES FOR OPERATION AND MAINTENANCE EXPENSES. The City covenants that it will not charge the Airport System any amounts for overhead expenses relating to the administration, operation and maintenance of the Airport System except to the extent that such amounts are reasonably allocable to the Airport System based upon a stated policy of allocation, reasonably applied to the Airport System and all other departments of the City and further covenants that the City will not charge the Airport System for any property provided or services rendered by the City unless such services are reasonably necessary and required for the Airport System and are not otherwise provided to the Airport System. All such charges imposed by the City upon the Airport System shall be reasonable, fair and consistent with similar charges imposed upon other departments of the City and shall be consistent with all applicable federal laws, regulations and other requirements applicable to the Airport System or imposed upon the Airport System in connection with the acceptance by the Airport System of any federal grants or aid.

SECTION 6.04 SALE OR ENCUMBRANCE OF AIRPORT SYSTEM.

(a) Except for the use of the Airport System or services pertaining thereto in the normal course of business, neither all nor a substantial part of the Airport System shall be sold, leased, mortgaged, pledged, encumbered, alienated, or otherwise disposed of until all Airport Obligations have been paid in full, or unless provision has been made therefor, and the City shall not dispose of its title to the Airport System or to any useful part thereof, including, without limitation, any property necessary to the operation and use of the Airport System, (i) except for the execution of leases, licenses, easements, or other agreements in connection with the operation of the Airport System by the City, or in connection with any Special Facilities, (ii) except for any pledges of and liens on revenues derived from the operation and use of the Airport System, or any part thereof, or any Special Facilities pertaining thereto, for the payment of Airport Obligations, Special Facilities Bonds and any other obligations pertaining to the Airport System, and (iii) except as otherwise provided in the next two paragraphs.

(b) The City may sell, exchange, lease, or otherwise dispose of, or exclude from the Airport System, any property constituting a part of the Airport System which the Aviation Director certifies (i) to be no longer useful in the construction or operation of the Airport System, or (ii) to be no longer necessary for the efficient operation of the Airport System, or (iii) to have been replaced by other property of at least equal value. The net proceeds of the sale or disposition of any Airport System property (or the fair market value of any property so excluded) pursuant to this paragraph shall be used for the purpose of replacing properties at the Airport System, or shall be paid into the Airports Improvement Fund for the purposes thereof.

(c) Nothing herein shall prevent any transfer of all or a substantial part of the Airport System to another body corporate or politic (including, but not necessarily limited to a joint action agency or an airport authority) which assumes the City's obligations under this Master Ordinance and any Supplemental Ordinance, wholly or in part, if, in the written opinion of the Airport Management Consultant, the ability to meet the rate covenant and other covenants under this Master Ordinance and any Supplemental Ordinance are not materially and adversely affected. In the event of any such transfer and assumption, nothing herein shall prevent the retention by the City of any facility of the Airport System if, in the written opinion of the Airport Management Consultant, such retention will not materially and adversely affect nor unreasonably restrict such other body's ability to comply with the requirements of the rate covenant and the other covenants of this Master Ordinance and any Supplemental Ordinance.

SECTION 6.05 INSURANCE. The City further covenants and agrees that it will keep the Airport System insured with insurers of good standing against risks, accidents or casualties against which and to the extent customarily insured against by political subdivisions of the State of Texas operating similar properties, to the extent that such insurance is available. All net proceeds of such insurance shall be applied to repair or replace the insured property that is damaged or destroyed or to make other capital improvements to the Airport System or to redeem Airport Obligations except for proceeds of business interruption insurance, which shall be credited to the Revenue Fund.

SECTION 6.06 ACCOUNTS, RECORDS, AND AUDITS. The City covenants and agrees that it will maintain a proper and complete system of records and accounts pertaining to the Gross Revenues and the operation of the Airport System in which full, true and proper entries will be made of all dealings, transactions, business and affairs that in any way affect or pertain to the Gross Revenues and the Airport System. The City shall, within 120 days after the close of each of its Fiscal Years or as soon thereafter as practicable, cause an audit report of such records and accounts to be prepared by an independent certified public accountant or independent firm of certified public accountants, which shall calculate the Gross Revenues, Net Revenues and Debt Service Requirements for such Fiscal Year and shall set forth a calculation to demonstrate whether the City has satisfied the rate covenant contained in Section 3.03 hereof. In addition, the City shall each year, as a part of its annual audit, cause an independent certified public accountant or independent firm of certified public accountants to prepare a report containing an analysis of any overhead and direct charges imposed on the Airport System by the City to determine whether such charges were imposed in conformity with the covenant contained in Section 6.03 hereof. Each year promptly after such reports are prepared, the City shall furnish copies thereof to any Owners of Airport Obligations who shall request the same. All expenses of obtaining such reports shall constitute Operation and Maintenance Expenses of the Airport System.

SECTION 6.07 PLEDGE AND ENCUMBRANCE OF REVENUES. The City covenants and represents that it has the lawful power to create a lien on and to pledge the Net Revenues to secure the payment of the Airport Obligations and has lawfully exercised such power under the Constitution and laws of the State of Texas. The City further covenants and represents that, other than to the payment of Operation and Maintenance Expenses and the Airport Obligations, the Gross Revenues are not and will not be made subject to any other lien, pledge or encumbrance to secure the payment of any debt or obligation of the City, unless such lien, pledge or encumbrance is junior and subordinate to the lien and pledge securing payment of the Airport Obligations.

SECTION 6.08 BONDHOLDERS REMEDIES. This Master Ordinance and all Supplemental Ordinances shall constitute a contract between the City and the Owners of the Airport Obligations from time to time Outstanding and this Master Ordinance and all Supplemental Ordinances shall be and remain irrevocable until the Airport Obligations authorized thereby and the interest thereon shall be fully paid or discharged or provision therefor shall have been made as provided herein. In the event of a default in the payment of the principal or interest on any of the Airport Obligations or a default in the performance of any duty or covenant provided by law or in this Master Ordinance or any Supplemental Ordinance, the Owner or Owners of any of the Airport Obligations authorized thereby may pursue all legal remedies afforded by the Constitution and laws of the State of Texas to compel the City to remedy such default and to prevent further default or defaults. Without in any way limiting the generality of the foregoing, it is expressly provided that any Owner of any of the Airport Obligations may at law or in equity, by suit, action, mandamus, or other proceedings, enforce and compel performance of all duties required to be performed by the City under this Master Ordinance and any Supplemental Ordinance, including the making and setting of reasonably required rates and charges for the use and services of the Airport System, the deposit of the Gross Revenues thereof into the special Funds herein provided, and the application of such Gross Revenues in the manner required in this Master Ordinance and any Supplemental Ordinance.

SECTION 6.09 LEGAL HOLIDAYS. In any case where the date of maturity of interest on or principal of any series of Airport Obligations or the date fixed for redemption of any series of Airport Obligations shall be in the City a legal holiday or a day on which a Paying Agent/Registrar for such Airport Obligations is authorized by law to close, then payment of interest or principal need not be made on such date but may be made on the next succeeding day not in the City a legal holiday or a day on which such Paying Agent/Registrar is authorized by law to close with the same force and effect as if made on the date of maturity or the date fixed for redemption and no interest shall accrue for the period from the date of maturity or redemption to the date of actual payment.

ARTICLE VII

ALTERATION OF RIGHTS AND DUTIES; AMENDMENT OF ORDINANCE

SECTION 7.01 ALTERATION OF RIGHTS AND DUTIES. The rights, duties, and obligations of the City and the Owners of the Airport Obligations are subject in all respects to all applicable federal and state laws including, without limitation, the provisions of federal law regarding the composition of indebtedness of political subdivisions, as the same now exist or may hereafter be amended. Inconsistencies among the provisions of the ordinances authorizing the issuance of Airport Obligations shall be resolved by the City in any manner or by any action to conform such provisions as it deems necessary or advisable in accordance with applicable law. The City may consult with and rely on the opinion of nationally recognized bond counsel with regard to any or all matters in this Article VII.

SECTION 7.02 AMENDMENT WITHOUT CONSENT. The City may, without the consent of or notice to any of the Owners of the Airport Obligations, amend this Master Ordinance or any Supplemental Ordinance for any one or more of the following purposes:

(a) To cure any ambiguity, defect, omission or inconsistent provision in this Master Ordinance, any Supplemental Ordinance, or in the Airport Obligations; or to comply with any applicable provision of state or federal law or regulation of federal agencies; provided, however, that such action shall not adversely affect the interests of the Owners of the Airport Obligations;

(b) To change the terms or provisions of this Master Ordinance or any Supplemental Ordinance to the extent necessary to prevent the interest on the Airport Obligations from being includable within the gross income of the Owners thereof for federal income tax purposes;

(c) To grant to or confer upon the Owners of the Airport Obligations any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the Owners of the Airport Obligations;

(d) To add to the covenants and agreements of the City contained in this Master Ordinance or any Supplemental Ordinance other covenants and agreements of, or conditions or restrictions upon, the City, or to surrender or eliminate any right or power reserved to or conferred upon the City in this Master Ordinance or any Supplemental Ordinance;

(e) To subject to the lien and pledge of this Master Ordinance or any Supplemental Ordinance additional Net Revenues which may include revenues, properties or other collateral;

(f) To add requirements or incorporate modifications the compliance with which is required by a rating agency in connection with issuing or confirming a rating with respect to any series of Airport Obligations;

(g) To authorize any series of Additional Senior Lien Bonds, Additional Senior Lien Notes, Additional Subordinate Lien Bonds or additional Inferior Lien Bonds, and, in connection therewith: (i) to specify and determine the terms, forms and details thereof and (ii) to create such additional funds and accounts and to effect such amendments of this Master Ordinance which may be necessary for such issuance, provided in each case that no such amendment or supplement shall be contrary to or inconsistent with the limitations set forth in this Master Ordinance;

(h) To evidence any sale, transfer or encumbrance of the Airport System in accordance with the provisions of Section 6.04;

(i) To make any other modification, amendment or supplement that shall not materially adversely affect the interests of the Owners of the Airport Obligations;

(j) To cure or correct any technical defect in connection with the terms, conditions or procedures relating to the variable rate provisions contained in any Supplemental Ordinance; provided, however, that such action shall not adversely affect the interests of the owners of the Airport Obligations; and

(k) Prior to the conversion of any variable rate Airport Obligations to a different interest rate mode, to change the terms, conditions or procedures relating to the new interest rate mode.

SECTION 7.03 AMENDMENTS REQUIRING CONSENT. The City may at any time adopt one or more ordinances (which may be in the form of a Supplemental Ordinance) amending, modifying, adding to or eliminating any of the provisions of this Master Ordinance or any Supplemental Ordinance, but, if such amendment is not of the character described in Section 7.02 hereof, only with the consent given in accordance with Section 7.04 hereof of the Owner or Owners of not less than a majority in aggregate unpaid principal amount of the Airport Obligations then Outstanding and affected by such amendment, modification, addition, or elimination; provided, however, that nothing in this Section 7.03 shall permit (a) an extension of the maturity of the principal of or interest on any Airport Obligation issued hereunder, or (b) a reduction in the principal amount of any Airport Obligation or the rate of interest on any Airport Obligation, or (c) a privilege or priority of (i) any Senior Lien Obligation(s) over any other Senior Lien Obligation(s), (ii) any Subordinate Lien Bond(s) over any other Subordinate Lien Bond(s), or (iii) any Inferior Lien Bond(s) over any other Inferior Lien Bond(s), or (d) a reduction in the aggregate principal amount of the Airport Obligations required for consent to such amendment, unless the Owner or Owners of 100% in aggregate principal amount of the Airport Obligations shall consent to any of said changes. Before the City shall adopt one or more of such ordinances pursuant to this Section 7.03, the City must receive an opinion from nationally recognized bond counsel to the effect that such ordinance or ordinances does not adversely affect the exclusion from gross income for federal income tax purposes of interest on the Airport Obligations.

SECTION 7.04 CONSENT OF OWNERS.

(a) Any consent required by Section 7.03 hereof by any Owner of Airport Obligations shall be in writing, may be in any number of concurrent writings of similar tenor, and may be signed by such Owner or his duly authorized attorney. Proof of the execution of any such consent or of the writing appointing any such attorney and of the ownership Airport Obligations, if made in the following manner, shall be sufficient for any of the purposes of this Master Ordinance, and shall be conclusive in favor of the City with regard to any action taken, suffered or omitted to be taken by the City under such instrument, namely:

(i) The fact and date of the execution by any person of any such writing may be proved by the certificate of any officer in any jurisdiction who by law has power to take acknowledgments within such jurisdiction that the person signing such writing acknowledged before him the execution thereof, or by affidavit of any witness to such execution; and

(ii) The fact of the ownership by any person of any Airport Obligations and the date of the ownership of same may be proved by a certificate executed by an appropriate officer of the Paying Agent/Registrar for such Airport Obligations, stating that at the date thereof such Airport Obligations were registered in the name of such party in the register for such Airport Obligations.

In lieu of the foregoing the City may accept such other proofs of the foregoing as it shall deem appropriate.

(b) Consents required pursuant to Section 7.03 shall be valid only if given following the giving of notice by or on behalf of the City requesting such consent and setting forth the substance of the proposed amendment of this Master Ordinance or any Supplemental Ordinance in respect of which such consent is sought and stating that copies thereof are available at the office of the City Secretary for inspection. Such notice shall be given by certified mail, postage prepaid, to each Registered Owner of the Airport Obligations affected at the address shown on the register for such Airport Obligations.

SECTION 7.05 REVOCATION OF CONSENT. Any consent by any Owner of an Airport Obligation pursuant to the provisions of this Article shall be irrevocable for a period of six months from the date of mailing of the notice provided for in this Article, and shall be conclusive and binding upon all future Owners of the same Airport Obligation and any Airport Obligation delivered in transfer thereof or in exchange for or replacement thereof during such period. Such consent may be revoked at any time after six months from the date of the first mailing of such notice by the Owner who gave such consent or by a successor in title, by filing notice thereof with the Paying Agent/Registrar for such Airport Obligation, but such revocation shall not be effective if the Owners of a majority in aggregate principal amount of the Airport Obligations then Outstanding and affected thereby have, prior to the attempted revocation, consented to and approved the amendment.

SECTION 7.06 BOND INSURER MAY BE DEEMED OWNER. For purposes of giving any consent under this Article VII, the bond insurer of any series of Airport Obligations may be deemed by the City to be the Owner of such series of Airport Obligations, as provided in the related Supplemental Ordinance or officers pricing certificate.

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APPENDIX C-2

PROPOSED AMENDMENTS TO THE MASTER ORDINANCE

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APPENDIX C-2

PROPOSED AMENDMENTS TO THE MASTER ORDINANCE

Proposed 2016 Amendments

The following amendments to the Master Ordinance have been incorporated into the Series 2018 Bonds, but will not become effective until the Proposed 2016 Amendments (or portions thereof) have become incorporated or deemed incorporated into every ordinance pursuant to which Airport Obligations are then Outstanding (the "Amendment Effective Date"). The City may not exercise its rights under any portion of the Proposed 2016 Amendments until the Amendment Effective Date. As of the date of this Official Statement, the Proposed 2016 Amendments have only been incorporated into the City's Outstanding Senior Lien Notes and the Series 2018 Bonds.

1. Section 5.02 of the Master Ordinance shall read:

SECTION 5.02 SHORT TERM/DEMAND OBLIGATIONS. The City reserves the right to issue, from time to time, one or more series of Additional Senior Lien Obligations and/or Additional Subordinate Lien Bonds as "Short Term/Demand Obligations"; provided, however, that no such Short Term/Demand Obligations may be issued without satisfying the applicable provisions of Section 5.01 above.

2. The definition of "Gross Revenues" shall read as follows, and the definition of "Released Revenues" shall be added.

"Gross Revenues" means all income and revenues derived directly or indirectly by the City from the operation and use of and otherwise pertaining to the Airport System, or any part thereof, whether resulting from extensions, enlargements, repairs, betterments or other improvements to the Airport System, or otherwise, and includes, except to the extent hereinafter expressly excluded, all revenues received by the City from the Airport System, including, without limitation, all rentals, rates, fees and other charges for the use of the Airport System, or for any service rendered by the City in the operation thereof, interest and other income realized from the investment or deposit of amounts credited to any fund required to be maintained pursuant to this Master Ordinance or any other ordinance authorizing the issuance of Airport Obligations. Gross Revenues expressly exclude:

- (i) proceeds of any Airport Obligations;
- (ii) interest or other investment income derived from Airport Obligation proceeds deposited to the credit of any construction fund, or applied to fund capitalized interest, or interest or investment income required to be retained in the Senior Lien Bond Reserve Fund, the Subordinate Lien Bond Reserve Fund, the Inferior Lien Bond Reserve Fund, the Operation and Maintenance Reserve Fund or any escrow fund in order to accumulate therein any amount or balance required to be accumulated or maintained therein pursuant to any ordinance authorizing any series of Airport Obligations;
- (iii) any monies received as grants, appropriations, or gifts, the use of which is limited by the grantor or donor to the construction or acquisition of Airport System facilities, except to the extent any such monies shall be received as payments for the use of the Airport System facilities;
- (iv) any revenues derived from any Special Facilities which are pledged to the payment of Special Facilities Bonds;
- (v) insurance proceeds other than loss of use or business interruption insurance proceeds;

(vi) the proceeds of any passenger facility charge or other per-passenger charge as may be hereafter authorized under federal law, including, but not limited to, those revenues defined as PFC Revenues;

(vii) sales and other taxes collected by the Airport System on behalf of the State of Texas and any other taxing entities;

(viii) Federal Payments received by the Airport System unless the City first receives an opinion from nationally recognized bond counsel to the effect that such payments, if included in Gross Revenues, would not cause the interest on the Airport Obligations to be includable within the gross income of the Owners thereof for federal income tax purposes;

(ix) the net proceeds received by the City from the disposition of any Airport System property;

(x) any Excluded Fee and Charge Revenues;

(xi) any Taxable Bond Credit Revenues; and

(xii) any Released Revenues

“**Released Revenues**” means a specific, identifiable portion of the income and revenues otherwise constituting Gross Revenues (the “Identified Revenues”) with respect to which the City has adopted a Supplemental Ordinance authorizing the Identified Revenues to be excluded from the definition of Gross Revenues and finding and determining that the following conditions have been met:

(i) either (x) the City Controller of the City has certified that, after the Identified Revenues were excluded from Gross Revenues, Net Revenues for each of the two most recent completed Fiscal Years were sufficient to satisfy the rate covenant set forth in Section 3.03(a) of this Master Ordinance in each of those Fiscal Years or (y) an Airport Management Consultant has certified, based upon reasonable assumptions, that after the Identified Revenues are excluded from Gross Revenues, Net Revenues for each of the following three (3) full Fiscal Years will be sufficient to enable the City to satisfy the rate covenant set forth in Section 3.03(a) of this Master Ordinance in each of those five Fiscal Years;

(ii) the City has received an opinion of nationally recognized bond counsel to the effect that the exclusion of the Identified Revenues from the definition of Gross Revenues and from the pledge and lien of this Master Ordinance will not, in and of itself, cause the interest on any Outstanding Airport Obligations to be included in gross income for purposes of federal income tax; and

(iii) the City has received written confirmation from each rating agency then rating the Outstanding Airport Obligations to the effect that the exclusion of the Identified Revenues from the definition of Gross Revenues and from the pledge and lien of this Master Ordinance will not cause a withdrawal or reduction in any unenhanced rating then assigned to any Outstanding Airport Obligation.

Beginning the first fully Fiscal Year following the adoption of the Supplemental Ordinance that meets the requirements set forth above, the Identified Revenues shall become “Released Revenues” and shall be excluded from the pledge and lien of this Master Ordinance. The City shall file a notice with the MSRB describing the Released Revenues and the effective date of the exclusion of the Released Revenues from the pledge and lien of this Master Ordinance.

3. Definition of “Qualified Hedge Agreement” shall read:

“Qualified Hedge Agreement” means any agreement between the City and a qualifying financial institution (as described in the following sentence) for the purpose of providing an interest rate swap, exchange, cap, collar, floor, forward or other hedging mechanism, arrangement or security, however denominated, expressly identified pursuant to its terms as being entered into in connection with and in order to hedge interest rate fluctuations on any portion of any Airport Obligations and in consideration for which the City may agree to pay, but solely from Net Revenues as herein provided, (i) periodic payments for the availability of such Qualified Hedge Agreement and/or (ii) net amounts as a result of fluctuation in hedged interest rates or in the value of any index of payment and/or (iii) termination charges. A Qualified Hedge Agreement may only be entered into with a financial institution that has long-term credit ratings or the obligations of which are unconditionally guaranteed by a financial institution with long-term credit ratings in one of the two highest generic rating categories by one nationally recognized rating service. Obligations of the City pursuant to a Qualified Hedge Agreement shall be included within the definition of Debt Service Requirements for the series of Airport Obligations to which the Qualified Hedge Agreement relates. Further, obligations of the City to make payments under a Qualified Hedge Agreement derived from or resulting from a fluctuation in hedged interest rates or in the value of any index of payment shall be deemed to be payments of interest on the Airport Obligations so hedged. Each Qualified Hedge Agreement shall be deemed to be a part of the Airport Obligations of the series to which it relates for the purpose of securing its payment by the pledge of Net Revenues as provided in Articles III, V and VI of this Master Ordinance. However, issuers of and counterparties to Qualified Hedge Agreements shall not be treated as Owners of Airport Obligations for purposes of any voting rights to approve amendments or direct the exercise of any remedies under this Master Ordinance.

4. Definition of “Reserve Fund Requirement” shall read:

“Reserve Fund Requirement” means the amount required to be maintained in the Senior Lien Bond Reserve Fund (and the accounts therein), the Subordinate Lien Bond Reserve Fund (and the accounts therein), or the Inferior Lien Bond Reserve Fund (and the accounts therein), as the case may be, as further set forth in the applicable Supplemental Ordinance and/or officers pricing certificate authorizing one or more series of Airport Obligations. Upon the issuance of any series of Airport Obligations, the amount of the Reserve Fund Requirement for such Airport Obligations shall be as set forth in the related Supplemental Ordinance or officers pricing certificate.

A. For Senior Lien Notes, such amount shall be computed and recomputed upon the issuance of each series of Senior Lien Notes to be the arithmetic average of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Senior Lien Notes then Outstanding, including the series of Senior Lien Notes then being issued.

B. For Senior Lien Bonds that are Reserve Fund Participants, such amount shall be computed upon the issuance of each series of Senior Lien Bonds that are Reserve Fund Participants and on each date on which Senior Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Senior Lien Bonds then Outstanding that are Reserve Fund Participants.

C. For any series of Senior Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Senior Lien Bonds and on each date on which any of such series of Senior Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be an amount, if any, as set forth and determined in the related Supplemental Ordinance.

D. For Subordinate Lien Bonds that are Reserve Fund Participants, such amount shall be computed and recomputed upon the issuance of each series of Subordinate Lien Bonds that are

Reserve Fund Participants and on each date on which Subordinate Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Subordinate Lien Bonds then Outstanding that are Reserve Fund Participants, including any series of Subordinate Lien Bonds then being issued that are Reserve Fund Participants.

E. For any series of Subordinate Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Subordinate Lien Bonds and on each date on which any of such series of Subordinate Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be an amount, if any, as set forth and determined in the related Supplemental Ordinance.

F. For Inferior Lien Bonds that are Reserve Fund Participants, such amount shall be computed and recomputed upon the issuance of each series of Inferior Lien Bonds that are Reserve Fund Participants and on each date on which Inferior Lien Bonds that are Reserve Fund Participants are paid at maturity or optionally or mandatorily redeemed, to be the greatest amount of the Debt Service Requirements scheduled to occur in the then current and each future Fiscal Year for all Inferior Lien Bonds then Outstanding that are Reserve Fund Participants, including any series of Inferior Lien Bonds then being issued that are Reserve Fund Participants.

G. For any series of Inferior Lien Bonds that are Reserve Fund Non-Participants, such amount shall be computed upon the issuance of such series of Inferior Lien Bonds and on each date on which any of such series of Inferior Lien Bonds are paid at maturity or optionally or mandatorily redeemed, to be an amount, if any, as set forth and determined in the related Supplemental Ordinance.

5. Definition of “Short Term/Demand Obligations” shall read:

“Short Term/Demand Obligations” means each series of bonds, notes and other obligations, the payment of principal of which is either (i) payable on demand by or at the option of the holder at a time sooner than a date on which such principal is deemed to be payable for purposes of computing Debt Service Requirements, or (ii) scheduled to be payable within one year from the date of issuance and is contemplated to be refinanced for a specified period or term through the issuance of additional Short Term/Demand Obligations pursuant to a commercial paper or other similar financing program. The purchase price, payment or refinancing of such principal may be additionally secured by a letter of credit, line of credit, standby bond purchase agreement, bond insurance, surety bond or other credit or liquidity facility.

APPENDIX D

FORM OF OPINIONS OF CO-BOND COUNSEL

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BRACEWELL LLP
711 LOUISIANA STREET, SUITE 2300
HOUSTON, TEXAS 77002

EDGARDO E. COLÓN, P.C.
4601 WASHINGTON AVENUE, SUITE 200
HOUSTON, TEXAS 77007

[CLOSING DATE]

WE HAVE ACTED as co-bond counsel for the CITY OF HOUSTON, TEXAS (the “City”) in connection with the issuance of the CITY OF HOUSTON, TEXAS AIRPORT SYSTEM SUBORDINATE LIEN REVENUE AND REFUNDING BONDS, SERIES 2018A (AMT) in the original aggregate principal amount of \$130,550,000 (the “Series 2018A Bonds”) and the CITY OF HOUSTON, TEXAS AIRPORT SYSTEM SUBORDINATE LIEN REVENUE AND REFUNDING BONDS, SERIES 2018B (NON-AMT) in the original aggregate principal amount of \$285,220,000 (the “Series 2018B Bonds”) and together with the Series 2018A Bonds, the “Series 2018 Bonds”).

The Series 2018 Bonds mature, bear interest and may be transferred and exchanged as set forth in the Series 2018 Bonds, City of Houston Ordinance No. 2017-0885 (the “Supplemental Ordinance”) and the officers pricing certificate executed pursuant thereto (the “Officers Pricing Certificate”). The Series 2018 Bonds are also authorized pursuant to City of Houston Ordinance No. 2016-0846 (the “Master Ordinance”). The Master Ordinance, the Supplemental Ordinance and the Officers Pricing Certificates are referred to collectively herein as the “Ordinance.” Capitalized terms used herein but not otherwise defined have the meaning assigned to them in the Ordinance.

WE HAVE ACTED as co-bond counsel for the sole purpose of rendering an opinion with respect to the legality and validity of the Series 2018 Bonds under the Constitution and laws of the State of Texas and with respect to the excludability of interest on the Series 2018 Bonds from gross income for federal income tax purposes. We have not investigated or verified original proceedings, records, data or other material, but have relied solely upon the transcript of certified proceedings described in the following paragraph. We have not assumed any responsibility with respect to the financial condition or capabilities of the City, including the Airport System, or the disclosure thereof in connection with the offer and sale of the Series 2018 Bonds. Our role in connection with the City’s Official Statement, dated March 2, 2018, prepared for use in connection with the offer and sale of the Series 2018 Bonds has been limited as described therein.

IN OUR CAPACITY as co-bond counsel, we have participated in the preparation of and have examined a transcript of certified proceedings pertaining to the authorization and issuance of the Series 2018 Bonds, the bonds being refunded with a portion of the proceeds of the Series 2018 Bonds (the “Refunded Bonds”), and the commercial paper notes being refunded with a portion of the proceeds of the Series 2018 Bonds (the “Refunded Notes”), which we have relied on in giving our opinion. The transcript contains certified copies of certain proceedings of the

City Council of the City; the report of Grant Thornton LLP, certified public accountants, (the “Report”) verifying (i) the sufficiency of the deposits made with the Refunded Bonds Escrow Agent for the defeasance and redemption of the Refunded Bonds, (ii) the sufficiency of the deposits made with the Refunded Notes Escrow Agent for the defeasance and redemption of the Refunded Notes, and (iii) the mathematical accuracy of certain computations of the yield of the Series 2018 Bonds and the escrowed securities acquired with the proceeds of the Series 2018 Bonds; customary certificates of officials, agents and representatives of the City, the Refunded Bonds Escrow Agent, the Refunded Notes Escrow Agent, and certain other persons; and other certified showings relating to the authorization and issuance of the Series 2018 Bonds and firm banking and financial arrangements for the discharge and final payment of the Refunded Bonds and the Refunded Notes. We have further examined such applicable provisions of the Internal Revenue Code of 1986, as amended (the “Code”), court decisions, regulations and published rulings of the Internal Revenue Service (the “Service”) as we have deemed relevant. We have also examined a specimen of the form of registered bond of each series of this issue.

BASED ON SUCH EXAMINATION, IT IS OUR OPINION THAT:

1. The transcript of certified proceedings referenced above evidences complete legal authority for the issuance of the Series 2018 Bonds in full compliance with the Constitution and the laws of the State of Texas presently effective and that therefore the Series 2018 Bonds constitute legal, valid and binding special obligations of the City;
2. The Series 2018 Bonds, together with all outstanding Subordinate Lien Bonds and any additional Subordinate Lien Bonds hereafter issued, are payable from and equally and ratably secured by a lien on the Net Revenues of the Airport System (subject to the prior and superior lien on Net Revenues securing the outstanding Senior Lien Obligations and any additional Senior Lien Obligations hereafter issued) and the Subordinate Lien Bond Interest and Sinking Fund, as provided in the Ordinance. The Series 2018 Bonds are also secured by a lien on the Subordinate Lien Bond Reserve Fund Participant Account, as provided in the Ordinance;
3. Under the terms of the Ordinance and certain certificates and letters of instruction delivered thereunder, firm banking and financial arrangements have been made for the discharge and final payment of the Refunded Bonds pursuant to a Refunded Bonds Escrow Agreement entered into between the City and the Refunded Bonds Escrow Agent effective as of the date of delivery of the Series 2018 Bonds, and therefore the Refunded Bonds are deemed to be fully paid and no longer outstanding except for the purpose of being paid from funds provided for such purpose pursuant to the Refunded Bonds Escrow Agreement; and
4. Under the terms of the Ordinance and certain certificates and letters of instruction delivered thereunder, firm banking and financial arrangements have been made for the discharge and final payment of the Refunded Notes pursuant to a Refunded Notes Escrow Agreement entered into between the City and the Refunded Notes Escrow Agent effective as of the date of delivery of the Series

2018 Bonds, and therefore the Refunded Notes are deemed to be fully paid and no longer outstanding except for the purpose of being paid from funds provided for such purpose pursuant to the Refunded Notes Escrow Agreement.

THE RIGHTS OF THE OWNERS of the Series 2018 Bonds are subject to the applicable provisions of the federal bankruptcy laws and any other similar laws affecting the rights of creditors of political subdivisions, and may be limited by general principles of equity which permit the exercise of judicial discretion. The Series 2018 Bonds are secured solely by a lien on and pledge of Net Revenues of the Airport System as described above and certain funds as provided in the Ordinance and do not constitute an indebtedness or general obligation of the City. Owners of the Series 2018 Bonds shall never have the right to demand payment of principal or interest out of any funds raised or to be raised by taxation.

THE CITY HAS RESERVED THE RIGHT TO ISSUE ADDITIONAL SENIOR LIEN OBLIGATIONS, SUBORDINATE LIEN BONDS AND INFERIOR LIEN BONDS, subject to the restrictions contained in the Ordinance, secured by liens on the Net Revenues that are prior and superior to, on a parity with, or junior and inferior to, respectively, the lien on Net Revenues securing the Series 2018 Bonds.

IT IS OUR FURTHER OPINION THAT:

5. Interest on the Series 2018A Bonds is excludable from gross income for federal income tax purposes, except with respect to interest on any Series 2018A Bond for any period during which such Series 2018A Bond is held by a person who, within the meaning of Section 147(a) of the Code, is a “substantial user” or a “related person” to such a “substantial user” of the facilities that were financed or refinanced with the proceeds of the Series 2018A Bonds; and
6. The Series 2018A Bonds are “private activity bonds” within the meaning of the Code, and, as such, interest on the Series 2018A Bonds is an item of tax preference that is includable in alternative minimum taxable income for purposes of determining a taxpayer’s alternative minimum tax liability; and
7. Interest on the Series 2018B Bonds is excludable from gross income for federal income tax purposes under existing law; and
8. The Series 2018B Bonds are not “private activity bonds” within the meaning of the Code, and as such, interest on the Series 2018B Bonds is not subject to the alternative minimum tax on individuals.

In providing such opinions, we have relied on representations of the City, the City's co-financial advisors and the Underwriters with respect to matters solely within the knowledge of the City, the City's co-financial advisors and the Underwriters, respectively, which we have not independently verified. We will further rely on the Report regarding the mathematical accuracy of certain computations. In addition, we have assumed for purposes of this opinion continuing compliance with the covenants in the Ordinance pertaining to those sections of the Code that affect the excludability of interest on the Series 2018 Bonds from gross income for federal income tax purposes. In the event that such representations or the Report are determined to be

inaccurate or incomplete, or if the City fails to comply with the foregoing covenants in the Ordinance, interest on the Series 2018 Bonds could become includable from the date of their original delivery, regardless of the date on which the event causing such inclusion occurs.

Except as stated above, we express no opinion as to any federal, state or local tax consequences resulting from the ownership of, receipt or accrual of interest on or disposition of the Series 2018 Bonds.

Owners of the Series 2018 Bonds should be aware that the ownership of tax-exempt obligations may result in collateral federal income tax consequences to financial institutions, life insurance and property and casualty insurance companies, certain S corporations with Subchapter C earnings and profits, individual recipients of Social Security or Railroad Retirement benefits, taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations, low and middle income taxpayers otherwise qualifying for the health insurance premium assistance credit and individuals otherwise qualifying for the earned income tax credit. In addition, certain foreign corporations doing business in the United States may be subject to the “branch profits tax” on their effectively-connected earnings and profits (including tax-exempt interest such as interest on the Series 2018 Bonds).

Our opinions are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. We assume no duty to update or supplement these opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in law that may hereafter occur or become effective. Moreover, our opinions are not a guarantee of result and are not binding on the Service; rather, such opinions represent our legal judgment based upon our review of existing law and in reliance upon the representations and covenants referenced above that we deem relevant to such opinions. The Service has an ongoing audit program to determine compliance with rules that relate to whether interest on state or local obligations is includable in gross income for federal income tax purposes. No assurance can be given regarding whether or not the Service will commence an audit of the Series 2018 Bonds. If an audit is commenced, in accordance with its current published procedures, the Service is likely to treat the City as the taxpayer. We observe that the City has covenanted in the Ordinance not to take any action, or knowingly omit to take any action within its control, that if taken or omitted, respectively, would cause the interest on the Series 2018 Bonds to be includable in gross income, as defined in Section 61 of the Code, of the holders thereof for federal income tax purposes.

APPENDIX E

SUMMARY OF SCHEDULES RELATED TO CONTINUING DISCLOSURE OF INFORMATION

Schedule A	PFC Collections
Schedule 1	Passenger Statistics (including Schedule 1-A – Total Enplaned Passengers for the Houston Airport System)
Schedule 2	Airline Market Shares
Schedule 3	Total Aircraft Operations and Aircraft Landed Weight
Schedule 4	Total System Cargo Activity
Schedule 5	Selected Financial Information
Schedule 6	Summary of Certain Fees and Charges
Schedule 7	Houston Airport System Debt Service Requirements Schedule
Schedule 8	Houston Airport System Outstanding Debt
Schedule 8A	Cash and Liquidity
Schedule 9*	Actuarially Determined Contribution Amounts and Changes in Pension Plan Assets
Schedule 9A:*	Municipal System Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability
Schedule 9B:*	Police System Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability
Schedule 9C:*	Firefighter Fund Pension Plan Assets, Liabilities and Unfunded Actuarial Accrued Liability

* The City agrees to update Schedules 9, 9A, 9B, and 9C only to the extent that the City receives updated actuarial reports from the boards of the pension systems. While required by State law, the City is not empowered to require the boards of the pension systems to obtain updated actuarial reports. The pension systems will periodically receive additional actuarial reports with regard to the City's pension plans, to the extent required under State law or requested by the boards of the pension systems. Accordingly, updated Schedules 9, 9A, 9B, and 9C may not be available in every annual continuing disclosure filing.

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APPENDIX F

DEPOSITORY TRUST COMPANY

The information in this APPENDIX E describes the securities clearance procedures of The Depository Trust Company (“DTC”) in the United States. The information in this APPENDIX concerning DTC has been obtained from sources that the City believes to be reliable, but the City takes no responsibility for the accuracy of such information.

The Depository Trust Company

Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the Series 2018 Bonds. The Series 2018 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Security certificate will be issued for each maturity of the Series 2018 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest securities 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 issues, 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”). DTC has a Standard & Poor’s rating 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.

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 Security (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect 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 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 and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the 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 the Series 2018 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect 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 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 the 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 financing documents. For example, Beneficial Owners of the 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 registrar 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 a maturity 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 Issuer 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 the Series 2018 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

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 Issuer or Bond 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, the Bond Trustee, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest on the Series 2018 Bonds to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Issuer or the Bond 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 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 Issuer or the Bond Trustee. Under such circumstances, in the event that a successor depository is not obtained, Series 2018 Bond certificates are required to be printed and delivered.

The Issuer may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Series 2018 Bond certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Issuer believes to be reliable, but the Issuer takes no responsibility for the accuracy thereof.

