

Chapter Seven

CAPITAL IMPLEMENTATION PLAN



Sustainable Airport Master Plan



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The analyses completed in previous chapters evaluated development needs at the Sunport over the next 20 years and beyond, based on forecast activity and operational efficiency. The next step is the development of a capital improvement plan (CIP) for those projects that are expected to be implemented over the short-term. A more general discussion of the funding for the intermediate- and long-term projects is provided because of the possible shifts in the priority of those projects over time. While the plan is demand-based, the CIP is developed under the assumption that various aviation demand indicators, such as annual operations, annual passenger enplanements, and based aircraft grow as forecast. Other projects related to major pavement maintenance or meeting FAA design standards are also included. Although activity rarely grows exactly as forecast in the master plan, establishing triggers for key improvements will allow the Sunport to respond to activity levels to better meet projected demand.

The CIP is organized into two sections. The first section includes a discussion of the various capital improvement funding sources on the federal, state, and local levels. The second section presents the Sunport development schedule and cost summaries in graphic and narrative form.

CAPITAL IMPROVEMENT FUNDING SOURCES

There are generally four sources of funds used to finance airport capital development projects: airport cash flow, revenue/general obligation bonds, federal/state/local grants, and 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 most small





commercial service and general aviation airports often requiring subsidies from their sponsors (local and state governments) to fund operating expenses and to finance modest improvements.

Financing capital improvements at the Sunport will not rely solely on the financial resources of the Sunport. Capital improvement funding is available through various grant-in-aid programs on both the state and federal levels. While some years more funds could be available, the CIP was developed with project phasing in order to appropriately space projects. The following discussion outlines key sources of funding potentially available for capital improvements at the Sunport.

FEDERAL GRANTS

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 was enacted on February 17, 2012 and is titled, the *FAA Modernization and Reform Act of 2012*.

Some Sunport projects are eligible for FAA funding through the Airport Improvement Program (AIP), which provides entitlement funds to airports based, in part, on their annual enplaned passengers and pounds of landed cargo weight. Additional AIP funds, designated as discretionary, may also be used for eligible projects, based on the FAA's national priority system. Although the AIP has been reauthorized several times and the funding formulas have been periodically revised to reflect changing national priorities, the program has remained essentially the same. Public use airports that serve civil aviation, like the Sunport, may receive AIP funding for eligible projects, as described in FAA's *Airport Improvement Program Handbook*. The Sunport must fund the remaining project costs using a combination of other funding sources, as discussed further below.

The law that authorized the AIP at \$3.35 billion for fiscal years 2012 through 2016, has been extended through 2017. Eligible airports, which include those in the *National Plan of Integrated Airport Systems* (NPIAS), such as the Sunport, can apply for airport improvement grants. **Table 7A** presents the approximate distribution of the AIP funds. Currently, the Sunport is eligible to apply for grants which may be funded through several categories.

Funding for AIP-eligible projects is undertaken through a cost-sharing arrangement in which the FAA share varies by airport size and is generally 75 percent for large and medium hub airports and 90 percent for all other airports. Since the early days of federal participation in airport infrastructure projects, Congress has provided a higher federal share for airports located in states with more than five percent of their geographic acreage comprised of public lands and nontaxable Indian lands. For states that qualify, such as New Mexico, with 26.44 percent public/Indian lands, the federal share is increased depending on the airport classification. As a medium hub commercial service airport, the federal share of eligible capital improvement projects for the Sunport is up to 84.29 percent. In exchange for this level of funding,



the Sunport sponsor is required to meet various Grant Assurances, including maintaining the improvement for its useful life, usually 20 years.

TABLE 7A
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 (i.e., MRY)	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 5100.38D, Airport Improvement Program Handbook

The source for AIP funds is the Aviation Trust Fund. The Aviation Trust Fund was established in 1970 to provide funding for aviation capital investment programs (aviation development, facilities and equipment, and research and development). The Aviation Trust Fund also finances the operation of the FAA. It is funded by user fees, including taxes on airline tickets, aviation fuel, and various aircraft parts.

Primary commercial service airports receive a guaranteed minimum level of federal assistance each year, based on their enplaned passenger levels, through the Airport Improvement Program.

Apportionment (Entitlement) Funds

AIP provides funding for eligible projects at airports through an apportionment (entitlement) program. Primary commercial service airports receive a guaranteed minimum level of federal assistance each year, based on their enplaned passenger levels



and Congressional appropriation levels. A primary airport is defined as any commercial service airport enplaning at least 10,000 passengers annually.

An airport enplaning 10,000 or more passengers annually will receive the higher of \$1,000,000 or an amount based upon the entitlement formula. The entitlement formula is \$7.80 per enplaned passenger for the first 50,000 enplanements, and \$5.20 per enplanement for the next 50,000 enplanements. The next 400,000 enplanements provide \$2.60 each, and an airport receives \$0.65 for the next 500,000 enplanements. For each annual enplanement above one million, the airport receives \$0.50.

Under the authorizing statute, individual entitlements are doubled (with a maximum of \$26 million and a minimum of \$1.0 million per airport sponsor) if Congressional AIP funding in a fiscal year is at least \$3.2 billion. The FAA utilizes the official enplanement totals from the Air Carrier Activity Information System (ACAIS) database, which is two years behind the current date for determination of entitlement funds.

In addition, airports that have over 100 million pounds of landed weight by all-cargo carriers, receive an air cargo entitlement. The air cargo entitlement fund is established at three percent of the annual AIP appropriation. The Sunport air cargo forecast does not indicate that it will exceed the threshold for landed weight during the 20-year term of this Master Plan. Therefore, the Sunport is not likely to be eligible for air cargo entitlements.

Small Airport Fund

If a large or medium hub commercial service airport chooses to institute a passenger facility charge (PFC), discussed in more detail below, which is a fee of up to \$4.50 on each airline ticket, for funding of capital improvement projects, then their entitlement is reduced. A portion of those entitlements go 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. As a medium hub commercial service airport, the Sunport is not eligible for funds from this source.

Discretionary Funds

Airports may often face major projects that will require funds in excess of the airports' annual entitlements. Thus, additional funds from discretionary apportionments under AIP become desirable. The primary feature about discretionary funds is that they are distributed on a priority basis. The priorities are established by the FAA, utilizing a priority code system. Under this system, projects are ranked by their purpose. Projects ensuring airport safety and security are ranked as the most important priorities, followed by maintaining current infrastructure development, mitigating noise and other environmental impacts, meeting standards, and increasing system capacity.

It is important to note that competition for discretionary funding is not limited to airports in the State of New Mexico or those within the FAA Southwest Region. The funds are distributed to all airports in the



country, thus are more difficult to obtain. High priority projects will often fare favorably, while lower priority projects may not receive discretionary grants.

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 Airports Program), and select reliever airports. It is not anticipated that the Sunport will be eligible for this funding category.

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.

Facilities at the Sunport that are eligible to receive funding from the F&E program include the ATCT and nav aids, including the instrument landing system.

PASSENGER FACILITY CHARGE (PFC)

The *Aviation Safety and Capacity Expansion Act of 1990* contained a provision for airports to levy a passenger facility charge (PFC), which is a user fee, for the purposes of preserving, enhancing, or making a significant contribution to airport safety, capacity, security, or to reduce or mitigate noise impacts, improve local air quality, enhance competition, or reduce current or anticipated congestion. PFC revenue may be used on a “pay-as-you-go” basis or leveraged to pay debt service on bonds or other debt used to pay for PFC-eligible projects.

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14 CFR, Part 158, of May 29, 1991, establishes the regulations that must be followed by airports choosing to levy PFCs. Passenger facility charges may be imposed by public agencies controlling a commercial service airport with at least 2,500 annual passengers with scheduled service. Authorized agencies were initially allowed to impose a charge of \$1.00, \$2.00, or \$3.00 per enplaned passenger. Legislation (*AIR-21*) passed in 2000

allowed the cap to increase to \$4.50, which remains the current cap level. Prior approval is required from the Department of Transportation (DOT) before an airport may levy a PFC. The DOT must find that the projected revenues are needed for specific, approved projects. Although FAA is required to approve the collection and use of PFCs, the program permits local collection of PFC revenue through the airlines operating at an airport and provides more flexibility to airport sponsors than AIP funds.



Any AIP-eligible project, whether development or planning related, is eligible for PFC funding. Gates and related areas for the movement of passengers and baggage are eligible, as are on-airport ground access projects. Any project approved must preserve or enhance safety, security, or capacity; reduce/mitigate noise impacts; or enhance competition among carriers.

PFCs may be used only on approved projects. However, PFCs can be utilized to fund 100 percent of a project. They may also be used as matching funds for AIP grants or to augment AIP-funded projects. PFCs can be used for debt service and financing costs of bonds for eligible airport development. These funds may also be commingled with general revenue for bond debt service. Before submitting a PFC application, an airport must give notice and an opportunity for consultation with airlines operating at an airport.

PFCs are treated more like other airport improvement grants, rather than as airport revenues, and they are administered by the FAA. Airlines retain up to 11 cents per passenger for collecting the PFCs. It should also be noted that only revenue passengers pay PFCs. Non-revenue passengers, such as those using frequent flier rewards or airline personnel, are counted as enplanements but do not generate PFCs. The Sunport has imposed a \$4.50 PFC to fund projects.

STATE FUNDING PROGRAMS

The New Mexico Department of Transportation – Aviation Division recognizes that airports make a valuable contribution to the state's transportation economy. Therefore, NMDOT administers a grant program to fund airport planning, construction, and maintenance projects. Funding for state aviation grant programs is sourced from taxes on jet fuel, aircraft registration fees, and apportionment by the state legislature from the general fund. The revenue generated from these taxes and fees are deposited into a restricted aviation account. On an annual basis, approximately \$3 million is available for state grants.

New Mexico Aviation Grant Program

The Aviation Division administers the aviation grant program. Grants are typically awarded either in support of a federal grant or as a state grant. The state will pay for 50 percent of the local match on federal grants. State grants are administered as a 50/50 cost share with the local airport sponsor. Projects eligible for the state grant program include all AIP-eligible projects, as well as many projects not typically eligible for AIP grants. For example, the state can participate in revenue-generating projects, such as fuel farms and hangars. Project participation is determined by the management of the Aviation Division.

New Mexico Air Service Assistance Program

The final grant program available to state airports is the Air Service Assistance Program. This grant program is specifically established by the state legislature and is codified in New Mexico Code, Title 18,



Chapter 11, Part 3. Under this program, two or more communities can submit a grant application for funds of up to \$200,000 with a 50 percent match. The grant funds are restricted to marketing, promotion, and certain equipment, and cannot be used as a direct subsidy to an airline.

LOCAL FUNDING

The balance of project costs, after consideration has been given to grants, must be funded through local resources. A goal for any airport is to generate enough revenue to cover all operating and capital expenditures, if possible.

There are several local financing options to consider when funding future development at airports, including airport revenues, issuance of a variety of bond types, and leasehold financing. These strategies could be used to fund the local matching share, or the entire project if grant funding is not forthcoming. Below is a brief description of the most common local funding options:

Bonding: Bonding is a common method to finance large capital projects at airports. A bond is an instrument of indebtedness of the bond issuer to the bond holders, thus a bond is a form of loan or IOU. While bond terms are negotiable, typically the bond issuer is obligated to pay the bond holder interest at regular intervals and repay the principal by the maturity date.

Leasehold Financing: Leasehold financing refers to a developer or tenant financing improvements under a long-term ground lease. The advantage of this arrangement is that it relieves the airport from the responsibility of raising capital funds for the improvement. As an example, an FBO might consider constructing hangars and charging fair market lease rates, while paying the airport for a ground lease. A fuel farm can be undertaken in the same manner with the developer of the facility paying the airport a fuel flowage fee.

Customer Facility Charge (CFC): A CFC is the imposition of an additional fee charged to customers for the use of certain facilities. The most common example is when an airport constructs a consolidated rental car facility and imposes a fee for each rental car contract. That fee is then used by the airport to pay down the debt incurred from building the facility. The Sunport currently collects a CFC for the construction of the rental car facility.

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SUNPORT DEVELOPMENT SCHEDULES AND COST SUMMARIES

Now that the specific needs and improvements for the Sunport have been established, the next step is to determine a realistic schedule and the associated costs for implementing the recommended development concept. The implementation plan considers the interrelationships among the projects to determine an appropriate sequence of projects while remaining within reasonable fiscal constraints. Following FAA guidance for Master Plans, the list of projects considered are those that are eligible for FAA grant



funding. It should be understood the Sunport has numerous non-eligible capital projects which are not specifically identified and discussed in the Master Plan.

This section will examine the overall cost of each item in the recommended development alternative and present a master development schedule. A CIP, programmed by years, has been developed to cover the first five years of the plan. The remaining projects are grouped into intermediate (years 6-10) and long (years 11-20) term planning horizons. More detailed information is provided for the five-year horizon, with less detail provided for the longer planning periods. By utilizing planning horizons instead of specific years for intermediate and long-term development, the Sunport will have greater flexibility to adjust capital needs as demand dictates. **Table 7B** summarizes the key milestones for each of the three planning horizons.

TABLE 7B
Planning Horizon Activity Levels
Albuquerque International Sunport

	BASE YEAR 2014	PLANNING HORIZONS		
		Short-Term	Intermediate-Term	Long-Term
Enplaned Passengers	2,446,388	2,490,000	2,750,000	3,330,000
Commercial Operations				
Air Carrier	57,172	56,600	61,000	70,000
Air Cargo	10,202	10,500	10,900	11,600
Other Air Taxi	12,304	13,200	13,900	15,800
<i>Total Commercial Operations</i>	79,678	80,300	85,800	97,400
General Aviation Operations				
Itinerant	28,548	29,300	31,600	36,200
Local	2,930	3,100	3,200	3,500
<i>Total General Aviation Operations</i>	31,478	32,400	34,800	39,700
Military Operations				
Itinerant	16,683	16,100	16,100	16,100
Local	2,230	2,800	2,800	2,800
<i>Total Military Operations</i>	18,913	18,900	18,900	18,900
Total Sunport Operations	130,069	131,600	139,500	156,000
Based Aircraft	165	170	190	220

Source: FAA approved forecasts (11.18.2015)

A key aspect of this planning document is the use of demand-based planning milestones. The short-term planning horizon contains items of highest need and/or priority. As short-term horizon activity levels are reached, it will then be time to program for the intermediate-term based upon the next activity milestones. Similarly, when the intermediate-term milestones are reached, it will be time to program for the long-term activity milestones.



Several development items included in the recommended concept will need to follow demand indicators which essentially establish triggers for key improvements. For example, the recommended concept includes construction of an addition to Concourse B. Growth in enplanements is the trigger for this project. If growth slows or does not occur as projected, the terminal addition can be delayed. As a result, capital expenditures will be undertaken as needed, which leads to a responsible use of capital assets. Some development items do not depend on demand, such as pavement maintenance. These types of projects typically are associated with day-to-day operations and should be monitored and identified by Sunport management.

Not all potential projects considered in the recommended concept will need to follow specific demand milestones. Many projects are necessary to maintain existing facilities and to meet FAA design standards for safety. These projects need to be programmed in a timely manner regardless of changes in demand indicators.

Many projects are necessary to maintain existing facilities and to meet FAA design standards for safety.

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. Some projects may also require agency coordination activities, as well as public coordination activities that carry the public involvement process into the project implementation phase. As with all projects undertaken with federal funds, appropriate environmental documentation will need to be developed prior to implementation.

Capital costs presented here should be viewed only as estimates subject to further refinement during design.

At this juncture, it is difficult to know, precisely, what the cost of individual projects will be. Many federal agencies utilize a five-class cost estimating system, as presented in **Table 7C**. For master planning projects, order-of-magnitude estimates are appropriate and are considered sufficiently accurate for planning purposes. The cost estimates are in 2017 dollars and should be increased accordingly for the actual year of implementation.

TABLE 7C
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



Exhibit 7A presents the proposed CIP for the Sunport. The first funding column presents an estimate of the total cost of the project. The second funding column presents that portion of the project cost that is eligible for FAA funding through the AIP. The third funding column considers the Sunport's matching share responsibility. The matching share is eligible for funding through Passenger Facility Charges (PFCs) that the Sunport can impose on airline tickets or through other local revenue sources.

Under most circumstances, a medium hub commercial service airport, such as the Sunport, the AIP eligible share is 75 percent. Certain states with a high percent of federal or tribal lands (public land states) may receive a higher federal share. New Mexico qualifies for the higher federal share because 26.44 percent of the land is considered federal or tribal. This results in a maximum funding level through AIP of 84.29 percent for the Sunport.

Exhibit 7B graphically presents the master plan projects on an aerial photograph of the Sunport. The projects are color-coded by planning horizon to indicate the recommended phasing of each project. The CIP establishes a list of projects recommended over the next 20-years. The key activities and responsibilities for implementation will vary from project to project, but will include project funding activities, environmental processing activities, sponsor-specific project implementation process activities associated with designing and constructing projects, agency coordination, and public involvement coordination.

SHORT-TERM IMPROVEMENTS

The short-term projects are those anticipated to be needed in years one through five of the 20-year CIP. The list of projects is further divided into yearly timeframes and are prioritized based on the needs of the Sunport. Projects related to safety and preservation generally have the highest priority. The following sub-sections discuss each of the projects in the short-term CIP.

- **Runway 8 and 12 Decoupling:** As shown on **Exhibit 7C**, remove the lead-in taxiway leading to the Runway 12 threshold to immediately remedy the priority Hot Spot #1. Remove Taxiway E1 (south of Taxiway E) and Taxiway K from airfield movement area for which the tower is responsible. Relocate the Taxiway E1 hold line outside the threshold siting surface.
- **Runway 8-26 Rehabilitation:** Repave and replace various pavement sections.
- **Relocate Taxiway A1 Holdline:** Relocate the holdline from threshold siting surface by moving it onto Taxiway A between Taxiways A2 and A3.
- **Install Terminal Apron "Island" at Taxiway A3:** Utilizing painted markings and relocated signage, create an apron "island" to prevent direct access from the terminal apron to the runway. Consideration may be given to a Memorandum of Agreement (MOA) between the tower and the airport to not allow aircraft to proceed from the apron, across Taxiway A, and south onto Taxiway A3.
- **Taxiway C Fillet Reduction:** Narrow Taxiway C to address "Hot Spot #3" by reducing this wide expanse of pavement. It should be noted that while there have been no pilot issues at this hot

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Project Description		Project Cost	AIP Eligible (84.29%)	Local Share
SHORT TERM PROGRAM (0-5 YEARS)				
1	2018 RW 8 and 12 Decoupling (RIM/HS No.1 Mitigation) ¹	\$361,000	\$304,287	\$56,713
2	2018 RW 8-26 Pavement Rehab	\$3,818,000	\$3,218,192	\$599,808
3	2019 TW A1 Holdline Relocation	\$167,000	\$140,764	\$26,236
4	2019 South Terminal Apron Island @ A3	\$122,000	\$102,834	\$19,166
5	2019 TW C Fillet Reduction (HS No.3 Mitigation)	\$300,000	\$252,870	\$47,130
6	2019 TW F7 New (RW 21 Exit TW)	\$1,476,000	\$1,244,120	\$231,880
7	2020 TW E Reconstruction - Design	\$600,000	\$505,740	\$94,260
8	2020 TW F3 Closure (Taxilane to Cargo Apron)	\$153,000	\$128,964	\$24,036
9	2020 EA for Runway 8 Landing Threshold Shift (not pictured)	\$1,000,000	\$842,900	\$157,100
10	2021 TW E Reconstruction - Construct Ph I ²	\$6,982,000	\$5,885,128	\$1,096,872
11	2021 ARFF Equipment and Building	\$3,035,000	\$2,558,202	\$476,799
12	2021 Runways 8 & 12 Landing Threshold Reconfiguration - Design	\$1,239,000	\$1,044,353	\$194,647
13	2022 TW E Reconstruction (Ph2) - Construct	\$6,500,000	\$5,478,850	\$1,021,150
14	2022 West Terminal Ramp Reconstruction/Fuel Truck Parking	\$4,902,000	\$4,131,896	\$770,104
15	2022 Terminal Building Perimeter Concrete Reconstruction	\$2,816,000	\$2,373,606	\$442,394
16	2022 Acquire Property Easement (1.8 Acres)	\$280,000	\$236,012	\$43,988
17	2022 Runways 8 & 12 Landing Threshold Reconfiguration - Construct	\$9,090,000	\$7,661,961	\$1,428,039
18	2022 TW E Reconstruction (Ph3) - Construct	\$4,980,000	\$4,197,642	\$782,358
19	2022 East (RON) Apron - Construct	\$10,806,000	\$9,108,377	\$1,697,623
20	On-Going Pavement Maintenance (Short Term)	\$500,000	\$421,450	\$78,550
TOTAL		\$59,127,000	\$49,838,148	\$9,288,852
INTERMEDIATE TERM PROGRAM (Years 6-10)				
1	TW B Reconstruction	\$10,763,000	\$9,072,133	\$1,690,867
2	GA Heavy Apron (South)/TW F1 Relocation - Construct	\$2,508,000	\$2,113,993	\$394,007
3	TW A2 Closure	\$449,000	\$378,462	\$70,538
4	TW E4, E7, E9, E11 Closure ³	\$2,109,000	\$1,777,676	\$331,324
5	TW G1 Relocation (HS No.2 Mitigation)	\$952,000	\$802,441	\$149,559
6	TW J Closure ³	\$568,000	\$478,767	\$89,233
7	Expand Air Cargo Apron - Construct	\$5,950,000	\$5,015,255	\$934,745
8	GA Heavy Apron North (In Triangle) - Construct	\$2,242,000	\$1,889,782	\$352,218
9	TW D Rehabilitation	\$503,000	\$423,979	\$79,021
10	Cargo Apron Slab Rehab	\$693,000	\$584,130	\$108,870
11	Elevator Concourse B - Construct	\$280,000	\$236,012	\$43,988
12	On-Going Pavement Maintenance (Intermediate Term)	\$500,000	\$421,450	\$78,550
TOTAL		\$27,517,000	\$23,194,079	\$4,322,921
LONG TERM PROGRAM (Years 11-20)				
1	TW A4, A6, A7 Closure/Construct Replacement TW ³	\$3,951,000	\$3,330,298	\$620,702
2	Threshold Taxiway to Runway 12 - Construct	\$5,000,000	\$4,214,500	\$785,500
3	Remove Belly Freight Building	\$1,050,000	\$885,045	\$164,955
4	West Terminal Taxilane - Construct	\$2,539,000	\$2,140,123	\$398,877
5	Concourse B Extension - Construct	\$7,300,000	\$6,153,170	\$1,146,830
6	FIS/International Terminal - Construct	\$4,600,000	\$3,877,340	\$722,660
7	Concessions In-Fill - Construct	\$5,600,000	\$0	\$5,600,000
8	Split Automated Baggage Screening and Delivery	\$5,200,000	\$4,383,080	\$816,920
9	TW F Rehabilitation	\$368,000	\$310,187	\$57,813
10	TW G Rehabilitation	\$154,000	\$129,807	\$24,193
11	RW 3-21 Rehabilitation	\$708,000	\$596,773	\$111,227
12	RW 12-30 Rehabilitation	\$1,535,000	\$1,293,852	\$241,149
13	On-Going Pavement Maintenance (Long Term)	\$1,000,000	\$842,900	\$157,100
TOTAL		\$39,005,000	\$28,157,075	\$10,847,925
TOTAL		\$125,649,000	\$101,189,302	\$24,459,697

¹Project includes removing Twy E1 south of Twy E and Twy K from the aircraft movement area under tower control.

²Includes removal of TW E5

³Cost includes pavement removal; however closure/removal should occur when pavement at end of useful life.



spot, issues with vehicles have been documented. They may be further resolved through additional driver training.

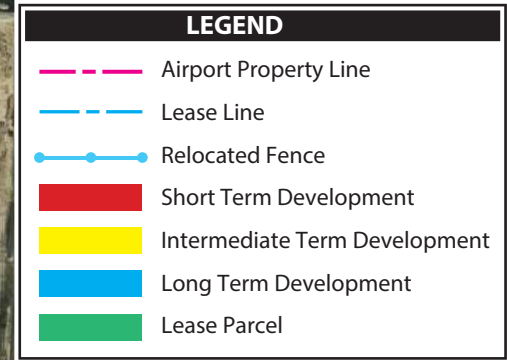
- Construct new Taxiway F7: New Runway 21 exit for capacity and efficiency improvement.
- Reconstruction of East Portion of Taxiway E: Three-phase project to reconstruct that portion of Taxiway E between Taxiway E5 and the east airport property line. Project cost includes removal of Taxiway E5.
- Taxiway F3 Removal: Remove Taxiway F3 between the air cargo apron and Taxiway F to eliminate direct access from the apron to the runway.
- Construct ARFF Building: Identify a location, east of the terminal area for a City-owned ARFF building. This is only to be constructed if the City were to take over primary emergency response from Kirtland Air Force Base.
- West Terminal Apron Reconstruction: Reconstruction of deteriorating pavement area to include strengthening and space for fuel truck parking.
- Terminal Building Perimeter Concrete Reconstruction: Multiple pavement sections immediately adjacent to the terminal building and concourses are deteriorating.
- Runway 8 Landing Threshold Relocation: The permanent remedy to prevent holding aircraft from penetrating the approach surface to Runway 8 is relocating the displaced landing threshold west 600 feet. The Runway 12 threshold will need to be relocated 600 feet southeast to accommodate the relocated ILS critical area for Runway 8. Property west of University Boulevard that will be inside the RPZ, but not already owned by the Sunport, will need to be controlled by easement or acquisition. This project could ultimately require relocating a portion of University Boulevard out of the RPZ if determined necessary by the FAA.
- East RON Apron: Expand the east side of the terminal apron to accommodate aircraft that remain-overnight (RON). Apron will also provide adequate taxi separation for larger aircraft that may need to access gates on the north side of Concourse A.

Short-term improvements presented on **Exhibit 7A** and depicted on **Exhibit 7B** are estimated at \$59.1 million. Of this total, approximately \$49.8 million is eligible for FAA AIP development grants. The Sunport matching share is \$9.3 million which is eligible for PFC funding. All projects in the short-term planning period are eligible for AIP or PFC funding.

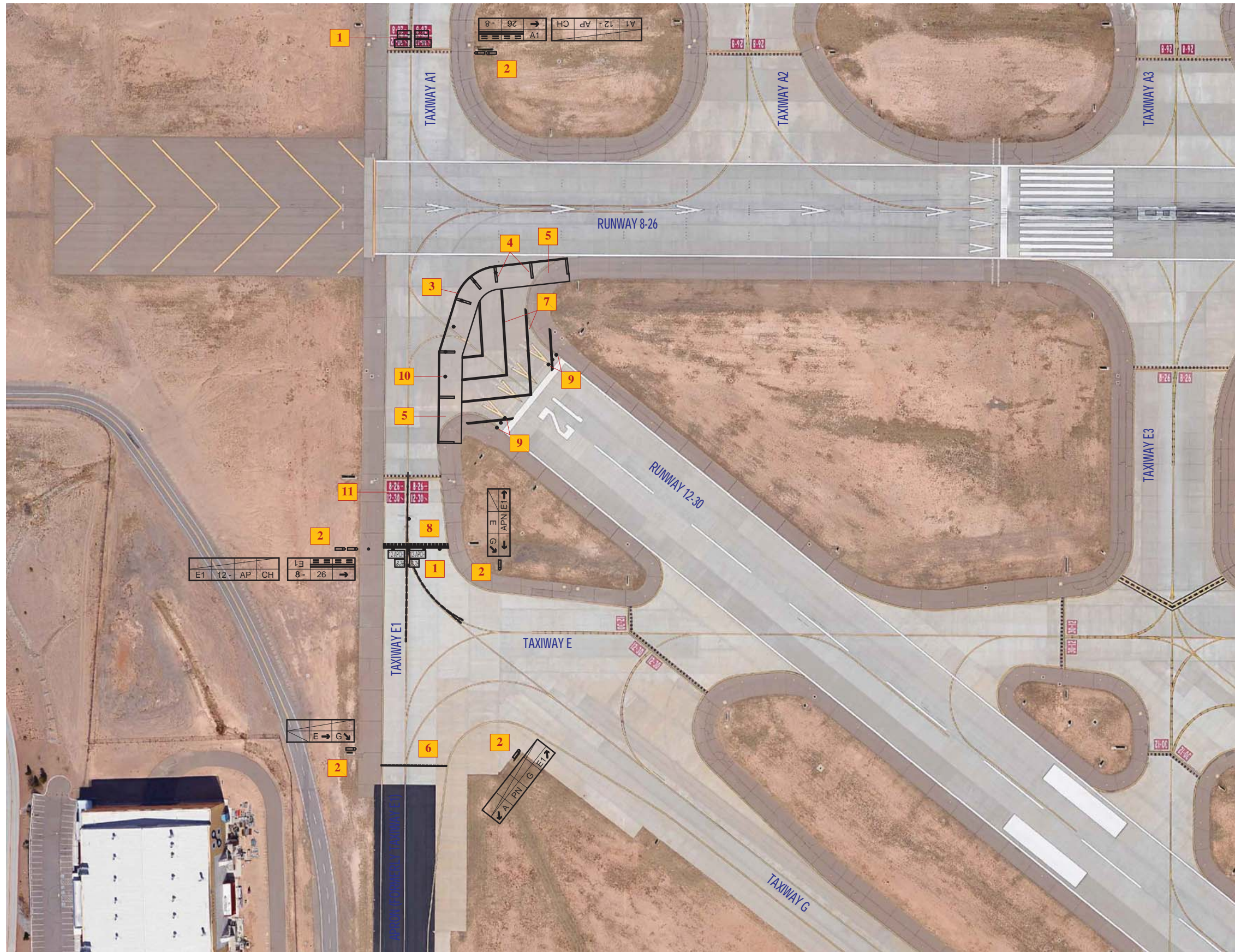
INTERMEDIATE-TERM IMPROVEMENTS

The intermediate-term projects are those that are anticipated to be necessary in years six through 10 of the Master Plan. These projects are not tied to specific years for implementation; instead, they have been prioritized so that Sunport management has the flexibility to determine when they need to be pursued based on current conditions. It is not unusual for certain projects to be delayed or advanced based on changing conditions, such as funding availability or changes in the aviation industry.

- Taxiway B Reconstruction: Taxiway B is showing signs of significant deterioration and reconstruction is anticipated to be needed in the intermediate-term.

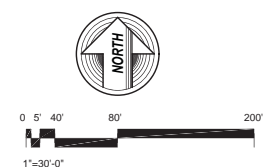


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Keyed Notes

- 1 REMOVE, REPAINT EXISTING SURFACE PAINTED HOLDING POSITION SIGN
- 2 NEW / REVISED AIRFIELD GUIDANCE SIGNAGE
- 3 NEW DUAL CONTINUOUS TAXIWAY EDGE MARKING (AVIATION YELLOW)
- 4 NEW 3' x 25' WIDE TAXIWAY SHOULDER STRIPES (AVIATION YELLOW) AT 50' MAXIMUM SEPARATION
- 5 PAINT 35' WIDE SHOULDER WITH NEW AVIATION GRADE ARTIFICIAL TURF MARKING (AVIATION GREEN), EXISTING SHOULDERS TO REMAIN UNDISTURBED
- 6 NEW NON-MOVEMENT AREA BOUNDARY LINE (AVIATION YELLOW)
- 7 NEW RUNWAY 12-30 BLAST PAD MARKINGS (AVIATION YELLOW)
- 8 NEW RUNWAY HOLDING POSITION MARKING WITH INSET GUARD LIGHTS
- 9 NEW RUNWAY THRESHOLD/END LIGHTS
- 10 NEW ELEVATED TAXIWAY EDGE LIGHTS
- 11 REMOVE EXISTING HOLDING POSITION LINE WITH MARKINGS AND LIGHTING



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- **Heavy Apron (South) Construction:** The first of two heavy aircraft aprons to serve the large private and charter aircraft that utilize general aviation services. This project also includes relocation of Taxiway F1 between the south general aviation apron and Taxiway F to eliminate the existing direct access to the runway from the apron.
- **Taxiway A2 Closure:** Close Taxiway A2 to eliminate the existing direct access from the terminal apron to the runway. This taxiway may be reopened in the future when the west terminal apron taxilane is relocated/shifted to the west.
- **Taxiways E4, E7, E9, E11 Closure:** Plan to close these taxiways as they may be considered redundant. This will save maintenance and repair costs over the long-term. Ultimately, they may need to be removed altogether due to build-up of FOD (Foreign Object Debris). Closure should be scheduled at the end of their useful life.
- **Taxiway G1 Relocation:** This project will remedy Hot Spot #2 by closing existing Taxiway G1, which provides direct access to the runway from the general aviation apron, while reconstructing it slightly to the east.
- **Taxiway J Closure:** Lightly utilized Taxiway J is considered for closure at the end of its useful life to save on maintenance and repair costs.
- **Air Cargo Apron Expansion:** Air cargo apron is planned for expansion to the southwest to accommodate growing demand. Grading of the open/vacant space adjacent is planned to accommodate cargo truck parking and staging.
- **Heavy Apron (North) Construction:** The second heavy apron to accommodate large transport type aircraft utilizing general aviation services is planned to be located within the triangle area. Note that until this is constructed, Taxiway K can still be used for heavy aircraft.
- **Taxiway D Rehabilitation:** Taxiway D is planned to be rehabilitated.
- **Air Cargo Slab Rehabilitation:** Portions of the existing air cargo apron will likely require rehabilitation in the intermediate planning horizon.
- **Concourse B Elevator:** Construct an elevator to facilitate movement of Sunport and airline employees and equipment between levels.

Intermediate-term improvements presented on **Exhibit 7A** and depicted on **Exhibit 7B** are estimated at \$27.5 million. Of this total, approximately \$23.2 million is eligible for FAA AIP development grants. The Sunport matching share is \$4.3 million which is eligible for PFC funding. All projects in the intermediate-term planning period are eligible for AIP or PFC funding.

LONG-TERM IMPROVEMENTS

Long-term projects are those considered for years 11-20 of the Master Plan.

- **Taxiways A4, A6, and A7 Closure:** Analysis indicated that several taxiways could be removed from service without substantially impacting airfield efficiency to reduce long-term maintenance costs. This project would close Taxiways A4, A6, and A7 and replace them with a single taxiway exit between A6 and A7. The new taxiway exit would be constructed at the traditional 90-degree angle.



- Construct Runway 12 Threshold Taxiway: If the initial solution to the Hot Spot in this area is not adequate, then a new threshold taxiway is planned.
- Remove Belly Freight Building: This building is aged and not utilized for its original purpose. To make space available for an expanded terminal apron, the Concourse B addition, a dedicated international terminal, and a relocated access taxiway, the belly freight building is planned to be removed.
- Relocate West Terminal Apron Taxiway: This project serves multiple purposes, including eliminating direct access from the apron to the runway and providing the additional separation needed to extend Concourse B.
- Concourse B Addition: If enplanements grow as forecast, there may be a need for two additional gates. To accommodate this need, an addition is planned at the end of Concourse B.
- Construct Federal Inspection Services/International Terminal: This project would construct a new building to serve international passengers.
- Concessions In-fill: Terminal building calculations show a need for additional concessions space. Several areas have been identified for this purpose. This is a revenue-producing project and is, therefore, not eligible for FAA funding.
- Automated Bag Screening/Delivery: While not considered necessary currently, there may be a desire to install an automated bag screening system in the future.
- Taxiway F Rehabilitation: By the long-term, Taxiway F is planned for major rehabilitation.
- Taxiway G Rehabilitation: By the long-term, Taxiway G is planned for major rehabilitation.
- Runway 3-21 Rehabilitation: In the long-term, Runway 3-21 will need to be reconstructed. At that time, it should be evaluated for necessary width. Under current design standards, it only needs to be 100 feet wide.
- Runway 12-30 Rehabilitation: In the long-term, Runway 12-30 will need additional rehabilitation.

Long-term improvements are estimated at \$39.0 million. Of this total, approximately \$28.2 million is eligible for FAA AIP development grants. The Sunport's matching share is \$10.8 million, which is eligible for PFC funding.

CAPITAL IMPROVEMENT SUMMARY

A 20-year CIP has been prepared for the Sunport. In the short-term, several major projects have been identified, including those intended to remedy the Hot Spots on the airfield. The east portion of Taxiway E is planned to be reconstructed. A new taxiway exit (F7) is planned to provide greater efficiency for Runway 3-21. The terminal apron is planned to be expanded to the east to provide access to the north side of Concourse A for larger aircraft and to accommodate aircraft that remain overnight. The landing threshold to Runway 8 is planned to be shifted 600 feet to the west to eliminate the potential for holding aircraft to penetrate the Runway 8 approach surface.

The intermediate-term projects include closure of several redundant taxiways. These are planned to be closed at the end of their useful life. Two general aviation aprons designed to accommodate heavy charter aircraft are planned. Taxiway B is planned to be reconstructed. Taxiway G1 is planned to be



relocated to mitigate Hot Spot #2 (which currently allows direct access from the general aviation apron to Runway 12-30). Several other taxiway rehabilitation and reconstruction projects are planned in the intermediate planning horizon.

In the long-term, additional taxiway closures are planned when the pavement is at the end of its useful life. As demand dictates, an addition is planned to Concourse B, which would add two gates. This terminal expansion will require the access taxiway to be shifted to the west. To accommodate this shift, the existing belly freight building is planned to be removed. Major rehabilitation of Taxiways F and G and Runways 3-21 and 12-30 are also planned in the long-term. When Runway 12-30 is reconstructed, additional analysis will need to be undertaken to determine if the width should be maintained at 150 feet or if it should be narrowed to 100 feet.

The list of projects needed to accomplish the vision for the Sunport has been prioritized and cost estimates have been developed. Projects considered for the short-term planning horizon (years 1-5) have been divided into yearly increments. Projects considered for the intermediate (years 6-10) and long-term (years 11-20) have been prioritized and grouped together. The grouping of projects is necessary to provide the needed flexibility for the Sunport to adjust as necessary. In addition, on an annual basis, the Sunport and the FAA assemble and review a five-year CIP. Therefore, the list of projects and the prioritization of the projects can and likely will change in the future.

The total 20-year CIP is estimated to cost \$125.7 million. Of this total, approximately \$101.2 million is eligible for FAA AIP development grants. The Sunport's matching share is \$24.5 million, which is eligible for PFC funding. Approximately \$5.6 million is not eligible for AIP or PFC funding.

FUNDING PLAN

The primary funding sources for capital improvement projects included in this Master Plan will be through the AIP and the PFC programs. For medium hub (such as the Sunport) and large hub airports that collect a PFC of greater than \$3.00, AIP funds apportioned must be reduced by an amount equal to the lesser of 75 percent of the projected revenues from the PFC or 75 percent of the passenger entitlement otherwise due the airport. The Sunport has elected to reduce their passenger apportionment as the PFC generates more revenue for airport development. **Table 7D** presents an approximation of the development funds available for use in airport development projects based on forecast enplanement levels.

As can be seen, the Sunport takes in approximately \$10.3 million in PFC revenue and an additional \$1.3 million in passenger entitlements. As enplanements increase, the revenue will also increase. Over the course of the next 20 years, the Sunport is anticipated to have more than \$287 million available for capital development projects. The total CIP included in this Master Plan amounts to approximately \$125 million. Therefore, the available funding appears to be adequate to accomplish the capital projects identified.

TABLE 7D
**Projected Annual AIP Entitlement Funding
Albuquerque International Sunport**

Period		Passenger Enplanements	25% of Passenger Entitlement Funds ⁴	PFC Funds Less Collection Cost ³	Total Entitlement and PFC Funds
CY	for FY				
2015	2017	2,323,883 ¹	\$1,338,471	\$10,201,627	\$11,540,098
2016	2018	2,341,719 ¹	\$1,342,930	\$10,537,736	\$11,880,666
2017	2019	2,468,095	\$1,374,524	\$10,834,937	\$12,209,461
2018	2020	2,475,373	\$1,376,343	\$10,866,887	\$12,243,231
2019	2021	2,482,673	\$1,378,168	\$10,898,934	\$12,277,103
Short-Term Total (FY 2017-2021)			\$6,810,436	\$53,340,121	\$60,150,557
2020	2022	2,490,000	\$1,380,000	\$10,931,100	\$12,311,100
2021	2023	2,539,954	\$1,392,489	\$11,150,398	\$12,542,887
2022	2024	2,590,911	\$1,405,228	\$11,374,099	\$12,779,327
2023	2025	2,642,890	\$1,418,223	\$11,602,287	\$13,020,510
2024	2026	2,695,911	\$1,431,478	\$11,835,049	\$13,266,527
Intermediate-Term Total			\$7,027,417	\$56,892,934	\$63,920,350
2025	2027	2,750,000	\$1,445,000	\$12,072,500	\$13,517,500
2026	2028	2,803,133	\$1,458,283	\$12,305,754	\$13,764,037
2027	2029	2,857,292	\$1,471,823	\$12,543,512	\$14,015,335
2028	2030	2,912,498	\$1,485,625	\$12,785,866	\$14,271,491
2029	2031	2,968,770	\$1,499,693	\$13,032,900	\$14,532,593
2030	2032	3,026,130	\$1,514,033	\$13,284,711	\$14,798,743
2031	2033	3,084,598	\$1,528,650	\$13,541,385	\$15,070,035
2032	2034	3,144,195	\$1,543,549	\$13,803,016	\$15,346,565
2033	2035	3,204,944	\$1,558,736	\$14,069,704	\$15,628,440
2034	2036	3,266,867	\$1,574,217	\$14,341,546	\$15,915,763
2035	2037	3,330,000	\$1,590,000	\$14,618,700	\$16,208,700
Long-Term Total			\$16,669,607	\$146,399,595	\$163,069,201
TOTAL			\$30,507,460	\$256,632,650	\$287,140,108

¹Actual²Preliminary estimate³Assumed to be \$0.11 per enplanement⁴By regulation, when a medium hub airport implements PFCs of greater than \$3.00, the passenger entitlement or the PFC total is reduced by 75%, whichever is lower.

CY - Calendar Year; FY - Fiscal Year

SUMMARY

The best means to begin implementation of the recommendations in the Master Plan is to first recognize that planning is a continuous process that does not end with completion and approval of this document. Rather, the ability to continuously monitor the existing and forecast status of Sunport activity must be provided and maintained. The issues upon which the Master Plan is based will remain valid for a number



of years. The primary goal is for the Sunport to best serve the air transportation needs of the region, while continuing to be economically self-sufficient.

The actual need for many facilities is most appropriately established by actual activity levels rather than a specified date. For example, the air cargo apron is planned to be expanded; however, this project should only be pursued as demand increases. 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 the development. Although every effort has been made in this master planning process to conservatively estimate when facility development may be needed, actual aviation demand will dictate when facility improvements need to be delayed or accelerated.

In addition, numerous projects have been identified that will not depend upon increased demand. These include resolution to FAA-identified Hot Spots, taxiway geometry, and regular pavement maintenance.

The real value of a usable master plan is in keeping the issues and objectives in the minds of the managers and decision-makers so that they are better able to recognize change and its effect. In addition to adjustments in aviation demand, decisions made as to when to undertake the improvements recommended in the Master Plan will impact the period that the plan remains valid. The format used in this Master Plan is intended to reduce the need for formal and costly updates by simply adjusting the timing. Updating can be done by the manager, thereby improving the plan's effectiveness.

In summary, the planning process requires the Sunport management to consistently monitor the progress of the Sunport in terms of passenger enplanements, aircraft operations, based aircraft, and peaking characteristics. Analysis of aircraft demand is critical to the timing and need for certain Sunport facilities. The information obtained from continually monitoring Sunport activity will provide the data necessary to determine if the development schedule should be accelerated or decelerated.

SUSTAINABILITY IMPLEMENTATION PLAN

Previous sustainability elements in this Master Plan have outlined the Sunport's current sustainability performance, identified specific goals and objectives, and set performance targets. The following section provides a plan for implementation of the recommended sustainability objectives. To support the successful implementation of the sustainability plan, an evaluation of each objective's associated benefits, staffing needs, and costs has been undertaken. In addition, a method for the Aviation Department to track key performance indicators (KPIs) has been established to aid in the continual monitoring and refinement of the Sustainability Plan. Finally, numerous sources for sustainability project grants and loans potentially available to the Aviation Department are discussed, including federal, state, local, and private programs.



OBJECTIVE EVALUATION

An evaluation of the objectives outlined have been prepared using the Sustainable Aviation Guidance Alliance (SAGA) database of sustainable practices. SAGA is a coalition of aviation interests that formed in 2008 to assist airport operators in planning, implementing, and maintaining sustainability programs. Membership of SAGA is made up of many aviation/airport industry organizations, including American Association of Airport Executives (AAAE), Airports Council International – North America (ACI-NA), Airport Consultants Council (ACC), the FAA, Airlines for America (A4A), and various airport consultants. The database utilized for this evaluation consists of over 900 sustainability practices, including evaluation criteria based upon their applicability to economic viability; operational efficiency; natural resource conservation; and social responsibility (EONS). The following seven criteria were utilized to evaluate each sustainability objective proposed in this master plan:

- Upfront capital investment to plan, design, and construct the project;
- Estimated annual operation and maintenance (O & M) costs;
- Payback period for a return on the initial capital investment;
- Staffing requirements in terms of hours required per month to implement or operate the practice;
- Energy reduction in terms of how the project will impact the amount of fossil fuels and/or building electricity consumed;
- Natural environmental benefits that result from the project; and
- How the project affects society and employee well-being.





































































































































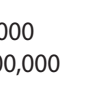























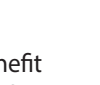
The results of the objective evaluation are included on **Exhibit 7D**. The exhibit also differentiates between short and long-term objectives. Short-term objectives are those that should be implemented within five years to achieve the sustainability objective, including those that had the lowest initial capital costs and those that the Sunport is already in the process of pursuing. Sustainability objectives that are classified as long-term are those that should be planned for the future, approximately six to 20 years from the present.

SUSTAINABILITY MONITORING PROGRAM

Routine monitoring of the sustainability program by Aviation Department staff will be necessary to measure program performance. Understanding the positive and negative results of program implementation will allow Aviation Department staff to determine if the airport is progressing toward its overall sustainability goals or if adjustments need to be made to the program.

The Sustainability Report Card serves as a continuous monitoring device to summarize lessons learned, issues that arise, and opportunities for improvement.

To support the Aviation Department in this data collection and analysis process, a Sustainability Report Card has been created. The Report Card, included as **Exhibit 7E**, is designed to compare the reporting

SUSTAINABLE OBJECTIVE EVALUATION	INITIAL INVESTMENT	O & M COST ¹	PAYBACK PERIOD	STAFFING REQUIREMENTS	ENERGY REDUCTION	ENVIRONMENTAL BENEFITS	SOCIAL BENEFITS
SHORT-TERM OBJECTIVES							
1. Coordinate with the City's Purchasing Division to establish a Green Procurement Program.					N/B		
2. Incorporate high-efficiency HVAC systems.							N/B
3. Expand recycling marketing & promotion efforts within the terminal.					N/B		
4. Engage tenants & airlines to ensure their involvement in the recycling program.			N/A		N/B		
5. Collaborate with the City's Solid Waste Management Department on expanding the Sunport's recycling program.		N/A	N/A		N/B		
6. Conduct regular (annual/biennial) waste assessments to monitor solid waste & recycling rates.					N/B		
7. Continue to transition to high-efficiency lighting.							N/B
8. Promote the reduction or elimination of idling automobiles in & around the Sunport.							N/B
9. Expand water fixture replacement to all outdated fixtures.							N/B
10. Implement low-impact development & green infrastructure techniques to improve stormwater runoff quality & to reduce water use for landscaped areas.					N/B		
11. Incentivize employee use of public transit & alternative fueled vehicles.					N/B		
12. Use social media & other public outlets to promote the use of public transit or cycling to/from the Sunport.					N/B	N/B	
13. Promote the Sunport as an expansion destination for the City's pilot bike share program (BICI).							
14. Develop construction policies to include sustainability.							
15. Use the FAA's Voluntary Airport Low Emissions (VALE) program to transition to low-emission fleet vehicles when practicable.					N/B	N/B	N/B
LONG-TERM OBJECTIVES							
16. Explore composting opportunities for food waste from on-site restaurants.					N/B		
17. Incorporate high-efficiency building equipment.							N/B
18. Expand on-site photovoltaic (PV) systems.							
19. Promote purchase of replacement vehicle and ground support equipment powered with low-emission fuels.							N/B
20. Create an energy audit program for tenants to identify opportunities for energy use reductions.							N/B
21. Improve facility metering to more accurately measure & manage water usage.					N/B		N/B
22. Expand on-site bicycle facilities for public use & coordinate with the City to connect the terminal to the citywide bicycle trails & path.							
<div> <div>KEY</div> <div> <div>Initial Investment</div> <div>  1 – < \$5,000  2 – \$5,000 to \$100,000  3 – \$100,000 to \$500,000  4 – > \$500,000 </div> </div> <div> <div>O & M Cost</div> <div>  N/A – Not Applicable  1 – < \$5,000 (savings)  2 – \$5,000 to \$50,000  3 – \$50,000 to \$100,000  4 – > \$100,000 </div> </div> <div> <div>Payback Period</div> <div>  N/A – Not Applicable  1 – 0 to 2 years  2 – 2 to 5 years  3 – 5 to 15 years  4 – > 15 year </div> </div> <div> <div>Staffing Requirement</div> <div>  1 – < 10 hours per month  2 – 10-50 hours per month  3 – 50 – 200 hours per month </div> </div> <div> <div>Energy Reduction</div> <div>  N/B – No benefit  1 – Decreases consumption  2 – Decreases consumption & generates renewable </div> </div> <div> <div>Environmental Benefits</div> <div>  N/B – No benefit  1 – Low benefit  2 – Moderate benefit  3 – Multiple benefits </div> </div> <div> <div>Social Benefits</div> <div>  N/B – No benefit  1 – Low benefit  2 – Moderate benefit  3 – Multiple benefits </div> </div> </div>							

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Annual Sustainability Report Card for the Sunport

Baseline Comparison Year: 2014

Reporting Year: _____

SUSTAINABILITY PERFORMANCE TARGETS	KEY PERFORMANCE INDICATORS	REPORTING YEAR STATUS	BASELINE YEAR DATA	IMPROVEMENT FROM BASELINE YEAR	IMPROVEMENT FROM PREVIOUS YEAR
Waste Management & Recycling	Tons of recycled materials		17.45		
	Tons of solid waste		1,047		
	Composted materials (cubic yards)		260		
	# of airlines participating in recycling program		1		
	# of food concessions participating in composting program		0		
Energy	Electric use (kWhs/year)		14,855,071		
	On-site energy generation (kWhs/year)		2,480,000		
	Energy costs (\$/year) ¹		1,460,000		
	Natural gas use (therms/year)		6,796,551.78		
Air Quality & GHG Emissions	# of alternative fuel/low-emission fleet vehicles		1		
	# of low/no emission GSE		0		
	% of low/no emission ground support equipment		0		
	GHG emissions (tons/year) ²		105,973		
	Vehicle & GSE equipment fuel use (gal/year) ³		226,824.26		
Water Conservation & Water Quality	Building water use/year (gal/per passenger)		1.99		
	Irrigation water use/year (gal)		53,973,436		
	Reclaimed/grey water use (gal/year)		0		
	Total water use (gal) ⁴		66,897,380		
	Total water costs/year ⁴		206,561.04		
Surface Transportation	# of sub-meters installed		0		
	# of annual employee/passenger transportation survey responses		0		
	% of employees/passengers using low/no-emission transportation				
	# of public EV stations available		0		
	# of priority parking spaces for carpools & alternatively-fueled vehicles		0		
Natural Resource Management	Alternative fuel use/year		0		
	Annual expenditures on sustainable &/or locally sourced materials		N/A		
	# of concessionaires committed to the Green Concessions Policy		0		
	# of construction/renovation projects with sustainable elements		1		

¹ Energy use costs includes electric & natural gas² GHG's include CO₂, CH₄, N₂O, CO₂e³ Includes gasoline & diesel⁴ Includes landscape, building & mixed use meters



Were there any issues or challenges implementing any of the Sustainability Performance Targets? (e.g., Additional staffing, funding needed, etc.)

List any lessons learned or best practices for implementation in the following reporting year.

Include/attach any pertinent data that complements the Report Card for record keeping purposes.





year status to the baseline of this master plan (2014) and to outline improvements from the previous year's data. The second page of the Report Card allows staff to report on any issues/challenges and lessons learned in its sustainability program. As a living document, the sustainability plan needs to be monitored on a regular basis. The Sustainability Report Card serves as a continuous monitoring device to summarize lessons learned, issues that arise, and opportunities for improvement. The Report Card can also serve as a means for promoting the Sunport's sustainability efforts and performance to the public.

FUNDING SOURCES

Financing for the sustainable projects and programs outlined in this appendix can come from various federal, state, and local sources. This section provides a summary of the various funding sources for sustainable projects at airports.

AIP GRANT FUNDING

At the federal level, the FAA provides funding to airports through the AIP. Sustainability projects available for AIP grant funding are discussed below.

- **FAA Voluntary Airport Low Emissions (VALE) Program¹**

The FAA's VALE program is designed to reduce all sources of airport ground emissions to meet the responsibilities of the *Clean Air Act*. Through the VALE program, airports can use AIP funds and PFCs to purchase low emission vehicles, refueling and recharging stations, gate electrification, and other air quality improvements. VALE funding is currently only available to commercial service airports that are located within areas designated by the Environmental Protection Agency (EPA) as being in non-attainment or maintenance of National Ambient Air Quality Standards (NAAQS). The Sunport currently qualifies for the VALE program; however, due to overall improvements in Bernalillo County air quality, the Sunport may fall out of the VALE program in the future.

- **Zero Emissions Vehicle and Infrastructure Pilot Program²**

The FAA's Zero Emissions Vehicle (ZEV) and Infrastructure Pilot Program provides funding to any AIP-eligible airport for AIP grants for the acquisition and operation of ZEVs, including the construction or modification of infrastructure to facilitate the delivery of fuel and services necessary for the use of such vehicles. This program will allow for public access to the refueling/recharging stations under certain conditions. The conditions as outlined in Table 5 of the *Zero Emissions Airport Vehicle and Infrastructure Pilot Program – Technical Guidance, Version 1*, are as follows:

¹ More information at: <http://www.faa.gov/airports/environmental/vale/>

² More information at: http://www.faa.gov/airports/environmental/zero_emissions_vehicles/



1. Ninety percent of the funded refueling or recharging station capacity is dedicated for on-airport vehicle use. Therefore, only 10 percent of the funded refueling or recharging station capacity can be available for public use.
2. The sponsor must guarantee security and public safety.
3. The sponsor must charge a reasonable fee for the use of the facility. Fees are considered airport revenue.
4. Sponsor vehicles must have priority use of the facility, especially in the event of fuel shortages or emergencies.
5. The sponsor must clearly document the number of project ZEVs and public ZEVs that will access the facility.
6. Sponsors must provide letters of commitment to FAA from non-airport ZEV owners at the time of grant application to support their proposed facility use plans. The sponsor must not unreasonably deny access or unjustly discriminate against users requesting access to these federally funded airport facilities.

- **Program to Increase Energy Efficiency of Airport Power Sources**

Section 512 of the *FAA Modernization and Reform Act of 2012* made projects that increase the energy efficiency of airport power sources eligible for AIP funding. Projects that would be eligible under this program include airport energy efficiency assessments, sustainability master plans, energy efficiency projects (specific guidance for what projects would be eligible is currently under development by the FAA). Until this guidance is published, FAA's Airport District Offices (ADOs) must receive approval from the FAA's Airport Planning and Programming (APP) division prior to programming a grant under this program.

- **Energy Efficiency (Green/Sustainable) Improvement Costs**

Funding through the AIP program is available for projects to improve the energy efficiency of a building. The criteria for energy efficiency improvement costs, as detailed in Table 3-44 of the FAA AIP Handbook, are as follows:

- a. The cost must be incurred on a measure to improve the efficiency of an airport building (such as a measure designed to meet one or more of the criteria for being considered a high-performance green building) as set forth under Section 401-13 of the *Energy Independence and Security Act of 2007*.
- b. Any increases in initial project costs must be offset by expected savings over the life cycle of the project. The sponsor must follow the published FAA guidance for calculating the life cycle cost.
- c. For building projects, the cost must be incurred on an otherwise eligible and justified airport building project (improving energy efficiency cannot be the justification). A project to improve a building's energy efficiency is not eligible as a stand-alone project.
- d. The cost must only include costs which are necessary for the project, such as those for design, construction, testing, and inspection (not for obtaining LEED or similar certification or credits – which is not a necessary cost of the project).



- e. For a building which contains eligible and ineligible areas, all costs associated with the measure (such as design, construction, testing, and inspection) must be prorated accordingly.
- f. The sponsor must submit the initial project costs, the expected savings over the life of the project, the life cycle cost calculations, and the proration calculations (for buildings that contain eligible and ineligible areas) to the ADO.

NON-AIP FUNDING SOURCES

The FAA's Airport Cooperative Research Program (ACRP) Synthesis 24, *Strategies and Financing Opportunities for Airport Environmental Programs*, provides a comprehensive summary of funding sources for not only environmental studies and mitigation projects but also for sustainable practices. This report identified several New Mexico state programs that provide funding for environmental or sustainability projects. These programs included the following:

- Energy, Minerals and Natural Resources Department (EMNR) Energy Efficiency and Conservation Block Grant Program – Provides grants with a zero percent local match for projects to reduce energy use and fossil fuel emissions.
- Renewable Energy Transmission Authority (RETA) Revenue Bond Financing – Provides loans for projects to expand use of New Mexico renewable energy resources.
- Environment Department safe water infrastructure programs.
- Environment Department Section 913(h) grant program – Provides grants for projects to reduce nonpoint source pollution.
- Historic Preservation Division (HPD) Certified Local Governments (CLG) Program and Preservation Loan Fund – Provides grants and loans for the preservation of historic and cultural resources.

Local funding sources should also be explored for sustainable projects. According to ACRP Synthesis 24, regional utility companies often offer a variety of financial assistance and incentive programs to encourage the reduction of fossil fuel-based energy consumption. Local and regional planning agencies may also be a source of funding. The Sunport's electric provider, Public Service Company of New Mexico (PNM), offers several rebate programs for business customers, including:

- Retrofit rebates – covers energy-saving upgrades to existing buildings, including prescriptive (lighting, HVAC, refrigeration, and motors) and custom improvements with verifiable electric savings. Custom projects pay \$0.06 per kWh for first-year savings.
- New construction program – covers projects that are more energy-efficient than the New Mexico building code requirement. Incentive payments are \$0.08 per estimated first-year kWh saved for projects at least 10 percent more efficient than code and \$0.10 for projects at least 20 percent more efficient than the code.



- Quick Saver program – provides free energy assessments and rebates (50 percent or more of the cost) for the installation of efficient lighting and refrigeration equipment to qualified customers with monthly peak demands of 100 kW or less.
- Building Tune-Up program – offers incentives for retro-commissioning assessments and measures. Support for training that helps building operators identify energy-efficient opportunities is also available.
- Peak Saver program – open to large customers on qualifying rates, provides quarterly financial incentives to participants in return for voluntarily reducing the amount of energy they use during peak demand days, typically the hottest days of the year. The size of the incentive paid depends on the amount of electricity managed by the program.

Third-Party Financing

Third-party financing is another option for sustainability projects in which agreements are reached between the airport and a private business, which then is allowed to construct on-airport facilities. The ACRP Synthesis 24 gives two examples of this agreement. In one example, a private business invests in the construction of an on-airport CNG refueling station (at no cost to the airport), because of the potential profits from CNG fuel sales. This is a guaranteed energy savings contract (GESC) model based on the concept that third-party providers can earn a profit by selling and installing efficient and renewable energy devices while being reimbursed from the reduction in electric utility costs. In another example, a private business offers to perform solid waste reduction, reuse, and recycling services for airports at no charge, based on the potential revenue stream generated by the sale of recyclable materials. Depending on the type and volume of materials, airports may even generate net revenue from these types of arrangements.

The following is a detailed description of a typical GESC process as provided in ACRP Synthesis 24:

1. The energy services company (ESCO) conducts a comprehensive energy analysis or audit of the facilities and develops recommendations to improve energy efficiency or otherwise reduce energy consumption.
2. The ESCO develops a GESC offer in which it (1) estimates the energy cost savings that will be achieved if the recommendations are followed, (2) guarantees that the savings will be obtained if the ESCO is retained to implement the recommendations, and (3) agrees to be compensated for its work in implementing the recommendations through the energy savings achieved by the facility owner.
3. The ESCO and facility owner execute the GESC.

Other options for third-party financing of sustainability projects, such as solar energy generation projects, include power purchase agreements (PPAs) and solar leases. Under a PPA, the ESCO builds the solar energy system on the airport at no cost to the airport sponsor. The solar energy system offsets the



airport's electric utility bill and the ESCO sells the power generated to the airport at a fixed rate, which is oftentimes lower than standard. At the end of the contract term, PPAs can be extended or the sponsor can buy the solar energy system. A lease model is no different than lease agreements for automobiles. A contract is established between the airport sponsor and the ESCO to pay for a solar energy system over a number of years, with the option to purchase the system before the end of the lease term. These third-party funding options can be considered for on-site renewable energy generation projects as they alleviate the Aviation Department from investing large up-front capital costs.

SUSTAINABILITY PLAN SUMMARY

The sustainability plan includes a baseline evaluation of current sustainability performance at the Sunport. The Sunport has already begun to incorporate many sustainable programs and facilities, including on-site electricity generation and low-emission fleet vehicles, among many others. These programs and projects have contributed toward the overall sustainability of the airport and the entire community. Goals and objectives have been established, along with performance targets, to guide the Aviation Department into the future of its sustainability program. The overall sustainability plan has been established with input from Aviation Department staff, the master plan advisory committee, and interested members of the public. The result is a sustainability plan that allows the Aviation Department to continually progress towards its sustainability goals.

This sustainability plan is not intended to be a static document but should be routinely reviewed and updated to consider new opportunities and issues as they arise. While some of the sustainability objectives are one-off capital projects, others are programs that will operate continuously once implemented. To ensure the continued success of these programs, it will take buy-in from Aviation Department staff and, in some cases, tenants of the Sunport. Close coordination with all potential stakeholders is a key to the success of the program.

Ultimately, it is the responsibility of the entire Aviation Department to ensure sustainability is incorporated into everyday operations and decision-making processes. Processes, procedures, and responsibilities for sustainability implementation have already been put in place by the Sunport's *Sustainability Management System* (SMS). Coupled with the SMS, this sustainability master plan should support the Aviation Department in achieving its overall goal of operating one of the greenest airport systems in the country.