CHAPTER SIX

CAPITAL IMPROVEMENT PROGRAM

The analyses completed in previous chapters evaluated development needs at the Airport over the next 20 years and beyond, based on forecast activity, operational efficiency, and meeting FAA design standards. Next, basic economic, financial, and management rationale is applied to each development item so that the feasibility of each item contained in the plan can be assessed.

The presentation of the capital improvement program (CIP) has been organized into three sections. First, the airport development schedules and CIP cost estimates are presented in narrative and graphic form. Second, capital improvement funding sources on the federal, state, and local levels are identified and discussed. Third, a funding plan is presented which identifies the range of potential capital expenses for the Airport based on various funding assumptions.

AIRPORT DEVELOPMENT SCHEDULES AND COST SUMMARIES

Now that the recommended development concept has been presented and specific needs and improvements for the Airport have been established, the next step is to determine a realistic schedule (implementation timeline) and associated cost estimates for the plan. The recommended improvements are grouped by planning horizon: short-term, intermediate-term, and long-term. The short-term planning horizon is further subdivided into yearly increments. Those short-term projects that include multiple phases for environmental documentation, design, and construction have been separated into the yearly increments. **Table 6A** summarizes key activity milestones for the three planning horizons.

TABLE 6A
Planning Horizon Summary
Georgetown Municipal Airport

	Base Year 2016	Short Term	Intermediate Term	Long Term
BASED AIRCRAFT	318	340	370	400
ANNUAL OPERATIONS				
General Aviation				
Itinerant	45,006	48,700	53,400	57,500
Local	50,972	58,000	67,200	74,000
Subtotal	95,978	106,700	120,600	131,500
Air Taxi				
Itinerant	811	800	1,100	1,500
Military Activity				
Itinerant	207	200	200	200
Local	350	200	200	200
TOTAL OPERATIONS	**97,346**	**107,900**	**121,920**	**133,400**

Source: Coffman Associates analysis

There are four primary sources from which to projects are derived:

- **Aviation Demand Forecasts**: The forecasts of aviation demand provide data necessary to develop various demand-based needs for the Airport. Most obvious is the number of based aircraft needing hangar space.
- **Design Standards Review**: Various design standards that apply to the airport have been reviewed. Several projects are the result of a need to meet various airport design standards, which are based on the critical design aircraft. Design standards primarily relate to the numerous imaginary safety-related surfaces and separation distances.
- **Facility Maintenance**: Airports are required to maintain their pavement surfaces for the useful life of those pavements. The pavements require routine maintenance and occasionally must be rehabilitated or reconstructed. Numerous projects identified fall in this category.
- **Support Facilities**: This category includes all airport-related facilities that do not naturally fall into the airside and landside categories, including elements such as fuel facilities, access and circulation, and general on-airport land use.

The plan includes siting and construction of new hangars. Larger business and box hangars are assumed to be constructed by private developers. T-hangars may be constructed by private developers or by the airport, which then act as the lessor of those facilities. Whether hangars are constructed by the airport or by a third party, the airport sponsor's responsibility is to provide public access taxilanes, which are typically funded with TxDOT development grants.

The economics of hangar construction and leasing over the last decade have made it difficult to amortize a 30-year loan on facilities while charging a reasonable monthly rent. This is the case across the country

where local airport sponsors are relying increasingly on private developers to build facilities at airports. Longer lease terms are becoming more common as a means of addressing this financial concern. Current TxDOT/FAA guidance suggests terms be no longer than 50 years.

Some airport sponsors see a benefit to building hangar facilities in order to stimulate aviation activity and business development, even if the monthly rents have to be subsidized to some degree. Naturally, this will be a local decision, and nothing in this Master Plan and development schedule should be construed to indicate that only private developers can construct facilities at the Airport.

As a master plan is a conceptual document, implementation of the capital projects should only be undertaken after further refinement of their design and costs through architectural and engineering analyses. Moreover, some projects may require additional infrastructure improvements (i.e., drainage improvements, extension of utilities, etc.) that may take more than one year to complete.

At this juncture, it is difficult to know, precisely, what the cost of individual projects will be; however, preparing order-of-magnitude cost estimates is an effective way to get a feel for the current costs. Many federal agencies utilize a system of five classes of estimates, as presented in **Table 6B**. The Master Plan scope limits cost estimates to Class 5.

TABLE 6B
Cost Estimate Classification

Estimate Class	Name	Purpose	Project Definition Level
Class 5	Order of Magnitude	Screening or Feasibility	0% to 2%
Class 4	Intermediate	Concept Study or Feasibility	1% to 15%
Class 3	Preliminary	Budget, Authorization, or Control	10% to 40%
Class 2	Substantive	Control or Bid/Tender	30% to 70%
Class 1	Definitive	Check Estimate or Bid/Tender	50% to 100%

Source: U.S. Department of Energy

Once the list of necessary projects was identified and refined, project-specific cost estimates were developed. The cost estimates include environmental documentation, design, engineering, construction administration, and contingencies that may arise on the project. Capital costs presented here should be viewed only as estimates subject to further refinement during design. Nevertheless, these estimates are considered sufficient for planning purposes. Cost estimates were developed based on recent airport construction costs in the region. Cost estimates for each of the development projects in the CIP are in current (2017) dollars. **Exhibit 6A** presents the proposed CIP for Georgetown Municipal Airport.

Most, but not all, of the projects identified are eligible for TxDOT grant funding because this Master Plan follows TxDOT guidelines and focuses on those projects that are eligible for grant funding. There are a variety of capital expenses that the Airport will have that are not eligible for TxDOT funding and which are not presented in great detail in this CIP. Non-eligible costs included are annual routine maintenance and initial T-hangar construction.

TxDOT utilizes a priority ranking system to help objectively evaluate potential airport projects. Projects are weighted toward safety, infrastructure preservation, standards, and capacity enhancement. TxDOT will participate in the highest priority projects before considering lower priority projects, even if a lower priority project is considered a more urgent need by the local sponsor. Nonetheless, the project should remain a priority for the airport, and funding support should continue to be requested in subsequent years.

The most important feature of the CIP is that future projects for which the Airport may request TxDOT funding are included on the list. On a biennial basis, the CIP is updated and reviewed with TxDOT. Projects on the CIP will be moved up and down, depending on priority and funding availability. Periodically, new projects will arise that can then be added to the annual CIP presented to the TxDOT.

On a biennial basis, the CIP is updated and reviewed with TxDOT.

The following sections will describe in greater detail the projects identified for the Airport over the next 20 years. The short term (0-5 years) projects are presented in yearly increments. The intermediate (years 6-10) and long term (years 10-20) are grouped by local priority.

SHORT TERM IMPROVEMENTS

The projects identified for the short-term planning period have been prioritized based on airport need and potential to be funded. If any of these projects cannot be funded in the timeframe indicated, the airport sponsor should consider the project for the following year. **Exhibit 6B** presents the short-term projects overlaid onto an aerial image of the airport.

2018 Projects

Project #1: Install Taxiway Edge Lighting and Runway 11-29 PAPIs
Description: This project has long been considered and is already programmed for 2018. Taxiway edge lighting will be installed, and precision approach path indicator lights will be installed on the crosswind runway.
Cost Estimate: $1,290,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #2: Runway 18-36 Rehabilitation - Design
Description: Design of a runway overlay and remarking project.
Cost Estimate: $458,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

	PROJECT DESCRIPTION	PROJECT COST	TXDOT ELIGIBLE	LOCAL SHARE
SHORT TERM PROGRAM (0-5 YEARS)				
2018				
1	Taxiway Edge Lighting & Rwy 11-29 PAPIs	$1,290,000	$1,161,000	$129,000
2	Runway 18-36 Rehabilitation - Design	$458,000	$412,200	$45,800
3	Wildlife Hazard Assessment/Management Plan	$100,000	$90,000	$10,000
4	Runway 18-36 Rehabilitation - Construct	$4,700,000	$4,230,000	$470,000
5	Pavement Preservation Maintenance	$20,000	$0	$20,000
2018 Total		***$6,568,000***	***$5,893,200***	***$674,800***
2019				
6	Tree Removal	$40,000	$36,000	$4,000
7	REILs Rwy 36 - Replace	$50,000	$45,000	$5,000
8	PAPIs Rwy 36 - Replace	$150,000	$135,000	$15,000
9	Pavement Preservation Maintenance	$20,000	$0	$20,000
2019 Total		***$260,000***	***$216,000***	***$44,000***
2020				
10	Two Supplemental Windsocks	$20,000	$18,000	$2,000
11	Area 3 South Site Prep - Fencing, fire station access, utility relocation, taxilane (design)	$844,000	$759,600	$84,400
12	Maintenance Building (80'x80')	$540,000	$486,000	$54,000
13	Two emergency generators	$150,000	$135,000	$15,000
14	Pavement Preservation Maintenance	$20,000	$0	$20,000
2020 Total		***$1,574,000***	***$1,398,600***	***$175,400***
2021				
15	Area 3 South Access Taxilanes - Construction	$2,481,000	$2,232,900	$248,100
16	Taxiway L Relocate/Reconstruct - Design	$197,000	$177,300	$19,700
17	Taxiway A1 Reconstruction - Design	$122,000	$109,800	$12,200
18	Pavement Preservation Maintenance	$20,000	$0	$20,000
2021 Total		***$2,820,000***	***$2,520,000***	***$300,000***
2022				
19	Taxiway L Relocate/Reconstruction - Construct	$2,105,000	$1,894,500	$210,500
20	Taxiway A1 Reconstruction - Construct	$1,299,000	$1,169,100	$129,900
21	Pavement Preservation Maintenance	$20,000	$0	$20,000
2022 Total		***$3,424,000***	***$3,063,600***	***$360,400***
TOTAL SHORT TERM PROGRAM		**$14,646,000**	**$13,091,400**	**$1,554,600**
INTERMEDIATE TERM PROGRAM (6-10 YEARS)				
1	AWOS Relocation	$100,000	$90,000	$10,000
2	Area 5 Site Prep: utilities, fencing, drainage basin in Area 6	$1,852,000	$1,666,800	$185,200
3	T-hangars Area 3 (20 unit)	$1,500,000	$0	$1,500,000
4	Dual Apron/Hold Bay between Twy A1 & A - Design/Construct	$1,624,000	$1,461,600	$162,400
5	Taxiway M Reconstruction - Design/Construct	$340,000	$306,000	$34,000
6	Taxiway G Reconstruction - Design/Construct	$349,000	$314,100	$34,900
7	Taxiway F Reconstruction - Design/Construct	$634,000	$570,600	$63,400
8	Runway 11-29 Reconstruction - Design/Construct	$5,532,000	$4,978,800	$553,200
9	Area 3 North Site Prep	$880,000	$792,000	$88,000
10	Area 3 North Access Taxilanes - Design/Construct	$1,929,000	$1,736,100	$192,900
11	Wash Rack - Design/Construct	$50,000	$45,000	$5,000
12	Terminal Building Expansion	$750,000	$675,000	$75,000
13	Runway 18 Extension - Design/Construct	$1,586,000	$1,427,400	$158,600
14	Runway 36 Extension - Design/Construct	$1,586,000	$1,427,400	$158,600
15	Relocate/Reconstruct Taxiway K - Design/Construct	$767,000	$690,300	$76,700
16	Pavement Preservation Maintenance	$100,000	$0	$100,000
TOTAL INTERMEDIATE TERM PROGRAM		**$19,579,000**	**$16,181,100**	**$3,397,900**
LONG TERM PROGRAM (11-20 YEARS)				
1	Taxilane to Area 2 - Design/Construct	$1,027,000	$924,300	$102,700
2	T-hangars Area 3 (20 unit)	$1,500,000	$0	$1,500,000
3	Hold Apron Runway 29 - Design/Construct	$597,000	$537,300	$59,700
4	Partial Parallel Twy to Rwy 18-36 (north) - Design/Construct	$3,539,000	$3,185,100	$353,900
5	Area 5 Apron - Design/Construct	$3,814,000	$3,432,600	$381,400
6	Area 5 Off Airport Roadway Access - Design/Construct	$488,000	$0	$488,000
7	Area 1 Taxilane/Apron - Design/Construct	$1,164,000	$1,047,600	$116,400
8	Area 5 Taxilanes	$562,000	$505,800	$56,200
9	Area 5 Internal Roads	$924,000	$831,600	$92,400
10	Partial Parallel Twy to Rwy 18-36 (south)	$3,824,000	$3,441,600	$382,400
11	Taxiway J Reconstruction - Design/Construct	$191,000	$171,900	$19,100
12	Opportunity Aquisition of Property in ROFA (7 homes)	$1,540,000	$1,386,000	$154,000
13	Opportunity Aquisition of Property in 1-mile RPZs (17 north/8 south)	$5,500,000	$4,950,000	$550,000
14	Master Plan Update	$450,000	$405,000	$45,000
15	Pavement Preservation Maintenance	$200,000	$0	$200,000
TOTAL LONG TERM PROGRAM		**$25,320,000**	**$20,818,800**	**$4,501,200**
TOTAL PROGRAM COSTS (Rounded to nearest $1,000)		**$59,545,000**	**$50,091,000**	**$9,454,000**

Note: Totals may not equal due to rounding

This page intentionally left blank

SHORT TERM PROJECTS

2018

1. Taxiway Edge Lighting (NP) & Rwy 11-29 PAPIs
2. Runway 18-36 Reconstruction - Design - *NP*
3. Wildlife Hazard Assessment/Management Plan - *NP*
4. Pavement Preservation Maintenance - *NP*

2019

5. Tree Removal - *NP*
6. REILs Rwy 36 - Replace
7. PAPIs Rwy 36 - Replace
8. Runway 18-36 Reconstruction - Construct
9. Pavement Preservation Maintenance - *NP*

2020

10. Two Supplemental Windsocks
11. Area 3 South Site Prep - Fencing, firestation access, utility relocation, taxilane (design) - *NP*
12. Maintenance Building (80'x80')
13. Two emergency generators - *NP*
14. Pavement Preservation Maintenance) - *NP*

2021

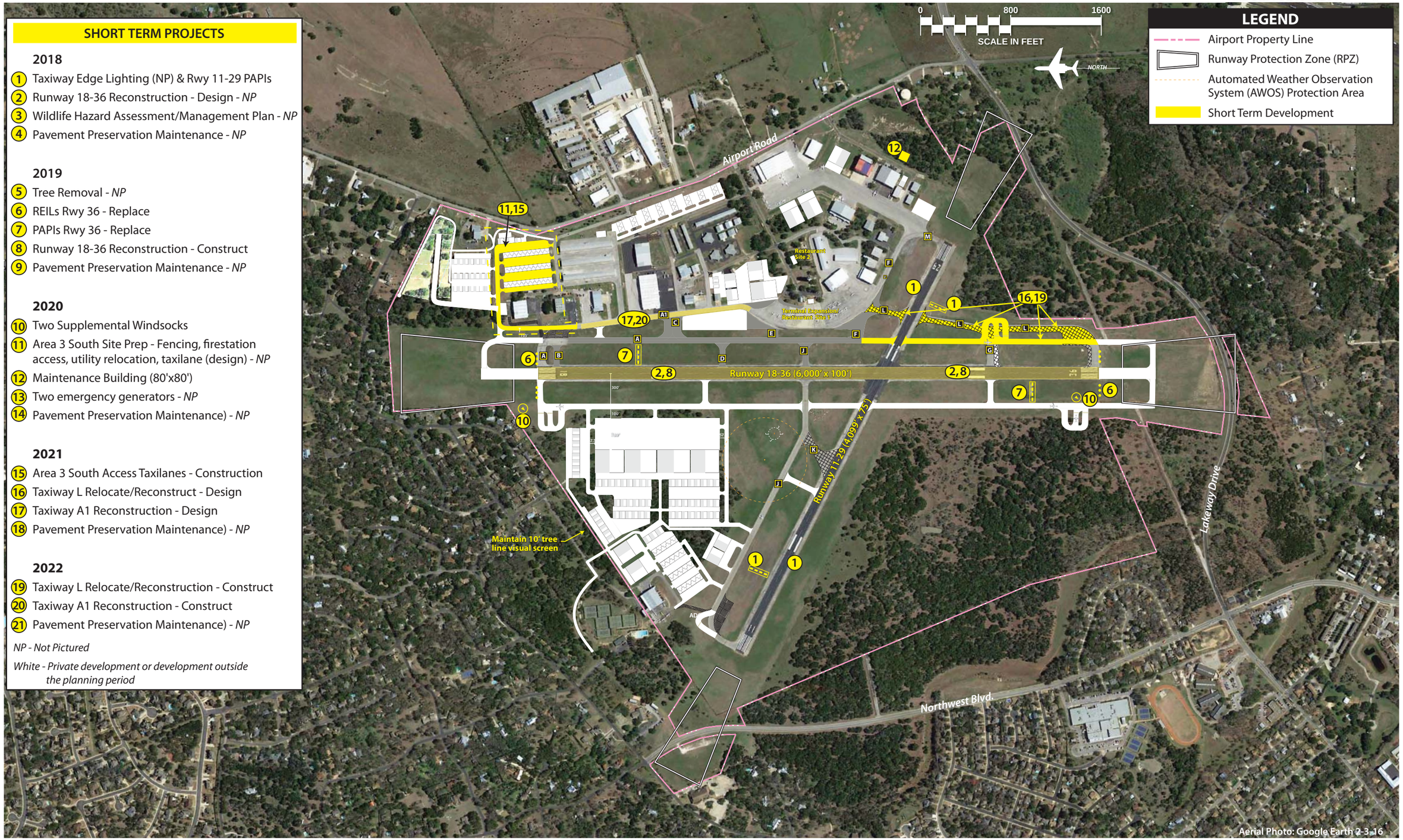
15. Area 3 South Access Taxilanes - Construction
16. Taxiway L Relocate/Reconstruct - Design
17. Taxiway A1 Reconstruction - Design
18. Pavement Preservation Maintenance) - *NP*

2022

19. Taxiway L Relocate/Reconstruction - Construct
20. Taxiway A1 Reconstruction - Construct
21. Pavement Preservation Maintenance) - *NP*

NP - Not Pictured

White - Private development or development outside the planning period



This page intentionally left blank

Project #3: Wildlife Hazard Assessment/Management Plan
Description: A study to assess the airport for wildlife hazards and to develop a management plan which will include eligible projects to mitigate wildlife intrusion.
Cost Estimate: $100,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #4: Runway 18-36 Runway Rehabilitation - Construction
Description: Four-inch overlay, grooving, and marking of the runway.
Cost Estimate: $4,700,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #5: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that are necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $20,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

2019 Projects

Project #6: Tree Removal
Description: Removal of trees located on the airport within the Runway Object Free Area and the Runway Visibility Zone.
Cost Estimate: $40,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #7: Replace REILs on Runway 36
Description: Replace the runway end identification lights at the end of the runway.
Cost Estimate: $50,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #8: Replace PAPIs on Runway 36
Description: Replace the PAPIs serving Runway 36.
Cost Estimate: $150,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #9: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that are necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $20,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

2020 Projects

Project #10: Two Supplemental Windsocks
Description: Install supplemental windsocks at both ends of Runway 18-36.
Cost Estimate: $20,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #11: Area 3 South Site Prep
Description: Prepare Area 3 for development with grading, drainage, fencing, utility relocation, taxiway design, and fire station access.
Cost Estimate: $844,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #12: Airport Maintenance Building - Construction
Description: Construction of an 80'x80' maintenance building to consolidate all maintenance equipment and functions. This is planned to be located on the east side of Wright Brothers Drive.
Cost Estimate: $540,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #13: Two Emergency Generators
Description: Install permanent emergency generators to provide back-up capability for the airfield lights and critical airport operations.
Cost Estimate: $150,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #14: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that is necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $20,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

2021 Projects

Project #15: Area 3 South Access Taxilanes - Construction
Description: Construct primary taxilane leading to Area 3. Disconnect Taxiways A and A1 at the Runway 18 threshold. Construct new connector taxiway between Taxiways A and A1. Construct approximately 18,100 square yards (sy) of new taxilane pavement, lighting and, marking. Remove approximately 1,800 sy of pavement.
Cost Estimate: $2,481,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #16: Taxiway L Relocate/Reconstruct - Design
Description: Design element of taxiway relocation and reconstruction.
Cost Estimate: $197,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #17: Taxiway A1 Reconstruction - Design
Description: Design element of Taxiway A1 reconstruction.
Cost Estimate: $122,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #18: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that are necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $20,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

2022 Projects

Project #19: Taxiway L Relocate/Reconstruct - Construction
Description: Taxiway L is in need of reconstruction and is planned to be relocated to be parallel to Runway 18-36. An aircraft hold bay is planned as part of the project. Once complete, the new taxiway will be the south portion of Taxiway A.
Cost Estimate: $2,105,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #20: Taxiway A1 Reconstruction - Construction
Description: Reconstruct Taxiway A1 in its current location. Includes pavement markings.
Cost Estimate: $1,299,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #21: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that is necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $20,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

Short Term Summary

The short-term projects address a number of pressing needs, the most significant of which is the rehabilitation of Runway 18-36. Demand is pushing the need for hangar expansion into the undeveloped portion of Area 3 where T-hangars and box hangars are planned. Both Taxiways A1 and L are in need of reconstruction. Taxiway L is planned to be shifted slightly toward the runway to be parallel with the runway.

The short-term projects total approximately $14.7 million. The share eligible for FAA/TxDOT funding is estimated at $13.1 million and the local matching share is $1.6 million.

INTERMEDIATE TERM IMPROVEMENTS

To provide maximum flexibility for management when programming capital improvement projects, the intermediate term projects have been grouped and generally include those projects that may be needed in years six through ten. Airport management should regularly assess the need and timing for these projects based on actual demand and growth at the Airport. **Exhibit 6C** presents the intermediate term projects, as well as the previously planned short-term projects.

Project #1: AWOS Relocation
Description: Relocate AWOS to west side of the airfield. Current location planned for apron expansion.
Cost Estimate: $100,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #2: Area 5 Site Prep
Description: Prepare Area 5 for development with grading, drainage, fencing, utility extension, and constructing a storm water drainage basin to accommodate long term development at the airport.
Cost Estimate: $1,852,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #3: T-hangars in Area 3 (20 units)
Description: Construct two 10-unit T-hangar structures in the south portion of Area 3.
Cost Estimate: $1,500,000
Funding Eligibility: 100 percent local. Assumes the airport will construct and act as the lessor.

Project #4: Dual Apron/Hold Bay Between Taxiways A1 and A – Design/Construct
Description: Construct an apron between the taxiways to accommodate aircraft parking and aircraft holding. Approximately 11,000 sy of pavement.
Cost Estimate: $1,624,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

INTERMEDIATE TERM PROJECTS

1. AWOS Relocation
2. Area 5 Site Prep: utilities, fencing, drainage basin in Area 6
3. T-hangars Area 3 (20 unit)
4. Dual Apron/Hold Bay between Twy A1 & A - Design/Construct
5. Taxiway M Rehabilitation - Design/Construct
6. Taxiway G Reconstruction - Design/Construct
7. Taxiway F Rehabilitation - Design/Construct
8. Runway 11-29 Reconstruction - Design/Construct
9. Area 3 North Site Prep
10. Area 3 North Access Taxilanes - Design/Construct
11. Wash Rack - Design/Construct
12. Terminal Building Expansion
13. Runway 18 Extension - Design/Construct
14. Runway 36 Extension - Design/Construct
15. Relocate/Reconstruct Taxiway K - Design/Construct
16. Pavement Preservation Maintenance - *NP*

NP - Not Pictured

White - Private development or development outside the planning period

0 800 1600
SCALE IN FEET

NORTH

LEGEND

- Airport Property Line
- Runway Protection Zone (RPZ)
- Automated Weather Observation System (AWOS) Protection Area
- Intermediate Term Development
- Short Term Development

Airport Road
Lakeway Drive
Northwest Blvd.
Runway 18-36 (6,000' x 100')
Runway 11-29 (4,099' x 75')
Restaurant Site 2
Terminal Expansion Restaurant Site 1
Maintain 10' tree line visual screen
Water quality and detention pond

Aerial Photo: Google Earth 2-3-16

This page intentionally left blank

Project #5: Taxiway M Reconstruction – Design/Construct
Description: Reconstruction of Taxiway M, an area of approximately 1,700 square yards.
Cost Estimate: $340,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #6: Taxiway G Reconstruction – Design/Construct
Description: Narrow Taxiway G to 50 feet and reconstruct. Approximately 1,400 sy of pavement construction. Remove approximately 1,200 sy of pavement.
Cost Estimate: $349,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #7: Taxiway F Reconstruction – Design/Construct
Description: Reconstruction of Taxiway F, an area encompassing approximately 3,300 square yards.
Cost Estimate: $634,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #8: Runway 11-29 Reconstruction – Design/Construct
Description: Rehabilitate Runway 11-29. Overlay with approximately 35,000 sy of pavement, remark runway.
Cost Estimate: $5,532,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #9: Area 3 North Site Prep
Description: Prepare the north portion of Area 3 for development with grading, drainage and utilities.
Cost Estimate: $880,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #10: Area 3 North Access Taxilanes – Design/Construct
Description: Extend taxilane to north portion of Area 3 (approximately 13,100 sy of pavement). Centerline marking.
Cost Estimate: $1,929,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #11: Replacement Aircraft Wash Rack
Description: Prior to construction of new hangars in Area 2, the current aircraft wash rack must be relocated. The new wash rack will include an oil separator and meet current environmental regulations.
Cost Estimate: $50,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #12: Terminal Building Expansion
Description: Extend terminal building to the south to accommodate expanded facilities or a restaurant.
Cost Estimate: $750,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #13: Runway 18 Extension – Design/Construct
Description: Construct extension with approximately 8,700 sy of pavement. Relocate and/or install runway lighting. Includes design element.
Cost Estimate: $1,586,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #14: Runway 36 Extension – Design/Construct
Description: Construct extension with approximately 8,700 sy of pavement. Relocate and/or install runway lighting. Includes design element.
Cost Estimate: $1,586,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #15: Relocate/Reconstruct Taxiway K – Design/Construct
Description: Remove existing Taxiway K (4,400 sy), construct new Taxiway K (2,200 sy) at a 90-degree angle. Install new lighting and marking.
Cost Estimate: $767,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #16: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that are necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $100,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

Intermediate Term Summary

During the intermediate planning period, the terminal apron is planned to be expanded. Initial site prep is to take place on the west side of the primary runway in Area 5. The northern half of Area 3 on the east side is also planned to be prepared for hangar construction. There is great need for additional hangars and the intermediate planning horizon is the planned timing of these projects.

The intermediate term projects total approximately $19.6 million. The share eligible for FAA/TxDOT funding is estimated at $16.2 million and the local matching share is $3.4 million.

LONG TERM IMPROVEMENTS

Long-term projects are those planned for years 11-20. These projects are grouped as demand could shift over time. The need for these projects could be accelerated if exceptional growth occurs at the Airport. All relevant cost elements, including environmental documentation, design, and construction, are included for each project. **Exhibit 6D** presents the long-term projects, along with the previously planned short and intermediate projects.

LONG TERM PROJECTS

1. Taxilane to Area 2 - Design/Construct
2. T-hangars Area 3 (20 unit)
3. Hold Apron Runway 36 - Design/Construct
4. Partial Parallel Twy to Rwy 18-36 (north) - Design/Construct
5. Area 5 Apron - Design/Construct
6. Area 5 Off Airport Roadway Access - Design/Construct
7. Area 1 Taxilane/Apron - Design/Construct
8. Area 5 Taxilanes
9. Area 5 Internal Roads
10. Partial Parallel Twy to Rwy 18-36 (south)
11. Taxiway J Rehabilitation - Design/Construct
12. Opportunity Acquisition of Property in ROFA (7 homes)
13. Opportunity Acquisition of Property in 1-mile RPZs (17 north/8 south)
14. Master Plan Update - *NP*
15. Pavement Preservation Maintenance - *NP*

NP - Not Pictured

White - Private development or development outside the planning period

0 800 1600
SCALE IN FEET

NORTH

LEGEND

- Airport Property Line
- Runway Protection Zone (RPZ)
- Automated Weather Observation System (AWOS) Protection Area
- Short Term Development
- Intermediate Term Development
- Long Term Development

PAPI - Precision Approach Path Indicator
REIL - Runway End Identification Lights

Airport Road
Lakeway Drive
Northwest Blvd.
Runway 18-36 (6,000' x 100')
Runway 11-29 (4,099' x 75')
Restaurant Site 2
Terminal Expansion/ Restaurant Site 1
Maintain 10' tree line visual screen
Water quality and detention pond
ADG I
Aerial Photo: Google Earth 2-3-16

This page intentionally left blank

Project #1: Taxilane to Area 2 – Design/Construct
Description: Construct approximately 5,000 sy of taxilane pavement to Area 2 to facilitate hangar access. Includes burial of overhead electrical lines and marking.
Cost Estimate: $1,027,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #2: T-hangars in Area 3 (20 units)
Description: Construct two 10-unit T-hangar structures in the south portion of Area 3.
Cost Estimate: $1,500,000
Funding Eligibility: 100 percent local. Assumes the airport will construct and act as the lessor.

Project #3: Hold Apron Runway 29 – Design/Construct
Description: Construct apron (3,000 sy) to be used for holding/runup aircraft.
Cost Estimate: $597,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #4: Partial Parallel Taxiway to Runway 18-36 (north) – Design/Construct
Description: Construction of a partial parallel taxiway on the west side of Runway 18-36. The taxiway extends from the landing threshold south to the intersection with Runway 11-29. The project includes the hold apron at the Runway 18 threshold. Approximately 19,400 sy of pavement. Includes lighting and marking.
Cost Estimate: $3,539,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #5: Area 5 Apron – Design/Construct
Description: Initial apron to serve Area 5 development. Approximately 21,500 sy of pavement. Includes marking.
Cost Estimate: $3,814,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #6: Area 5 Off-Airport Roadway Access – Design/Construct
Description: Extend an airport entrance road around the tennis/swim club, from Granada Drive. to the airport fence. Estimated at approximately 6,400 sy of pavement.
Cost Estimate: $488,000
Funding Eligibility: 100 percent local.

Project #7: Area 1 Taxilane/Apron – Design/Construct
Description: Construction of a taxilane and apron to serve development of Area 1 adjacent to the terminal building. Includes removal of the existing structures and other site prep. Approximately 7,700 sy of new pavement.
Cost Estimate: $1,164,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #8: Area 5 Taxilanes
Description: Extend initial taxilanes to Area 5. Approximately 3,000 square yards of pavement.
Cost Estimate: $562,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #9: Area 5 Internal Roads
Description: Extend access road from the fence to the Area 5 terminal apron. Approximately 11,800 square yards of pavement.
Cost Estimate: $924,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #10: Partial Parallel Taxiway to Runway 18-36 (south) – Design/Construct
Description: Construct the south half of the west side parallel taxiway. Includes a hold apron for Runway 36. Approximately 25,400 sy of pavement. Includes lighting and marking.
Cost Estimate: $3,824,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #11: Taxiway J Reconstruction – Design/Construct
Description: Reconstruction of Taxiway J which encompasses approximately 16,700 square yards of pavement.
Cost Estimate: $2,808,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #12: Opportunity Acquisition of Property in ROFA (7 homes)
Description: Opportunity acquisition with grant funding of seven homes in the Runway 18-36 ROFA. Fence around the property.
Cost Estimate: $1,540,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #13: Opportunity Acquisition of Property in 1-mile RPZs
Description: Opportunity acquisition with grant funding of 17 homes north, 7 homes south, 1 home Runway 29 RPZ
Cost Estimate: $5,500,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #14: Master Plan Update
Description: Planning is a continuous process and a new master plan should be undertaken when appropriate.
Cost Estimate: $450,000
Funding Eligibility: This project is eligible for 90 percent TxDOT/FAA funding.

Project #15: Pavement Preservation Maintenance
Description: Repair of any pavement surfaces that is necessary to maintain the pavement. This type of maintenance is considered to be a pavement preservation project.
Cost Estimate: $200,000
Funding Eligibility: 100 percent local. Routine pavement maintenance is a responsibility of the local airport sponsor and is required to meet grant assurances. This placeholder is included in every year of the 20-year CIP. Some years, the necessary funding may be greater and in other years, it may be less.

Long Term Summary

The long-term projects continue the general trend of major pavement rehabilitation projects and other projects related to hangar construction, including taxiways and taxilanes. Also included in the long-term planning period is property acquisition, which will bring the ROFA and RPZ up to current design standards.

The long-term projects total approximately $25.3 million. The share eligible for FAA/TxDOT funding is estimated at $20.8 million and the local matching share is $4.5 million.

CAPITAL IMPROVEMENT SUMMARY

The CIP is intended as a road map of airport improvements to help guide the airport sponsor, FAA, and state aviation officials on needed projects. The plan as presented will meet the forecast demand over the next 20 years and, in many respects, beyond. The first five years of the CIP are separated into yearly installments, and the intermediate and long-term projects are grouped together. The sequence of projects will likely change due to availability of funds or changing priorities in the years to come. Nonetheless, this is a comprehensive list of capital improvement projects the Airport should consider in the next 20 years.

The total CIP is estimated at approximately $59.5 million. The share eligible for FAA/TxDOT funding is estimated at $50.1 million and the local matching share is $9.5 million.

CAPITAL IMPROVEMENT FUNDING SOURCES

There are generally five sources of funds used to finance airport development which include:

- Airport cash flow
- Revenue and general obligation bonds
- Certificate of Obligation
- Federal/state/local grants
- Passenger facility charges (PFCs), which are reserved for commercial service airports

Access to these sources of financing varies widely among airports, with some large airports maintaining substantial cash reserves and the smaller commercial service and general aviation airports often requiring subsidies from local governments to fund operating expenses and finance modest improvements.

Financing capital improvements at the Airport will not rely solely on the financial resources of the City. Capital improvement funding is available through various grant-in-aid programs on both the federal and state levels. Historically, the Airport has received federal and state grants. While some years more funds could be available, the CIP was developed with project phasing in order to remain realistic and within the range of anticipated grant assistance. The following discussion outlines key sources of funding potentially available for capital improvements at the Airport.

FEDERAL GRANTS[1]

Through federal legislation over the years, various grant-in-aid programs have been established to develop and maintain a system of public-use airports across the United States. The purpose of this system and its federally based funding is to maintain national defense and to promote interstate commerce. The most recent legislation affecting federal funding, the *FAA Modernization and Reform Act of 2012*, was enacted on February 17, 2012. The law expired on September 30, 2015; however, it has been extended through several temporary measures. As of this writing (October 2017), a comprehensive new long-term authorization has not been passed.

The current law authorizes the FAA's Airport Improvement Program (AIP) at $3.35 billion for fiscal years 2012 through 2015 (and subsequent extensions). The AIP is funded through the collection of user fees, such as those imposed on airline tickets, aircraft parts, and aviation fuel. Eligible airports, which include those in the *National Plan of Integrated Airport Systems* (NPIAS), such as Georgetown Municipal Airport, can apply for airport improvement grants. **Table 6C** presents the approximate distribution of the AIP funds. Currently, Georgetown Municipal Airport is eligible to apply for grants which may be funded through state apportionments, the small airport fund, reliever set-asides, and discretionary categories.

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement in which TxDOT/FAA provides up to 90 percent of the cost and the airport sponsor invests the remaining 10 percent. In exchange for this level of funding, the airport sponsor is required to meet various Grant Assurances, including maintaining the improvement for its useful life, which is usually 20 years.

[1] Guidance on the eligibility of a project for federal AIP grant funding can be found in FAA Order 5100.38D, *Airport Improvement Program Handbook*, which can be accessed at:
http://www.faa.gov/airports/aip/aip_handbook/media/AIP-Handbook-Order-5100-38D

TABLE 6C
Federal AIP Funding Distribution

Funding Category	Percent of Total	Funds*
Apportionment/Entitlement		
Passenger Entitlements	29.19%	$977,865,000
Cargo Entitlements	3.00%	$100,500,000
Alaska Supplemental	0.65%	$21,775,000
State Apportionment for Nonprimary Entitlements	10.35%	$346,725,000
State Apportionment Based on Area and Population	9.65%	$323,275,000
Carryover	10.77%	$360,795,000
Small Airport Fund		
Small Hubs	1.67%	$55,945,000
Nonhubs	6.68%	$223,780,000
Nonprimary (GA and Reliever)	3.34%	$111,890,000
Discretionary		
Capacity/Safety/Security/Noise	11.36%	$380,560,000
Pure Discretionary	3.79%	$126,965,000
Set-Asides		
Noise	8.40%	$281,400,000
Military Airports Program	0.99%	$33,165,000
Reliever	0.16%	$5,360,000
Totals	100.00%	$3,350,000,000

* FAA *Modernization and Reform Act of 2012*
AIP: Airport Improvement Program
Source: FAA Order 5100.38C, Airport Improvement Program Handbook

Apportionment (Entitlement) Funds

AIP provides funding for eligible projects at airports through an apportionment (entitlement) program. Non-primary airports, such as Georgetown, receive a guaranteed minimum level of federal assistance each year in the amount of $150,000. These non-primary entitlement (NPE) funds are available to use in the fiscal year it becomes available and the following three fiscal years. Unused funds expire after four years unless the sponsor obligates the funds under a grant or transfers the funds to another NPIAS airport.

States also receive a direct apportionment based on a federal formula that takes into account area and population. For the State of Texas, TxDOT distributes these funds for projects at various airports throughout the state.

Small Airport Fund

If a large or medium hub commercial service airport chooses to institute a passenger facility charge (PFC), which is a fee of up to $4.50 on each airline ticket, for funding of capital improvement projects, then

their apportionment is reduced. Part of the reduced apportionment goes to the small airport fund. The small airport fund is reserved for small-hub primary commercial service airports, non-hub commercial service airports, and general aviation airports. Georgetown Municipal Airport is eligible for funds from this source.

Discretionary Funds

The remaining AIP funds are distributed by TxDOT/FAA based on the priority of the project for which they have requested federal assistance through discretionary apportionments. A national priority ranking system is used to evaluate and rank each airport project. Those projects with the highest priority from airports across the country are given preference in funding. High priority projects include those related to meeting design standards, capacity improvements, and other safety enhancements.

Under the AIP program, examples of eligible development projects include the airfield, public aprons, and access roads. Additional buildings and structures may be eligible if the function of the structure is to serve airport operations in a non-revenue generating capacity, such as maintenance facilities. Some revenue-enhancing structures, such as T-hangars, may be eligible if all airfield improvements have been made; however, the priority ranking of these facilities is very low.

Whereas entitlement monies are guaranteed on an annual basis, discretionary funds are not assured. If the combination of entitlement, discretionary, and airport sponsor match does not provide enough capital for planned development, projects may be delayed. Georgetown Municipal Airport is eligible for discretionary funds.

Set-Aside Funds

Portions of AIP funds are set-asides designed to achieve specific funding minimums for noise compatibility planning and implementation, select former military airfields (Military Airport Program), and select reliever airports. Georgetown does qualify for set-aside funds as it is a reliever airport.

FAA Facilities and Equipment (F&E) Program

The Airway Facilities Division of the FAA administers the Facilities and Equipment (F&E) Program. This program provides funding for the installation and maintenance of various navigational aids and equipment of the national airspace system. Under the F&E program, funding is provided for FAA Airport Traffic Control Towers (ATCTs), enroute navigational aids, on-airport navigational aids, and approach lighting systems.

While F&E still installs and maintains some navigational aids, on-airport facilities at general aviation airports have not been a priority. Therefore, airports often request funding assistance for navigational aids

through AIP and then maintain the equipment on their own. The airport owns all the navigational aids at the Airport except for the REILs and PAPIs on the Runway 36 end, which are owned and maintained by the FAA.

STATE AID TO AIRPORTS

The State of Texas participates in the federal State Block Grant Program. Under this program, the FAA annually distributes general aviation state apportionment and discretionary funds to TxDOT, which in turn distributes grants to airports within the state. In compliance with TxDOT's legislative mandate that it "apply for, receive, and disburse" federal funds for general aviation airports, TxDOT acts as the agent of the local airport sponsor. Although these grants are distributed by TxDOT, they contain all federal obligations.

The State of Texas also distributes funding to general aviation airports from the Highway Trust Fund as the Texas Aviation Facilities Development Program. These funds are appropriated each year by the state legislature. Once distributed, these grants contain state obligations only.

The establishment of a CIP for the state entails first identifying the need, then establishing a ranking or priority system. Identifying all state airport project needs allows TxDOT to establish a biennial program and budget for development costs. The most recent TxDOT CIP, *Aviation Capital Improvement Program 2016-2018*, assumed that approximately $19 million in annual federal AIP grants, plus $24 million earmarked for non-primary entitlements, $8 million in annual federal discretionary funding, and $16 million in state funds, would be available.

The TxDOT biennial program sets a project priority system established by the Texas Transportation Commission in order to make the best use of limited state and federal airport development funds. **Table 6D** presents the priority objectives and their associated description in order of importance.

TABLE 6D
TxDOT Project Priorities

Priority Objective	Description
Safety	Projects needed to make the facility safe for aircraft operations.
Preservation	Projects to preserve the functional or structural integrity of the airport.
Standards	Improvements required to bring the airport up to design standards for current user aircraft.
Upgrade	Improvements to accommodate larger aircraft or longer stage lengths.
Capacity	Expansion required to accommodate more aircraft or higher activity levels.
New Access	A new airport providing new air access to a previously unserved area.
New Capacity	A new airport needed to add capacity or relieve congestion at other area airports.

Source: TxDOT Aviation Capital Improvement Program 2016-2018

Each project for the Airport must be identified and programmed into the state CIP and compete with other airport projects in the state for federal and state funds. In Texas, airport development projects

that meet TxDOT's discretionary funds' eligibility requirements can receive 90 percent funding from the AIP State Block Grant Program. Eligible projects include airfield and apron facilities. Historically, revenue-generating improvements, such as fuel facilities, utilities, and hangars, have not been eligible for AIP funding. However, FAA funding legislation has historically provided an allowance of NPE funds to be utilized for hangar, terminal, or fuel farm construction if all other airfield needs have been addressed.

The availability of grant funds can fluctuate from year to year. Typically, an airport can expect a grant to cover several projects in one grant-cycle. The next grant opportunity may not arise for a couple of years thereafter. This cycle occurs as TxDOT must administer grants for more than 300 airports and has relatively limited resources. As a result, local budgeting for future capital improvements should consider sporadic grant availabilities.

Routine Airport Maintenance Program (RAMP)

TxDOT has established the RAMP to help general aviation airports maintain and, in some instances, construct new facilities. The program was initially designed to help airports maintain airside and landside pavements but has since been expanded to include construction of new facilities. RAMP is an annual funding source in which TxDOT will provide a 50 percent funding match for projects up to $100,000. **Table 6E** outlines the projects that are eligible under RAMP. It should be noted that several of the projects listed in the Airport's proposed CIP are also eligible for RAMP funding.

TABLE 6E
Eligible Work Items
Routine Airport Maintenance Program

AIRSIDE MAINTENANCE	
Pavement crack seal	Sweeping
Pavement slurry seal/Fog seal/Rejuvenator	Herbicide application
Pavement markings	Replacement bulbs/lamps for airside lights and approach aids
Pavement failure repairs	Repair/maintenance of beacon, lighting, and approach aids
Drainage maintenance	AWOS part replacement
LANDSIDE MAINTENANCE (after airside has been addressed)	
Repair/maintenance of vehicle parking	Navigational aids purchase and installation
Hangar/terminal painting and repairs - airport-owned facilities only	AWOS NADIN Interface charges
Security camera systems	Airport entrance signs and landscaping
Game-proof or security fencing and gates	Repair of fuel systems - airport-owned
Access roads for AWOS installations	Storm Water Pollution Prevention Plans and Spill Prevention Control & Countermeasure Plans
CAPITAL IMPROVEMENT PROJECTS	
New public vehicle parking areas	Drainage improvements
New entrance roads and hangar access roads	Extension of runway lighting systems
Aircraft wash racks	Beacon/tower replacements
Aircraft parking aprons	Water wells, sewer lines, and septic systems
Small general aviation terminal buildings	Preparation of FAA Form 7460-1 for RAMP projects

Source: TxDOT

Other State Airport Programs

TxDOT also provides a funding mechanism for terminal building and ATCT improvements. TxDOT has funded terminal building construction on a 50/50 basis, up to a $1.0 million total project cost. It should be noted that TxDOT has recently considered upgrading the total cost allowance on a case-by-case basis.

TxDOT also funds the construction of up to two ATCTs statewide each year. TxDOT has improved the program so that ATCT funding could be provided on a 90/10 basis, up to a total construction cost of $1.67 million. Georgetown is eligible for both these funding sources; however, the Airport already has an ATCT.

LOCAL FUNDING

The balance of project costs, after consideration has been given to grants, must be funded through local resources. The goal of the airport is to generate enough revenue to cover all operating and capital expenditures. As with many general aviation airports, this is not always possible and other financing methods will be needed.

According to **Exhibit 6A**, local funding will be needed in each planning horizon. This includes $1.6 million in the short term, $3.4 million in the intermediate term, and $4.5 million in the long term.

There are several alternatives for local financing options for future development at the Airport, including airport revenues, direct funding (subsidizing) from the City, issuing bonds, and leasehold financing. These strategies could be used to fund the local matching share or complete the project if grant funding cannot be arranged.

There are several municipal bonding options available, including general obligation bonds, limited obligation bonds, and revenue bonds. General obligation bonds are a common form of municipal bond that is issued by voter approval and secured by the full faith and credit of the city, and future tax revenues are pledged to retire the debt. As instruments of credit and because the community secures the bonds, general obligation bonds reduce the available debt level of the community. Due to the community pledge to secure and pay general obligation bonds, they are the most secure type of municipal bond and are generally issued at lower interest rates and carry lower costs of issuance. The primary disadvantage of general obligation bonds is that they require voter approval and are subject to statutory debt limits. This requires that they be used for projects that have broad support among the voters, and that they are reserved for projects that have the highest public priorities.

In contrast to general obligation bonds, limited obligation bonds (sometimes referred to as self-liquidating bonds) are secured by revenues from a local source. While neither general fund revenues nor the taxing power of the local community is pledged to pay the debt service, these sources may be required to retire the debt if pledged revenues are insufficient to make interest and principal payments on the

bonds. These bonds still carry the full faith and credit pledge of the local community and are considered, for the purpose of financial analysis, as part of the debt burden of the local community.

The overall debt burden of the local community is a factor in determining interest rates on municipal bonds.

There are several types of revenue bonds, but in general, they are a form of municipal bond which is payable solely from the revenue derived from the operation of a facility that was constructed or acquired with the proceeds of the bonds. For example, a lease revenue bond is secured with the income from a lease assigned to the repayment of the bonds. Revenue bonds have become a common form of financing airport improvements. Revenue bonds present the opportunity to provide those improvements without direct burden to the taxpayer. Revenue bonds normally carry a higher interest rate because they lack the guarantees of general and limited obligation bonds.

Leasehold financing refers to a developer or tenant financing improvements under a long-term ground lease. The obvious advantage of such an arrangement is that it relieves the community of all responsibility for raising the capital funds for improvements. However, the private development of facilities on a ground lease, particularly on property owned by a government agency, produces a unique set of concerns.

In particular, it is more difficult to obtain private financing as only the improvements and the right to continue the lease can be claimed in the event of a default. Ground leases normally provide for the reversion of improvements to the lessor at the end of the lease term, which reduces their potential value to a lender taking possession. Also, companies that want to own their property as a matter of financial policy may not locate where land is only available for lease.

In addition to leasehold financing, it is acceptable for the airport to enter into some form of public/private partnership for various airport projects. Typically, this would be limited to hangar construction, but there are some examples where a private developer constructs, for example, a taxilane, and then deeds it to the airport for ongoing maintenance. When entering any such arrangement, the airport must be sure that the private developer does not gain an economic advantage over other airport tenants.

Texas law generally requires local governments to seek voters' approval before issuing debt that will be repaid from tax revenue. One form of borrowing, however, represents an exception to this rule: certificates of obligation, which do not require voter approval. Certificates of obligation are often associated with emergency spending but are not restricted to this purpose. Certain capital projects can be funded with CO's. For an airport, construction of revenue-generating facilities, such as a hangar or fuel farm, could be funded through CO's.

FUNDING PLAN

The underlying strategy of the funding plan is to present the range of costs that the Airport may be responsible for if the entire CIP were to be undertaken in the timeframe suggested. Total project costs in the short, intermediate, and long term have been identified. Projects that are not eligible for TxDOT grant funding have been removed. The remaining amount is what is eligible for FAA AIP grant funding. This amount is reduced by 10 percent, which is the Airport matching share. It is further reduced by the maximum entitlement funding (non-primary entitlement). The remaining amount is what is eligible for FAA AIP discretionary funding.

Table 6F outlines the maximum potential funds from AIP entitlements and FAA discretionary sources that could be attained during each planning horizon. This analysis assumes that the short-term horizon would be attained in five years, the intermediate horizon would be achieved in the next five years, and the long-term horizon would be achieved in an additional 10 years. Each horizon includes the aggregate total costs and funds available for the given planning horizon.

TABLE 6F
CIP Financial Assumptions (2017$)
Georgetown Municipal Airport

	Short Term	Intermediate Term	Long Term	Total
Total Project Costs	$14,653,000	$19,579,000	$25,320,000	$59,552,000
Non-Eligible Costs	$100,000	$1,600,000	$2,188,000	$3,888,000
Total Grant Eligible Project Costs	$14,553,000	$17,979,000	$23,132,000	$55,664,000
AIP Project Grant Match (10%)	$1,455,300	$1,797,900	$2,313,200	$5,566,400
Remaining Costs Less Matching Funds	$13,097,700	$16,181,100	$20,818,800	$50,097,600
AIP NPE Funds	$750,000	$750,000	$1,500,000	$3,000,000
Remaining Costs Eligible for FAA Discretionary Funding	$12,347,700	$15,431,100	$19,318,800	$47,097,600
Airport CIP Costs High End[1]	$13,903,000	$18,829,000	$23,820,000	$56,552,000
Airport CIP Costs Low End[2]	$1,555,300	$3,397,900	$4,501,200	$9,454,400

[1]Assumes no discretionary FAA funding.
[2]Assumes eligible costs receive full discretionary FAA funding.

AIP - Airport Improvement Program; NPE - Non-Primary Entitlements

In the short term, if the Airport were to receive full FAA discretionary funding for eligible projects, the minimum local investment would be $1.6 million. If no discretionary funding is available, then the high end for local funding would be $13.9 million.

In the intermediate term, the low end local cost would be $3.4 million, which assumes full discretionary FAA funding. The high end local cost would be $18.8 million.

In the long term, the minimum investment required from local sources is $4.5 million. The high end local cost would be $23.8 million.

The funding plan makes no assumption about the potential for other grant sources or the method for financing the local responsibility. Instead, a range is provided for the likely level of required local financial participation if the entire CIP were to be implemented. If the full level of FAA/TxDOT discretionary funding can be obtained, then the Airport would be responsible for approximately $1.6 million in the short term, $3.4 million in the intermediate term, and $4.5 million in the long-term.

CONSIDERATIONS TO ENHANCE ECONOMIC AVIATION DEVELOPMENT

Airports have land that can provide access to runways, a commodity that is in limited supply. Development of airport land is strictly reserved for aviation uses at federally obligated airports (such as Georgetown Municipal Airport) unless there are special circumstances which would allow non-aviation development. This master plan has identified on-airport land uses for both aviation and non-aviation functions. This section focuses on methods for the airport to enhance economic development of which there are three primary methods:

1. Airport sponsors build all facilities, including hangars and act as the leasing agent.
2. Airport sponsors execute a land lease and a private developer builds the facilities.
3. A combination of private development and airport sponsor development.

Most airports have pursued the third option. Private developers build facilities to suit their own aviation needs, while airport sponsors take responsibility for facilities intended to meet the needs of the larger aviation community. Sponsor facilities may include terminal buildings, fueling infrastructure, surface road infrastructure, utility infrastructure, and runways/taxiways. Some airport sponsors have additionally taken responsibility for bulk aircraft storage facilities, such as T-hangars, and acted as the leasing agent.

At Georgetown Municipal Airport, private development of hangar facilities has waned in recent years. In fact, there has not been a new executed ground lease in more than 10 years. Potential developers have cited multiple factors related to challenges of building on the airport: current maximum length of available ground lease, construction cost, and difficulty of available financing. The time to amortize a construction loan is cited as the largest impediment. FAA guidance provided in FAA Order 5190.6B, *Airport Compliance Manual*, suggests that terms of 30-35 years are sufficient to retire a tenant's initial financing and provide a reasonable return on the tenant's investment. Terms extending beyond 50 years are not permitted. After a ground lease expires, the improvements (i.e., the constructed hangar) revert back to the airport.

To improve private development of aviation facilities, airport sponsors should consider extending ground leases not to exceed 50 years. This may encompass an initial 30-year term followed by two 10-year options.

All airports should establish standard basis rates for any facility for which they desire to extend a lease. Such facilities may include:

- Unimproved ground lease
- Improved ground lease
- Hangar lease for airport-owned hangars (condition dependent)
- Aircraft tie-down positions
- Fuel flowage fees and margins

In addition to establishing standard basis rates, airports should allow for regular rate adjustments based on an inflation index. Periodically, airports will also commission a Rates and Fees study to establish the going rate for facilities. These studies typically include research on the rates and fees charges at other surrounding airports.

In conclusion, Georgetown Municipal Airport should consider increasing the maximum ground lease period to at least 30 years but no more than 50 years, in addition to updating their lease rate structure.

FUNDING AIRPORT OPERATIONS

The Airport is operated by the City of Georgetown through the collection of various rates and charges from general aviation revenue sources. These revenues are generated specifically by airport operations. There are, however, restrictions on the use of revenues collected by the Airport. All receipts, excluding bond proceeds or related grants and interest, are irrevocably pledged to the punctual payment of operating and maintenance expenses, payment of debt service for as long as bonds remain outstanding, or to additions or improvements to Airport facilities.

The operation of the Airport generates revenues, which are secured by federal grant assurances, to be utilized only on the Airport. While these revenues generated are significant, they are oftentimes not enough to fund both Airport operating expenditures and capital improvement requirements. Most general aviation airports in this country do not generate enough revenues to cover operating expenses. According to airport records, the Airport has begun in recent years to cover its operating expenses with operating revenues. An operating profit, however, should not be taken for granted. All potential revenue sources should be considered to support future capital expenditures, if necessary.

To ensure that the airport maximizes revenue potential in the future, the Airport should periodically review aviation services rates and charges (i.e., ground lease rates, rental rates, etc.) at other airports to ensure that rates and charges at the Airport are competitive and similar to aviation services at other airports. This can further generate the opportunity for the City to establish other means of revenue collection or establish future rates and charges. Additionally, all new leases at the Airport should have inflation clauses allowing for periodic rate increases in line with inflationary factors.

AIRPORT RATES AND CHARGES

The FAA places several stipulations on rates and charges establishment and collection; however, two primary considerations need to be addressed. First, the rates and charges must be fair, equally applied, and resemble fair market value. Second, the rates and charges collected must be returned to and used only by and/or for the airport. In other words, the revenues generated by Airport operations cannot be diverted to the general use of the City of Georgetown. The FAA requires funds to be used at airports, as these funds are many times needed to either support the day-to-day operational costs or offset capital improvement costs.

The following provides several activities that enhance revenue production for an airport, some of which are currently being practiced at Georgetown Municipal Airport.

Aircraft Parking/Tiedowns

Aircraft parking fees, also referred to as tiedown fees, are typically assessed to those aircraft utilizing a portion of an aircraft parking area that is owned by the airport. These fees are most generally assessed on a daily or monthly basis, depending upon the specific activity of a particular aircraft.

Aircraft parking fees can be established in several different ways. Typically, airports assess aircraft parking fees in accordance with an established schedule in which an aircraft within a designated weight and/or size pays a similar fee (i.e., small aircraft, single engine aircraft). Aircraft parking fees may also be charged according to a "cents per 1,000 pounds" basis in which larger aircraft with increased weights would obviously pay more for utilizing the aircraft parking apron. There are also instances in which aircraft parking fees are not assessed on an airport.

An airport sponsor may also include in a lease agreement with an aviation-related commercial operator at the airport to collect aircraft parking fees on portions of an aircraft parking apron in which the airport does not own or is leasing to a commercial operator. As a result, the airport could directly collect parking fees from an aircraft utilizing this space or allow the commercial operator to collect the parking fee, in which the agreement may allow the commercial operator to retain a portion of the parking fee as an administrative or service fee.

As previously discussed, aircraft parking fees can be assessed on a daily or monthly basis. Daily aircraft parking fees are typically assessed to transient aircraft utilizing the airport on a short-term basis, while monthly fees are charged to aircraft that utilize a particular parking area for the permanent storage of their aircraft. Monthly aircraft parking fees are often assessed at airports that contain a waiting list for aircraft hangar storage space, such as Georgetown. It is also common practice at many airports to waive a daily aircraft parking fee in the event the aircraft purchases fuel prior to departing the airport.

At Georgetown, the daily transient parking fee is $5.00. The monthly tie-down fee is $75.

Aircraft Storage Hangars

There are several types of aircraft storage hangars that can accommodate aircraft on an airport. In order to establish hangar fees, an airport typically factors in such qualities as hangar size, location, and utilities. Aircraft hangar fees are most often charged on a monthly basis.

Common aircraft storage hangars are typically categorized as T-hangars, box hangars, and conventional hangars. T-hangars provide for separate, single-aircraft storage areas. Box hangars are smaller clear-span hangars for individual aircraft. Conventional hangars provide a larger enclosed space that can accommodate larger multi-engine piston or turbine aircraft and/or multiple aircraft storage. Conventional hangars can also be utilized by aviation-related commercial operators for their business activities on an airport.

Location can also play a role in determining hangar rates. Aircraft storage hangars with direct access to improved taxiways/taxilanes and adjacent to aviation services being offered at an airport can oftentimes be more expensive to rent. In addition, the type of utility infrastructure being offered to the hangar can also help determine storage fees. Smaller aircraft storage hangars, such as a T-hangar or small box hangar, can either be granted access through a manual sliding door or electric door. It is common for hangars that provide electric doors to have higher rental fees, as the cost associated with constructing these hangars would exceed the cost associated with simpler structures.

At some airports, hangar facilities are constructed by the airport sponsor, while at other airports, hangars are built by private entities. In some cases, airports have both public and private hangar facilities available. Hangars can be expensive to construct and offer minimal return on investment in the short term. In order to amortize the cost of constructing hangars, lease rates should be developed at a minimum to recover development and finance costs.

The airport owns hangars of all sizes at the airport. T-hangar rates vary from $230-$400 per month. The fee difference depends on the condition, location, and if the hangar door is electric or not. Box and conventional hangars will range in monthly rates from $800 for a 3,000-square foot hangar to $6,000 per month for a larger conventional hangar. Differences in fees are dependent on condition, location, and other utilities availability.

Ground Rental/Lease

Ground rentals can be applied to aviation and non-aviation development on an airport. Also known as a land lease, a ground lease can be structured to meet the particular needs of an airport operator in terms of location, terrain features, amount of land needed, and type of facility infrastructure included.

One of the single most valuable assets available to an airport is the leasable land with access to the runway/taxiway system. For aviation-related businesses, it is critical that they be located on an airport. Airport property is available for long term lease but, in most cases, it cannot be sold. At the expiration

of the lease and any extensions, the improvements on the leased land revert back to the airport sponsor. In order for this arrangement to make financial sense, most ground leases are at least 20 years in length and include extension opportunities. Those who lease land on an airport are typically interested in constructing a hangar for their own private use, for sub-lease, or for operation of an airport business. Therefore, the long-term lease arrangement is important in order to obtain capital funding for the construction of a hangar or other type of facility. It should also be noted that ground leases should include the opportunity to periodically review the lease and adjust the rate according to the consumer price index (CPI). FAA guidance allows for lease terms of up to 50 years.

Ground leases are typically established on a yearly fee schedule based upon the amount of square feet leased. The amount charged can vary greatly depending on the level of improvements to the land. For example, undeveloped land with readily accessible utilities and taxiway access can generate more revenue than unimproved property.

Some airports will have other leasable space available. For example, airports with a terminal building may have office or counter space available for aviation and non-aviation related businesses.

As previously mentioned, under certain circumstances, an airport sponsor may utilize portions of the airport for non-aeronautical purposes, such as commercial and/or industrial development if certain areas are not needed to satisfy aviation demand or are not accessible to aviation activity. Prior to an airport pursuing a ground lease with a commercial operator for non-aeronautical purposes, the sponsor must formally request that the FAA release the land in question from its federal obligations.

Georgetown offers ground leases for operators wishing to construct their own hangar facility. Improved land with ready access to utilities is generally $0.35 per square foot per month. Unimproved land is generally $0.20 per square foot per month.

Fuel Sales and Flowage

Fuel sales are typically managed at an airport in one of two ways: the airport sponsor acts as the fuel distributor or fueling operations are sub-contracted to a fixed base operator (FBO). If the airport sponsor acts as the fuel distributor, then the airport would receive revenues equal to the difference between wholesale and retail prices. At Georgetown, the airport owns the fuel farm and sells fuel directly through self-serve pumps and also sells wholesale to the FBOs who provide fuel delivery services.

When fueling services are undertaken by an FBO, the airport sponsor typically receives a fuel flowage fee per gallon of fuel. By way of agreement with the airport sponsor, FBOs would be required to pay a fuel flowage fee for each gallon of fuel sold or received into inventory. In the case of self-fueling entities, a fuel flowage fee could apply for each gallon of fuel dispensed. Fuel flowage fees are typically paid on a “cents per gallon” basis. In some instances, fuel flowage fees will be established based upon the type of aviation activity. For example, commercial airline service operators may be assessed a higher fuel

flowage fee than general aviation aircraft or no fuel flowage fee at all if being assessed a landing fee. Fuel flowage fees can also be distinguished by type of fuel (100LL or Jet A).

The owner of the fuel farm can also be the airport sponsor or an FBO operator. If the airport sponsor owns the fuel farm and the FBO operator undertakes the fueling activities, then a separate fuel storage fee can be charged or a higher fuel flowage fee may be assessed.

At Georgetown, the airport owns the fuel farm. The airport sells AvGas self-serve directly to aircraft owners who fuel their own aircraft. There is no self-serve Jet A available. The FBOs have fuel delivery trucks for both AvGas and Jet A fuel. They purchase fuel from the airport at a fee that includes a fuel flowage fee of $0.1542 per gallon and an additional margin. The margin is $0.5208 per gallon for AvGas and $0.50 per gallon for Jet A.

Landing Fees

Landing fees typically only apply to larger aircraft, such as those over 60,000 pounds, for example, and only those involved in commercial airline or air taxi operations. Landing fees are not common on general aviation airports and are generally discouraged due to collection difficulty. Moreover, landing fees are somewhat discouraging to aircraft operators, who will many times elect to utilize a nearby airport that does not collect a landing fee.

When landing fees are assessed, they are most commonly based upon aircraft weight and a "cents per 1,000 pounds" approach. In addition, some airport sponsors may use a flat fee approach wherein aircraft within a specified weight range are charged the same fee.

Landing fees may be collected directly by the airport sponsor, or an airport may have an agreement with a commercial operator to collect landing fees. Similar to what was discussed with aircraft parking fees, under this scenario, the agreement may allow the commercial operator, such as an FBO, to retain a portion of the landing fee as an administrative or service fee. Similar to most general aviation airports, a landing fee has not been imposed at Georgetown.

Financial Grant Assurances

The above financial discussion is intended to show that the operation of Georgetown Municipal Airport meets various requirements and goals set forth by the FAA. Several of the grant assurances relate to financial condition of the airport as outlined below.

Grant Assurance #24 – Fee and Rental Structure: Requires the airport sponsor to set fee, lease rates, and other charges that are directed at making the airport as self-sustaining as possible. Airport sponsors must impose fair market value charges for noncommercial uses of airport property, but aeronautical

user charges may be less than fair market value. As demonstrated, the fee and rental structure for airport property and facilities is fair and equitable.

Grant Assurance #25 – Airport Revenues: Restricts the use of airport revenue generated by the airport and local taxes on aviation fuel to be expended for the capital or operating costs of the airport, the local airport system, or other facilities owned or operated by the airport sponsor, which directly and substantially relate to the actual air transportation of passengers, property, or noise mitigation efforts. Under the *Single Audit Act of 1984*, the airport must conduct an annual audit and assure the government that airport funds have been properly used. In general, revenue generated by the airport may not be diverted to functions unrelated to the operation and maintenance of the airport. Examples of revenue diversion include:

a) General economic development;
b) Marketing and promotional activities unrelated to the airport;
c) Payments in lieu of taxes or other assessments that exceed the value of services;
d) Payments to compensate sponsoring governmental bodies for lost tax revenues exceeding stated tax rates; and
e) Direct or indirect payments of airport revenue beyond that which is required to pay for services and facilities provided to the airport.

AIRPORT FUTURE AND BRANDING

In 2013, the city commissioned the *Georgetown Airport Business Analysis*. The purpose of the study is to assist the city and airport in developing and operating the airport in a manner that would be financially and operationally sustainable in both the immediate and long term. A recommendation of the study was for the City of Georgetown to develop a long-term vision for the airport, a mission statement per se, that will help guide future planning of the airport. "As one of the most significant transportation-related economic development sites in the City, a unified vision will relate directly to jobs and economic viability for the City's future. A policy statement from the City Council regarding the unified vision for the airport would allow staff to work to achieve the vision."

One element discussed in the study was branding for the airport which would emerge from the mission statement. "An assumption of this study is that the airport will continue to be developed to accommodate both leisure aviation and the higher end business aircraft market. If this is the vision that City leaders wish for the Airport, then a more descriptive branding and marketing program can be developed for the airport. This clear-cut brand and resulting marketing program for GTU is essential to both keep existing businesses and to attract new businesses to the City."

Airport visioning and branding is a best practice that is consistent with successful airport operations. An essential element of a successful brand is the name. For an airport, the name should convey the type of facility (recreational, business, commercial, etc.) and the location. The following are possible airport names, each of which conveys the type of facility and the location:

- Georgetown Regional Airport
- Georgetown Executive Airport
- Georgetown Business Airport
- Georgetown Gateway Airport
- Hill Country Gateway Airport at Georgetown

MASTER PLAN IMPLEMENTATION

To implement the Master Plan recommendations, it is key to recognize that planning is a continuous process and does not end with approval of this document. The airport should implement measures that allow them to track various demand indicators, such as based aircraft, hangar demand, and operations. The issues that this Master Plan is based on will remain valid for a number of years. The primary goal is for the Airport to best serve the air transportation needs of the region, while continuing to be economically self-sufficient.

The actual need for facilities is best established by airport activity levels rather than a specified date. For example, projections have been made as to when additional hangars may be needed at the Airport. In reality, the timeframe in which the development is needed may be substantially different. Actual demand may be slower to develop than expected. On the other hand, high levels of demand may establish the need to accelerate development. Although every effort has been made in this master planning process to conservatively estimate when facility development may be needed, aviation demand will dictate timing of facility improvements.

The value of a Master Plan is keeping the issues and objectives at the forefront of managers and decision-makers. In addition to adjustments in aviation demand, when to undertake the improvements recommended in this Master Plan will impact how long the plan remains valid. The format of this plan reduces the need for formal and costly updates by simply adjusting the timing of project implementation. Updating can be done by the manager, thereby improving the plan's effectiveness.

In summary, the planning process requires the City of Georgetown to consistently monitor the progress of the Airport in terms of aircraft operations and based aircraft. Analysis of aviation demand is critical to the timing and need for new Airport facilities.