



# AIRPORT MASTER PLAN EXECUTIVE SUMMARY

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MARANA REGIONAL AIRPORT

MARANA, ARIZONA | 2018

# MARANA REGIONAL AIRPORT

## IN WITH THE NEW

The 2010 Town of Marana General Plan includes a strategic vision for the community – **New Focus, New Thinking, New Direction**. This fresh perspective and vision was also used in preparation of the 2015 Airport Master Plan for the Marana Regional Airport. This perspective, along with sound planning techniques, has ensured future airport development is designed to improve air and ground operations and enhance safety and airport services for the Town, as well as the public users of the airport.

## PLANNING FOR THE FUTURE

The primary objectives of an airport master plan are to produce an attainable phased development plan that will satisfy the airport needs in a safe, efficient, economical, and environmentally sound manner. The plan also serves as a guide to decision makers, airport users, and the general public for implementing airport development actions while considering Town goals and objectives. This Airport Master Plan updates and replaces the September 2007 Airport Master Plan.

Airport master plans are prepared by the operators of individual airports and are usually completed with the assistance of consultants. The Town of Marana completed this Airport Master Plan with the assistance of Armstrong Consultants, Inc. The airport master plan process involves collecting readily available data, forecasting future aviation demand, determining facility requirements, studying various alternatives, and developing plans and schedules.

## SET FOR SUCCESS

As a part of the master plan process, two advisory committees were established to assist with the overall future development plan for Marana Regional Airport. The Planning Advisory Committee (PAC) provided high-level guidance and advice on development plans for the future of the airport. The Technical Advisory Committee (TAC) consisted of members representing various interests in and around the airport who were very familiar with the airfield and who were able to provide technical guidance and suggestions in more detail. Both committees' involvement throughout the Airport Master Plan process helped to keep interested parties informed and fostered consensus for future development actions.

## THE AIRPORT AT A GLANCE

Marana Regional Airport (the Airport) was built during World War II by the U.S. Army as part of a system of auxiliary airfields to Pinal Airpark (originally Marana Airbase). The Airport was formerly known as Avra Valley Airport and also Marana Auxiliary No.2. A businessman from Tucson leased the Airport in 1968 from the Bureau of Land Management (BLM) and reactivated it for personal and public use. In 1982, Pima County acquired fee simple interest in the Airport. In 1999, the Airport was purchased by the Town of Marana and renamed the Marana Regional Airport. The Town of Marana currently owns and maintains the Airport.

**Classification:** General Aviation (reliever airport for Tucson International Airport)

**Location:** Approximately 15 nautical miles northwest of Tucson and five miles west of Interstate 10 on Avra Valley Road

**Based Aircraft (2017):** 260

**Annual Operations (2017):** 90,000 takeoffs/landings

**Primary Runway (12-30):** 6,901 feet in length

**Crosswind Runway (3-21):** 3,892 feet in length

**Services / Features:** Fixed-base operator (FBO), flight school, specialty maintenance, aviation fuel, restaurant, aircraft tie-down space, hangar rental

**Operations:** Personal and business/corporate transportation, flight instruction and training, air ambulance, law enforcement, skydiving, and special events including fly-ins and air shows



## FORECASTS OF AVIATION ACTIVITY

The forecasts of aviation activity for the previous 2007 airport master plan were developed using data prior to the economic downturn of the U.S. economy, including the aviation industry, in 2008. As a result, the forecasts and corresponding proposed development at Marana Regional Airport were grandiose, and perhaps highly optimistic. Today the Airport has a **new focus** – right-size the airport and its facilities to the more conservative growth that is occurring nationally and regionally at general aviation airports, while also considering some of the unique local factors that are having an effect on the steady increase of operations at Marana Regional Airport in the present day. The updated forecasts of aviation activity and demand were vital components of the Airport and Town's new focus for the airport.



## NEW FOCUS

### Future Activity

Forecasts of aviation activity serve as guidelines for the timing required for implementation of airport improvement programs. Activity projections are made based on estimated growth rates, area demographics, industry trends, and other indicators. Forecasts are prepared for the short-term (0-5 years), the medium-term (6-10 years), and the long-term (11-20 years) planning periods. Using forecasts within these time frames allows airport improvements to be timed to meet demand.

Many factors have the potential to influence aviation activity at general aviation airports such as Marana Regional Airport. Based on projected national and state trends in the general aviation industry, and from discussions with Town of Marana and airport personnel, several factors have been identified which may potentially affect future aviation activity at the Airport.

**1. Aviation Industry Growth** – According to assumptions within the Federal Aviation Administration's (FAA) Aerospace Forecast Fiscal Years 2015-2035, jet aircraft are anticipated to account for most of the growth in the general aviation industry sector, with hours flown increasing at an average annual rate of 3.6 percent over the forecast period. This growth has already been seen at Marana Regional Airport, where over the past several years airport management has noted an increase in its corporate jet traffic, including a rise in the larger and heavier corporate jets such as the Gulfstream 550/650.

### Summary of Preferred Forecasts – Marana Regional Airport (2015-2035)

| Year                                      | 2015   | 2020   | 2025    | 2030    | 2035    |
|---|--------|--------|---------|---------|---------|
| <b>Itinerant Operations</b>               | 28,000 | 36,604 | 39,514  | 42,270  | 45,023  |
| <b>Local Operations</b>                   | 32,000 | 42,968 | 46,385  | 49,623  | 52,854  |
| <b>Military and Commercial Operations</b> | 20,000 | 15,000 | 15,000  | 15,000  | 15,000  |
| <b>Total Annual Operations</b>            | 80,000 | 94,572 | 100,899 | 106,893 | 112,877 |
| <b>Total Based Aircraft</b>               | 260    | 284    | 303     | 321     | 339     |

Source: Armstrong Consultants, Inc., 2015

**2. Town Boom** – The second factor is the strong historical growth occurring in the area. Marana was the fourth fastest-growing city among all cities and towns in Arizona of any size from 1990 to 2000. The continued increases in population for the Town of Marana has the potential to include a portion of its population that uses general aviation aircraft for recreational or business purposes, and who may be inclined to either base an aircraft or fly to or from the Airport on a regular basis, thus increasing the Airport's aviation activity.

**3. Airport Business Plan** – Lastly, a third factor which may influence aviation activity at the Airport is the implementation of the findings of the Airport Business Plan; the Strategic Airport Business Plan was conducted simultaneously alongside this master plan. The Business Plan has analyzed the assets and resources of the Marana Regional Airport, along with outside factors and opportunities that may be

leveraged to increase the effectiveness of the airport as an economic engine and catalyst for future growth. If properly orchestrated, this plan will provide a framework for attracting new businesses and services to the airport, and increase levels of aeronautical activity. The net result will be an improved revenue stream for the Airport, and new aeronautical access and services in support of future economic development opportunities in Marana.

The outcome of the aviation activity and demand forecasts for Marana Regional Airport over the 20-year planning period show conservative growth in both annual operations and based aircraft. With the new focus centered on conservative growth, the estimated forecasts are considered reasonable. The forecasts take into consideration the potential economic growth in the region and also the specific factors unique to the Airport.

# RECOMMENDED DEVELOPMENT PLAN

## NEW THINKING

As a result of newly focused forecasts, **new thinking** about the future development at the Marana Regional Airport emerged. This new thinking included the concept that a good plan is one that is based on actual demand at an airport rather than time-based predictions. It is a fact that actual activity at the Airport will vary over time, and it may be higher or lower than what the demand forecasts predict. Using the three planning milestones (short-term, medium-term, and long-term) the airport sponsor can make an informed decision regarding the timing of development based on the actual demand. This approach will result in financially responsible and demand-based development at the Airport.

Future airport development covers a 20-year planning period. Development items are categorized as either airside or landside, and are grouped into three phases:

- Phase I, Short-term (1-5 years)
- Phase II, Medium-term (6-10 years)
- Phase III, Long-term (11-20 years)

A combination of effective airside and landside planning is essential to the successful development of an airport. Airside components for the most part include areas of the airfield where aircraft takeoff or land, taxi, and park. Landside components generally consist of a system of buildings, fueling facilities, roadways, and vehicle parking areas.

Besides traditional airside and landside development, a unique development strategy also materialized for the Airport. It focuses on grouping similar operations, businesses, and functions together to improve aircraft movements and parking, thereby enhancing the overall safety and efficiency of the airfield. Once the strategy is fully implemented, the level of customer service should also improve, primarily to the corporate aircraft using the Airport. The three sectors created include the: Corporate Development Complex, General Aviation Complex, and Specialty Aviation Complex.

Having carefully assessed the existing airport facilities and their abilities to meet current and future demand, development concepts and projects were created, or "right-sized," for Marana Regional Airport that are realistic and feasible, and that meet the planning needs of the Town of Marana over the course of the planning horizon.

### PHASE I, SHORT-TERM DEVELOPMENT ITEMS

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|--|--|--|
| <b>A1</b> Demolition of itinerant aircraft parking apron (RVZ portion) | <b>A6</b> Taxiway lighting upgrade – Phase I (Taxiway A and connectors)  | <b>A12</b> Runway 3 displacement; install REILs                        |
| <b>A2</b> Construct aircraft parking apron – Phase I (RVZ replacement) | <b>A7</b> Taxiway lighting upgrade – Phase II (Taxiway B and connectors) | <b>A13</b> Land acquisition – Phase I (approx. 125 acres)              |
| <b>A3</b> Replace rotating beacon and tower                            | <b>A8</b> Demolition / removal of Hangar #6                              | <b>A14</b> Airport drainage study (not shown on exhibit)               |
| <b>A4</b> Runway 12-30 MIRL upgrade – LED fixtures                     | <b>A9</b> Demolition / removal of Hangar #20                             | <b>A15</b> Install perimeter fencing – Phase I                         |
| <b>A5</b> Runway 3-21 MIRL upgrade – LED fixtures                      | <b>A10</b> Construct additional vehicle parking lot – Phase I            | <b>A16</b> Replace Runway 12-30 PAPIs/REILs; replace Runway 3-21 PAPIs |
|  | <b>A11</b> Construct aircraft shade structure                            |  |

### PHASE II, MEDIUM-TERM ITEMS

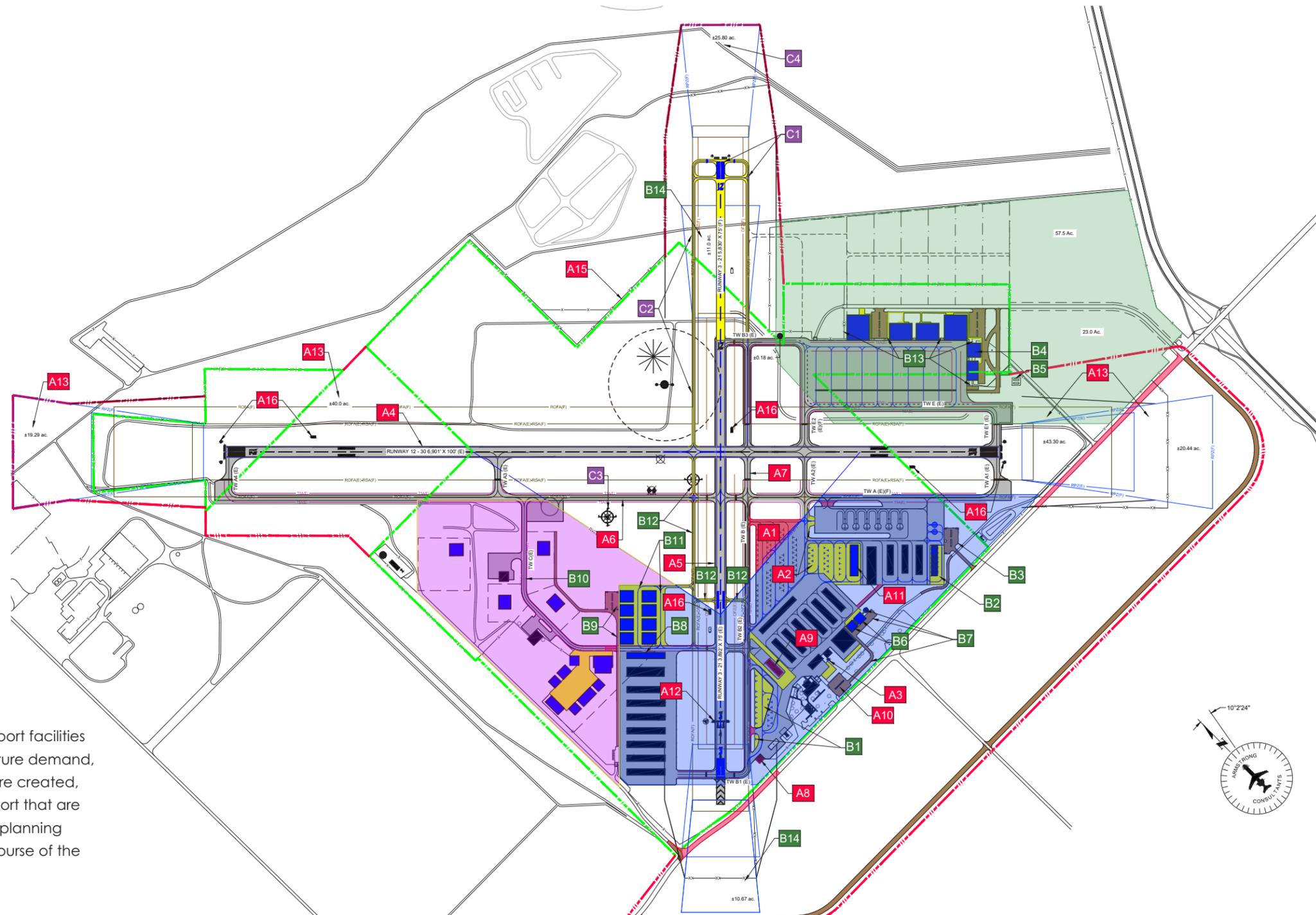
- B1** Construct aircraft parking apron – Phase II
- B2** Construct additional T-hangars and apron (east hangar apron)
- B3** Construct additional vehicle parking lot (east hangar apron)
- B4** Construct corporate terminal building (east apron)
- B5** Install aircraft fuel facility (east apron)
- B6** Construct airport maintenance / ARFF facility
- B7** Construct air traffic control tower and parking lot/access road
- B8** Construct additional T-hangars (west hangar apron)
- B9** Construct on-airport access road/parking lot to specialty aviation services complex
- B10** Reconstruct Taxiway C to 25 feet wide; install MITL and signage
- B11** Construct taxilanes for additional box hangars (adjacent to west hangar apron)
- B12** Construct Runway 3-21 partial-parallel taxiway – Phase I
- B13** Install perimeter fencing – Phase II
- B14** Land Acquisition – Phase II

### PHASE III, LONG-TERM ITEMS

- C1** Runway 21 extension (1,608 feet); install lighting and signage; relocate PAPIs/REILs; Construct Runway 3-21 partial-parallel taxiway – Phase II
- C2** Construct Runway 3-21 partial-parallel taxiway – Phase III
- C3** Relocate/install new wind cone and segmented circle
- C4** Land acquisition – Phase III (approx. 26 acres)

### DEVELOPMENT COMPLEXES

- Corporate Development Complex
- General Aviation Complex
- Specialty Aviation Services Complex



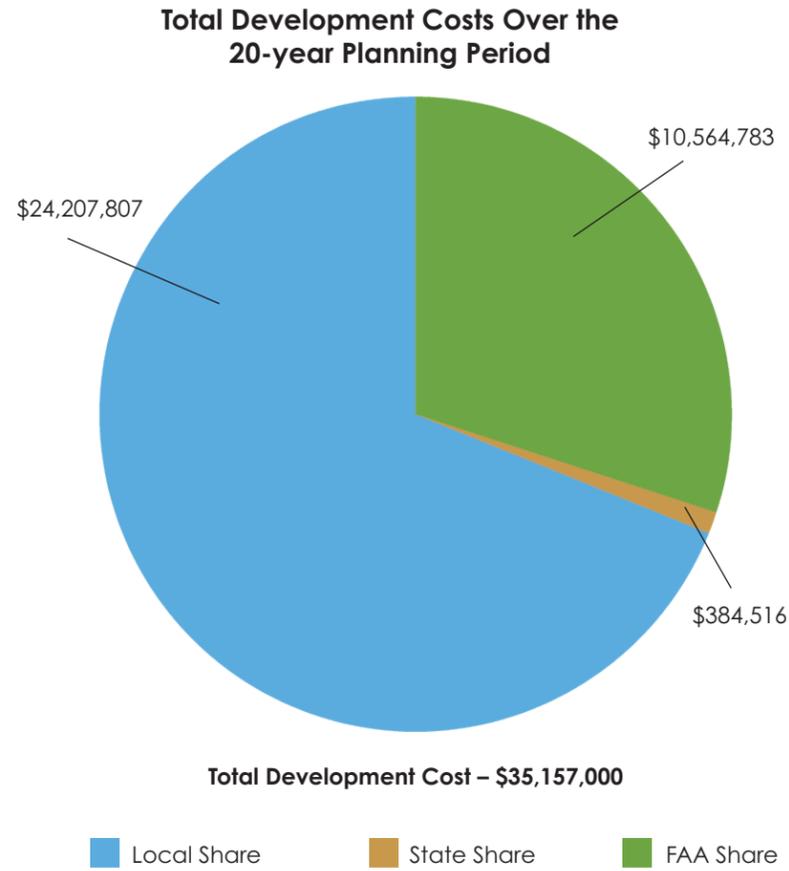
### DEVELOPMENT FUNDING

A proposed funding plan accompanies the development plan; the Town's ability to fund the recommended projects plays a major role in determining the inclusion and priority of projects on the Airport's Annual Capital Improvement Plan (ACIP).

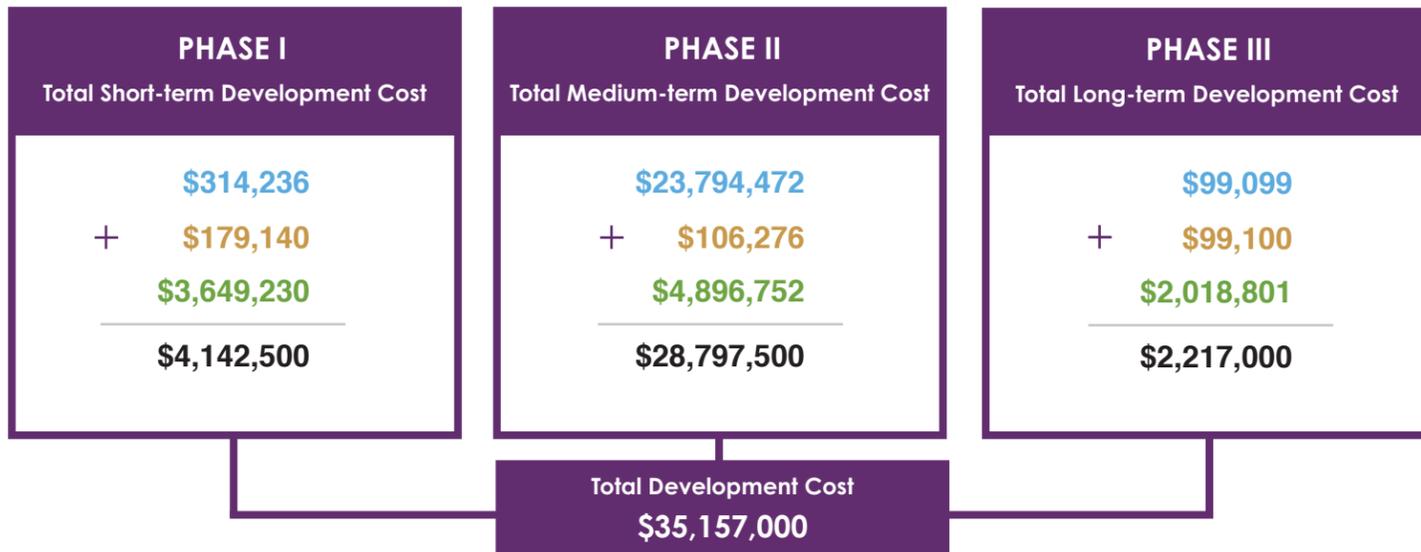
Approximately **35 airport development projects** and **\$35.2 million** (2016 dollars) in capital needs over the 20-year planning period has been identified as an outcome of the facility requirements and development alternatives portions of the Master Plan.

More than **\$10.5 million** of the total is eligible for grant funding from the Federal Aviation Administration (FAA), as well as nearly **\$400,000** from the Arizona Department of Transportation's (ADOT) - Multimodal Planning Aeronautics Group.

An estimate of approximately **\$24.2 million** of the total cost would be the responsibility of the Town of Marana.



### Estimated Development Costs Over the 20-year Planning Period



It should be noted that some of the Town's total cost is for the construction of hangars and for infrastructure improvements that are not grant eligible, such as the proposed corporate terminal building. These costs can be recovered over time through lease revenue, or shared with private investments.



**A new focus and new thinking produced an airport master plan for the Marana Regional Airport with realistic and progressive development plans. As a result, the Airport is headed in a new direction.**

Airport planning is a continuous process that does not end with the completion of a major capital project. This process necessitates that the Town of Marana consistently monitor the progress of the Airport in terms of growth in based aircraft and annual operations, as this growth is critical to the exact timing and need for new airport facilities as recommended within the airport master plan. The information obtained from this monitoring process will provide the data necessary to determine if the development schedule should be accelerated, decelerated, or maintained as scheduled.

Periodic updates of the Airport Layout Plan (ALP), Capital Improvement Plan, and Airport Master Plan are recommended to document physical changes to the Airport, review changes in aviation activity, and to update improvement plans for the Airport. The continuous airport planning process is a valuable tool in achieving the strategic plans and goals for the Airport.

The Marana Regional Airport Master Plan has documented the existing and anticipated aviation demand based on existing conditions, as well as provided a practical and implementable development plan based on input and guidance from the Town of Marana, Planning Advisory Committee (PAC), Technical Advisory Committee (TAC), FAA, and ADOT. Based on the assumptions and the financial analysis put forth, the development plan illustrated on the ALP, along with its estimated associated costs, are considered feasible. Therefore, the Town should be able to develop a safe and efficient airport that will meet the demands of its aviation users and stimulate economic development for the airfield and surrounding areas.

Based on the findings of the planning process, the following recommendations are provided for the Town of Marana to consider for development of the Airport to meet the needs of the community:



Improve airfield pavements, lighting, signage, and navigational aids, and correct non-standard design conditions to enhance airfield safety and efficiency.



Consolidate airport operations in to three distinct development areas – corporate development complex, general aviation complex, and specialty aviation services complex – to improve the overall operational airfield movements and enhance customer service.



Consider additional aviation and non-aviation related development northeast of the proposed corporate development complex.



Construct the necessary infrastructure, such as a corporate terminal building adjacent to the east apron, to position the Airport for additional corporate clientele.



Continue to monitor the Airport's financial status and search out non-traditional funding opportunities in order to adapt and adjust to changing conditions.