



INTRODUCTION AND SUMMARY

WHAT IS A MASTER PLAN?

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years, or as necessary to address local changes at the airport. The last master plan update for Chandler Municipal Airport (CHD) was completed in 2007. The City of Chandler (City), the sponsor of the airport, received a grant from the FAA to update the Airport Master Plan.

The City is responsible for funding capital improvements at the airport, as well as obtaining FAA and Arizona Department of Transportation (ADOT) – Aeronautics Group development grants. In addition, the City oversees facility enhancements and infrastructure development conducted by private entities at the airport. The Master Plan provides guidance for future development and justification for projects for which the airport may receive funding through an updated capital improvement program (CIP) to demonstrate the future investment required by the City, as well as the FAA and ADOT – Aeronautics Group.

The Airport Master Plan follows a systematic approach outlined by the FAA to identify airport needs in advance of the actual need for improvements. This is done to ensure that the City can coordinate environmental reviews, project approvals, design, financing, and construction to minimize the negative effects of maintaining and operating inadequate or insufficient facilities. An important outcome of the Master Plan process is a recommended development plan, which reserves sufficient areas for future facility needs. Such planning will protect development areas and ensure they will be readily available when



required to meet future needs. The intended outcome of this study is a detailed on-airport land use concept which outlines specific uses for all areas of airport property, including strategies for revenue enhancement.

The preparation of this Master Plan is evidence that the City recognizes the importance of the airport to the surrounding region and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment which yields impressive benefits to the local community. With a sound and realistic Master Plan, the airport can maintain its role as an important link to the regional, state, and national air transportation systems. Moreover, the plan will aid in supporting decisions for directing limited and valuable City resources for future airport development. Ultimately, the continued investments in the airport will allow the City to reap the economic benefits generated by historical investments.

Some common questions regarding what a master plan is / is not are answered in the graphic below.

<div style="border: 1px solid gray; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;"> <div style="text-align: center; font-size: 10px; color: white; background-color: #333; border-radius: 50%; padding: 2px 5px;"> What an Airport Master Plan is: </div> </div> <p>→ A comprehensive, long-range study of the airport and all air and landside components that describes plans to meet FAA safety standards and future aviation demand.</p> <ul style="list-style-type: none"> → Required by the FAA to be conducted every 7-10 years to ensure plans are up-to-date and reflect current conditions and FAA regulations. The last Master Plan was completed in 2007. → Funded by the FAA through the Airport Improvement Program (AIP), which provides 91.06% of the total project costs. The remaining 8.94% is funded by ADOT – Aeronautics Group and the City of Chandler. → A local document that will ultimately be presented for approval from the City of Chandler. The FAA approves only two elements of the Master Plan, the Aviation Demand Forecasts and the Airport Layout Plan (ALP) drawing set. → An opportunity for airport stakeholders and the general public to engage with airport staff on issues related to the airport and its current and future operations, and environmental and socioeconomic impacts. Three (3) public information workshops will be conducted throughout the Master Plan process to facilitate this public outreach effort. 	<div style="border: 1px solid gray; border-radius: 50%; width: 60px; height: 60px; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;"> <div style="text-align: center; font-size: 10px; color: white; background-color: #333; border-radius: 50%; padding: 2px 5px;"> What an Airport Master Plan is not: </div> </div> <p>→ A guarantee that the airport will proceed with any planned projects. Master Plans are guides that help airport staff plan for future airport development; however, the need/demand for certain projects may not ever materialize.</p> <ul style="list-style-type: none"> → A guarantee that the City of Chandler, ADOT, or the FAA will fund any planned projects. Project funding is considered on a project-by-project basis requiring appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis. → Environmental clearance for any planned projects. The Master Plan includes an environmental overview that identifies potential environmental sensitivities per the National Environmental Policy Act of 1969 (NEPA); however, most planned projects will require a separate NEPA study (Environmental Impact Statement/ Environmental Assessment/Categorical Exclusion) prior to construction.
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WHO IS PREPARING THE MASTER PLAN?

The City has contracted with the airport planning firm Coffman Associates, Inc. to undertake the Airport Master Plan. Coffman Associates is an airport consulting firm that specializes in master planning and environmental studies. Coffman Associates will lead the planning team, with support from the following firms:

- Dibble Engineering | Engineering support primarily to offer insights into development alternatives and estimates of probable costs;
- MakPro Services | Community outreach and involvement support;

- Quest Energy | Evaluating the airport in terms of its energy use and efficiency;
- SWCA | Conducting field surveys in support of the environmental elements of the plan; and,
- Woolpert | Aerial photography, ground survey, and Geographic Information System (GIS) products to meet FAA 5300-18B requirements for Airports GIS data submittal.

The Airport Master Plan Update has been prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13A, *Airport Design* (as amended), and AC 150/5070-6C, *Airport Master Plans* (as amended). The plan will be closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and ADOT – Aeronautics Group. The plan will also be coordinated with the City of Chandler, as well as other local and regional agencies as appropriate.

GOALS AND OBJECTIVES

The primary goal of this Master Plan is to develop and maintain a financially feasible, long-term development program, which will satisfy aviation demand of the region; be compatible with community development, other transportation modes, and the environment; and enhance employment and revenue for the local area. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility.

Specific objectives of the study include the following:

- Document the issues that proposed development will address.
- Justify the proposed development through the technical, economic, and environmental investigation of concepts and alternatives.
- Provide an effective graphic presentation of the development of the airport and anticipated land uses in the vicinity of the airport.
- Establish a realistic schedule for the implementation of the development proposed in the plan, particularly the short-term capital improvement program.
- Propose an achievable financial plan to support the implementation schedule.
- Provide sufficient project definition and detail for subsequent environmental evaluations that may be required before the project is approved.
- Present a plan that adequately addresses the issues and satisfies local, state, and federal regulations.
- Document policies and future aeronautical demand to support municipal or local deliberations on spending, debt, land use controls, and other policies necessary to preserve the integrity of the airport and its surroundings.

- Set the stage and establish the framework for a continuing planning process. Such a process should monitor key conditions and permit changes in plan recommendations as required.
- To enhance/expand general aviation services to accommodate tenants/users, thus increasing the socioeconomic benefits to the community.

BASELINE ASSUMPTIONS

A long-range planning study requires several baseline assumptions that will be used throughout this analysis. The baseline assumptions for this study are as follows:

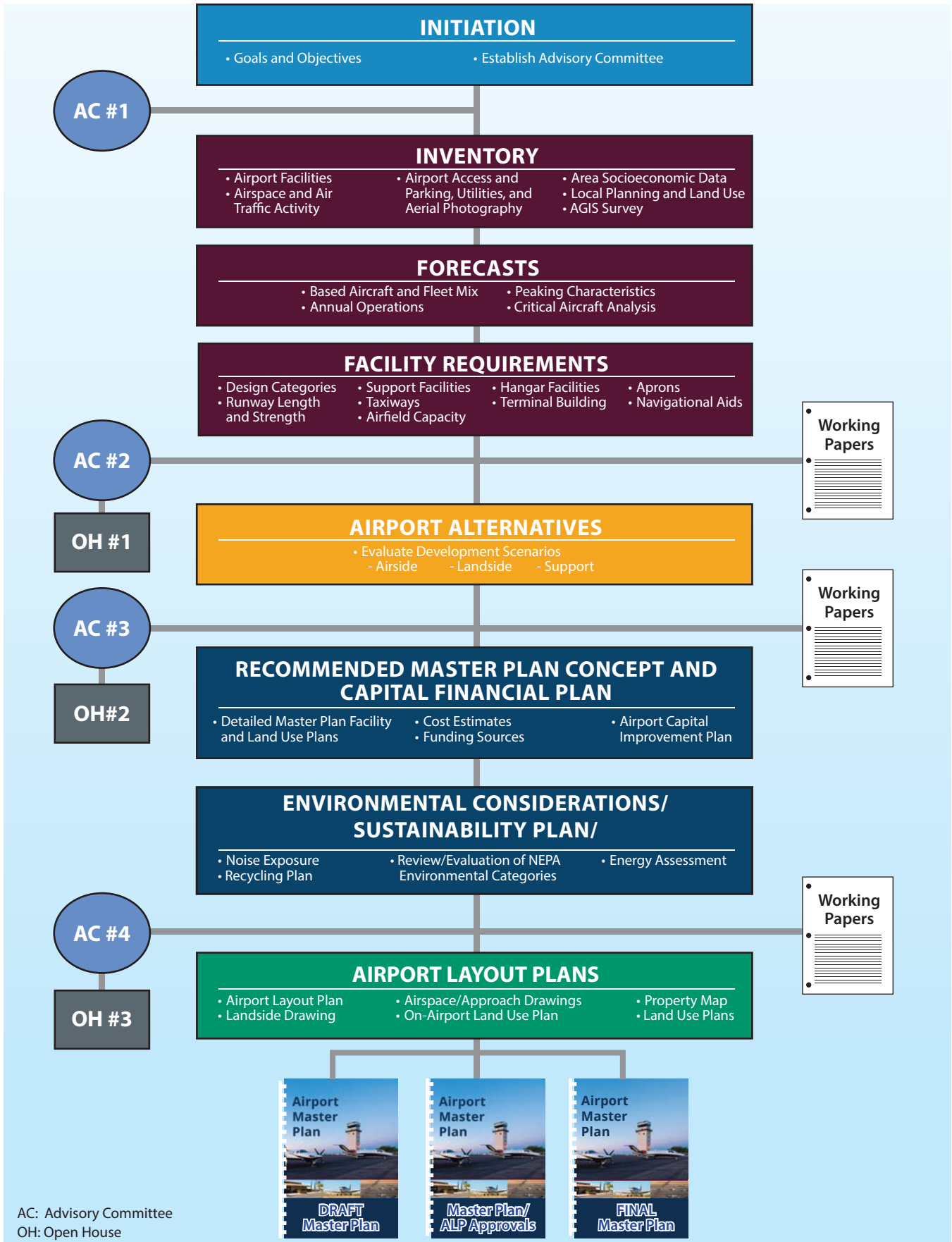
- CHD will continue to operate as a regional general aviation reliever airport through the 20-year planning period;
- CHD will continue to accommodate general aviation tenants, as well as itinerant and/or local aircraft operations by air taxi, general aviation, and military operators;
- The aviation industry will develop through the planning period as projected by the FAA. Specifics of projected changes in national aviation industries are described in Chapter Two – Forecasts;
- The socioeconomic characteristics of the region will generally change as forecast (see Chapter Two); and,
- A federal and state airport improvement program will be in place through the planning period to assist in funding future capital development needs.

MASTER PLAN ELEMENTS AND PROCESS

The Master Plan has 11 elements that are intended to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit IA** provides a graphical depiction of the process involved with the study.

Element 1 – Initiation includes the development of the scope of services, schedule, and study website. Study material will be assembled in a workbook format. General background information will be established that includes outlining the goals and objectives to be accomplished during the Master Plan.

Element 2 – Inventory is focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information is collected on existing facilities and operations. Local economic and demographic data is collected to define the local growth trends, and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies which may have relevance to the Master Plan are also collected.



AC: Advisory Committee
OH: Open House

Element 3 – Forecasts examines the potential aviation demand at the airport. The analysis utilizes local socioeconomic information, as well as national air transportation trends to quantify the levels of aviation activity which can reasonably be expected to occur at CHD over a 20-year period. An existing and ultimate critical design aircraft, based upon AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, is also established to determine future planning design standards. The results of this effort are used to determine the types and sizes of facilities which will be required to meet the projected aviation demand at the airport through the planning period. This element is one of two elements that are submitted to the FAA for approval.

Element 4 – Facility Requirements determines the available capacities of various facilities at the airport, whether they conform with FAA standards, and what facility updates or new facilities will be needed to comply with FAA requirements and/or projected 20-year demand.

Element 5 – Airport Alternatives considers a variety of solutions to accommodate projected airside and landside facility needs through the long-term planning period. An analysis is completed to identify the strengths and weaknesses of each proposed development alternative, with the intention of determining a single direction for development.

Element 6 – Recommended Master Plan Concept and Capital Financial Plan provides both a graphic and narrative description of the recommended plan for the use, development, and operation of the airport. A capital improvement program (CIP) is established to define the schedules, costs, and funding sources for the recommended development projects.

Element 7 – Airport Layout Plans is the preparation of the official Airport Layout Plan (ALP) drawings based on the recommended development concept. The ALP set is used by the FAA and ADOT – Aeronautics Group in determining grant eligibility. This element is the second element of the study that is submitted to the FAA for approval.

Element 8 – Environmental Considerations involves providing environmental information to assist in the evaluation of airport development alternatives and to provide information that will help expedite subsequent environmental review under NEPA.

Element 9 – Sustainability Plan consists of two tasks, a recycling plan and an energy assessment. These tasks are intended to help the airport reduce its operating costs and its environmental impacts.

Element 10 – Public Coordination and Communication includes tasks related to the establishment of a Planning Advisory Committee (Committee) for the Master Plan, as well as conducting periodic public information workshops with the aim of engaging the community in the study process. A study website is also developed for the purpose of distributing study materials and notices of public meetings.

Element 11 – Final Reports and Approvals provide documents which depict the findings of the study effort and present the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers prepared under earlier elements into a usable Master Plan document.

COORDINATION AND OUTREACH

The CHD Master Plan is of interest to many within the local community and region. This includes local citizens, local businesses, community organizations, City officials, airport users/tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, CHD is of importance to both state and federal agencies responsible for overseeing the air transportation system.

To assist in the development of the Master Plan, a Master Plan Committee was established to act in an advisory role in the development of the Master Plan. Committee members met four times at designated points during the study to review study materials and provide comments to help ensure that a realistic, viable plan was developed.

Draft working paper materials were prepared at various milestones in the planning process. The working paper process allows for timely input and review during each step within the Master Plan to ensure that all issues are fully addressed as the recommended program develops.

A series of three open-house public information workshops were also conducted as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to become informed and provide input concerning the Master Plan process. Notices of meeting times and locations were advertised through local media outlets. All draft reports, meeting notices, and materials were made available to the public on a website: www.chandler.airportstudy.com.

SWOT ANALYSIS

A SWOT analysis is a strategic business planning technique used to identify **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats associated with an action or plan. The SWOT analysis involves identifying an action, objective, or element, and then identifying the internal and external forces that are positively and negatively impacting that action, objective, or element in a given environment. A SWOT analysis will be conducted at the first Advisory Committee meeting.

SWOT DEFINITIONS

This SWOT analysis groups information into two categories:

- **Internal** – attributes of the airport and market area that may be considered strengths or weaknesses to the action, objective, or element.
- **External** – attributes of the aviation industry that may pose as opportunities or threats to the action, objective, or element.

The SWOT further categorizes information into one of the following:

- **Strengths** – internal attributes of the airport that are helpful to achieving the action, objective, or element.
- **Weaknesses** – internal attributes of the airport that are harmful to achieving the action, objective, or element.
- **Opportunities** – external attributes of the industry that are helpful to achieving the action, objective, or element.
- **Threats** – external attributes of the industry that are harmful to achieving the action, objective, or element.

SWOT ANALYSIS EXERCISE

The SWOT analysis for CHD is based upon information gathered, including a kick-off Master Plan Committee meeting that was conducted in October 2019. As previously discussed, the Committee is a diversified group of stakeholders, community leaders, and governmental agencies that represent several interests in the airport. A SWOT analysis was conducted with this group to identify key factors that might be addressed in the Master Plan. A summary of the results from the SWOT analysis exercise is shown in **Table IA**. These results were used to frame the subjective or judgmental processing of the data presented in the Master Plan.

TABLE IA
SWOT Analysis Results
Chandler Municipal Airport

Strengths	
Strong humanitarian segment	Fast growing community drives demand
Various demand segments operating at CHD	Attracts national/global business
Economic impact of airport on local community	Fully developed airfield/lack of delays
Opportunities it provides to economic climate of the community and wider area	FBOs available providing full range of GA services
Good climate (weather)	Infrastructure in place to support future development
Location/accessibility from highway	Flexibility of airspace/cooperation with regional airspace controllers
Interest in local entities in airport activities	Great airport staff
On-site airport traffic control tower	Large engineering schools in area
Available property for development	Runway length; Can be extended, but only so long
Underutilized large helipad	Flight testing areas close
Close to Phoenix but not too close - away from the worst of land and air congestion	Encroachment on the airfield (at this point) has not restricted operations. Current city administration intent on keeping it that way.
Favorable city government	New fueling capability
Population familiar with unmanned motor vehicles - receptive to UAVs	Expansion areas around the airfield for airport related infrastructure. (Especially since Wingspan fell out.)
Strong business development benefits from CHD's role as a GA reliever	Proximity to Tucson in relation to the other airfields in the Valley
Large industrial base in area	Hangar Cafe
City finances solid - can provide grant matches	

TABLE IA (continued)
SWOT Analysis Results
Chandler Municipal Airport

Weaknesses	
Aging infrastructure/pavements	City owned hangars are nearing end of life/poor condition
Climate	Accessibility to south side of airport/deters development
Available runway length/aircraft insurance restrictions	Low airport staffing levels
Difficult political history/lack of political support	Organizational structure of airport within City departments (airport moves from one department to another leads to confusion)
Land lease renewals have not been renewed	Lack adequate dust control for larger military helicopters
Hangar availability	Environmental issues
All existing instrument approaches cross	Runway length; Can be extended, but only so long
Runway length and ordinance	Land locked - limited areas
Opportunities	
Fast growing community drives demand	Potential for revenue generation
City is visioning to support future development of the community	Sustainability component/considerations
Better cooperation with current mayor and city council	Airpark area development/surrounding land use development
Preparing this master plan to educate/engage local elected officials and public	Available amenities near airport to support businesses/industry
Aircraft hangar waiting list/demand for new hangars	Expanded services/hotels/rental cars to support airport growth
Utilizing data gathered in master plan to supplement economic development tools	Capitalizing on city's welcoming of innovation and startups provides opportunity to airport
Local businesses that supply aviation industry	Attract new aircraft maintenance/rehab (upholstery/aircraft painting) service operators
Attracting new business aviation operators	New staff to attract business aviation
Hangar for experimental aircraft final assembly	Develop a consistent marketing strategy for the airport (business/tourism/educational)
City transportation department is updating its master plan and has a dedicated section on airport	Educate youth in community - next generation - integrate local schools
Engaging with youth	Funding availability from FAA/ADOT
Unmanned aerial vehicles (UAVs)	More hangar space - more comfortable for tenants
Lengthened runway increases fuel sales & business travelers	Strategic partnerships with technology companies
ALP shows longer runway	Update Airpark Area Plan
Favorable political climate to consider runway length	Additional revenue generation for airport = more improvements
Pilot training - next generation	Connection to Intel and all the corporate structure that has grown up around it.
Longer runway = more options	As a somewhat underutilized airfield, opportunity to become the one airfield which can service a new player in the Valley (Especially if the runway is extended)
Building more of a community at the airport / sense of legacy and belonging	
Threats	
Encroachment of surrounding development	Multi-family housing development near airport/residential encroachment
Difficult political history	Pilot shortage/aging pilot population
Potential future constraints of regional airspace	Drop in aircraft ownership among pilots/less investing in aircraft
Lack of hotel accommodations in area/losing tax dollars to other communities	Economic downturns/impact of worldwide events

TABLE IA (continued)
SWOT Analysis Results
Chandler Municipal Airport

Very strong/committed local/regional competition for business aviation operators	Funding availability/uncertainty
Voters/lack of knowledge of airport activities	Cyber security/threats
Public perception - history from longtime residents	Climate change - summer temperatures
Strong competition from other airports	Demographic changes - aging GA pilot population
Traditional airport/aviation businesses will change	Pressure on traditional airport revenue streams
Threat of economic downturn	Legislation (fed, state, local)
Election can change climate/support	Future city administration that values the land more than they value the economic impact of the airport
Change in pilots - more drone pilots, more single pilot aircraft	Chandler City is in late stages of buildout - land around the airport will get more and more premium
Change in air traffic - busier with UAVs	Increasing noise aversion as the population fills in

SUMMARY

Planned development at CHD is focused on accommodating projected growth in activity and meeting FAA airfield design standards. The capital improvement program (CIP) that has been developed identifies both airside (runways, taxiways, navigational aids, etc.) and landside (aprons, access roads, vehicle parking, etc.) facility needs.

To properly plan for future demand that may occur, aviation demand forecasts were prepared. Because of the cyclical nature of the economy, it is virtually impossible to predict with certainty year-to-year fluctuations in activity when looking five, ten, and twenty years into the future. Recognizing this reality, the Master Plan is keyed toward potential demand “horizon” levels rather than future dates in time. These “planning horizons” were established as levels of activity that will call for consideration of the implementation of the next step in the Airport Master Plan program. By developing the Airport to meet the aviation demand levels instead of specific points in time, the Airport will serve as a safe and efficient aviation facility which will meet the operational demands of its users while being developed in a cost-efficient manner. This program allows the City of Chandler to change specific development in response to unanticipated needs or demand.

The forecast approach utilized historical and forecasted general aviation and economic trends resulting in modest growth projections for CHD through the planning period of the Master Plan. The forecast planning horizons are summarized in **Table IB**. These forecasts were reviewed and approved by the FAA on May 5, 2020 (see **Appendix C**).

TABLE IB
Aviation Demand Planning Horizons
Chandler Municipal Airport

	Base Year (2019)	Short Term (1-5 Years)	Intermediate Term (6-10 Years)	Long Term (11-20 Years)
BASED AIRCRAFT				
Single Engine	379	424	469	552
Multi-Engine	26	24	20	15
Turboprop	6	7	9	13
Jet	8	10	13	20
Helicopter	22	25	29	40
TOTAL BASED AIRCRAFT	441	490	540	640
ANNUAL OPERATIONS				
Itinerant				
Air Taxi	2,990	3,900	4,400	5,100
General Aviation	67,647	72,500	77,300	87,400
Military	199	213	213	213
Total Itinerant	70,836	76,613	81,913	92,713
Local				
General Aviation	149,754	158,300	165,800	181,900
Military	72	62	62	62
Total Local	149,826	158,362	165,862	181,962
TOTAL OPERATIONS	220,662	234,975	247,775	274,675

Source: Coffman Associates analysis

It should be noted that aviation activity can be affected by numerous outside influences that may occur locally, regionally, or nationally. At the time of this writing in March 2021, the biggest factor currently influencing the aviation industry is the COVID-19 pandemic that has resulted in a significant reduction in air travel. While general aviation and business aviation operations have been returning to pre-COVID levels, there is still much uncertainty as to how this health crisis will affect airports in the coming months, or the lasting impacts it may have on the industry as a whole. With that in mind, it is important to note that aviation demand forecasts should be used for advisory purposes only. It is recommended that planning strategies remain flexible to accommodate unforeseen events, and that airport decision-makers be prepared to adapt plans as necessary.

MASTER PLAN CONCEPT

The Master Plan concept includes improvements to the airfield and landside area to satisfy FAA design and safety standards and to meet current and forecast needs. Runway design standards are based upon the characteristics of each runway’s critical design aircraft, which is the most physically demanding aircraft that uses each runway for at least 500 operations annually.

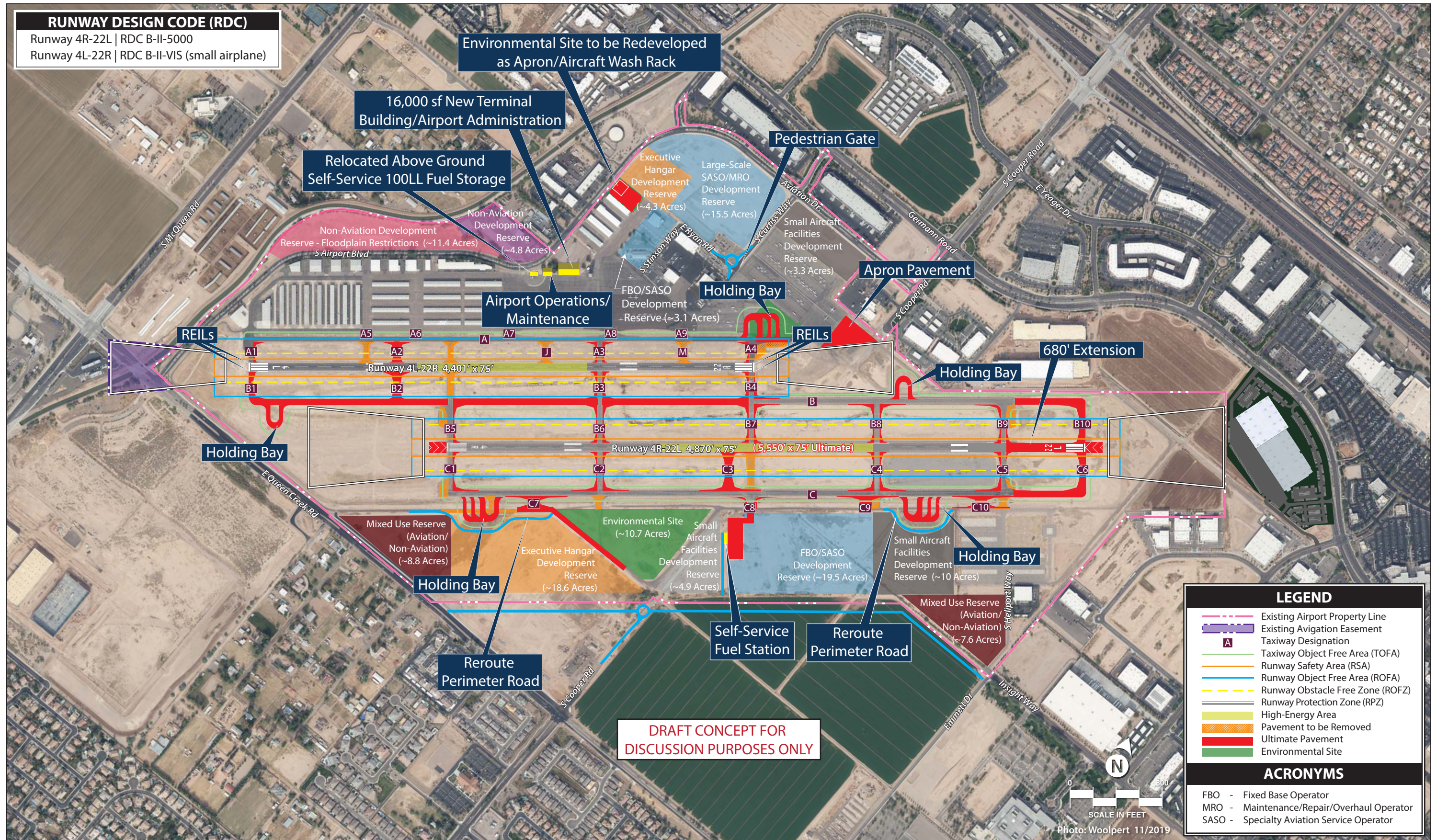
Airside Summary

CHD is classified in the FAA’s National Plan of Integrated Airports System (NPIAS) as a general aviation reliever airport of regional importance. In this role, CHD is meant to relieve the commercial service airports in the Phoenix Metropolitan Area (Phoenix Sky Harbor and Phoenix-Mesa Gateway) of general aviation

traffic including small single-engine aircraft up to mid-sized business jets. The existing airfield, which consists of two runways, is well situated to serve in its role. However, improvements are necessary to meet FAA design standards and the needs of a new generation of aircraft and the businesses that support airport activities. **Table IC** provides a summary of airside improvements, which are depicted on **Exhibit IB**. A more detailed discussion of recommendations can be found in Chapter Five of the Master Plan.

TABLE IC
Airside Summary
Chandler Airport

	EXISTING CONDITION	ULTIMATE CONDITION
RUNWAY 4R-22L (Primary Runway)		
Runway Design Code (RDC)	RDC B-II-5000	RDC B-II-5000
Critical Design Aircraft	Beechcraft King Air 200/300/350	Cessna Citation CRJ4/Citation X
Runway Dimensions (l x w) (in feet)	4,870' x 75'	Extend to 5,550 feet to increase utility for mid-sized business jets
Runway Pavement Strength	30,000 lbs. Single Wheel Loading	Maintain
Safety Areas	Standard RSA, ROFA, and ROFZ	Maintain
Runway Protection Zones (RPZs)	RPZs are contained entirely on airport property	The Runway 22L RPZ will shift with the runway extension but will remain on airport property.
RUNWAY 4L-22R (Parallel Runway)		
Runway Design Code (RDC)	RDC B-II-VIS (small)	RDC B-II-5000 (small)
Critical Design Aircraft	Beechcraft King Air 90	Beechcraft King Air 90
Runway Dimensions (l x w) (in feet)	4,401' x 75'	Maintain
Runway Pavement Strength	30,000 lbs. Single Wheel Loading	Maintain
Safety Areas	Standard RSA, ROFA, and ROFZ	Maintain
Runway Protection Zones (RPZs)	RPZs are contained entirely on airport property or on property controlled by aviation easements	Maintain
TAXIWAYS		
Taxiway Design Group (TDG)	TDG-2	TDG-2
Taxiway Width	All taxiways at least 35' wide	Maintain
Taxiway Geometry Issues	Taxiway fillets throughout airfield do not meet design standards	Modify taxiway fillets to meet design standards
	Direct access points: Taxiways F, M, and Q	Relocate Taxiway F and Q and eliminate a portion of Taxiway M
	High-energy area intersections: Taxiways H and N	Eliminate Taxiway H intersection with Runway 4L-22R and shift a portion of Taxiway N outside the Runway 4R-22L high-energy area
	Holding aprons near the ends of both runways are non-standard design	Replace holding aprons with holding bays that meet new FAA design
NAVIGATIONAL AND APPROACH AIDS		
Instrument Approach Procedures	2 published approach procedures including GPS and VOR to Runway 4R	Establish GPS-based instrument approaches with 1-mile or greater visibility minimums to all runway ends
Weather Reporting Station	Automated Weather Observation System (AWOS)	Maintain
Airport Traffic Control Tower	ATCT on north side of airfield	Maintain
Visual Approach Aids	PAPI-4s – all runways	Maintain
	REILs - Runways 4R, 22L	Install REILs on Runway 4L, 22R
LIGHTING, MARKING, AND SIGNAGE		
Lighting	Rotating Beacon	Maintain
	MIRL – both runways	Consider gradual replacement with LED technology
	MITL – all taxiways	Consider gradual replacement with LED technology
Marking	Non-Precision Markings - Runway 4R-22L	Maintain
	Basic Markings – Runway 4L-22R	Potential upgrade to non-precision markings to support instrument approaches
	Runway 4R-22L - Holding position markings 200' from runway centerline	Maintain
	Runway 4L-22R - Holding position markings 125' from runway centerline	Maintain
Signage	Lighted airfield location and directional signage	Consider gradual replacement with LED technology



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Landside Summary

Landside facilities at CHD consist of aircraft storage hangars, parking aprons, and businesses providing aviation services (fixed base operators [FBOs] and specialty aviation service operators [SASOs]). Additional landside support facilities include fuel storage tanks, maintenance facilities, and vehicle parking lots and access roads. The master plan provides recommendations on the development of new landside facilities to accommodate the needs of existing and future users.

All hangar-related development should occur only as dictated by demand. The locations of hangar development proposed in the recommended concept are conceptual and are subject to modification based on the needs of a developer and their target customers. The recommended concept is intended to be used strictly as a guide for CHD staff when considering new developments.

A summary of landside recommendations is included below.

- **North Side** | Recommended facilities include a new 16,000 square foot (sf) terminal building to be developed adjacent to the airport traffic control tower (ATCT) to provide a more modern facility for pilot and passenger amenities, as well as offices for airport administration. This site has frontage to the terminal apron that makes it highly visible from the airfield and takes advantage of an existing vehicle parking lot that is currently underutilized. The airport's operations and maintenance equipment storage are planned to be moved to a new facility adjacent to the new terminal to provide a consolidated airport administrative complex. An existing underground storage tank located along S. Airport Boulevard is planned to be replaced with a new above ground tank equipped with spill containment on the terminal apron adjacent to the existing self-service fuel distribution system. Apron pavement on the north side is planned to be expanded by approximately 11,825 square yards (sy). Approximately 39.3 acres of undeveloped property on the north side is planned for a variety of uses including new specialty aviation service operators (SASOs), maintenance/repair/overhaul (MROs) operations, executive hangars and small aircraft facilities, and non-aviation development. The existing terminal building and adjacent unoccupied hangar are planned for redevelopment for FBO/SASO activities.
- **South Side** | The south side of the airport is predominantly undeveloped with approximately 82 acres (excluding 10.7 acres of an environmental site) available for development. Helicopter operations associated with Quantum Helicopters are the primary activity on the south side. It is anticipated that once the north side reaches a built-out condition, new development will begin on the south side. A major barrier to development of the south side is a need for expanded utility infrastructure and vehicle access roads. The plan also identifies extensions of Insight Way and S Cooper Road into the south side of the airport for vehicle circulation. Once this infrastructure is in place, the plan reserves parcels for new FBO/SASO development, executive hangar development, small aircraft facilities, and mixed-use development that could include aviation-related or non-aviation related development.

DEVELOPMENT FUNDING

The full implementation of the Airport Master Plan is likely to take two decades or more at a cost of \$100.8 million in 2020 dollars. The breakdown of funding over the three planning horizons is presented in **Table ID**. Approximately 40 percent of the total is eligible for grant funding from the FAA or the Arizona Department of Transportation (ADOT) – Aeronautics Group. The source for FAA funding is the Aviation Trust Fund, which is funded through user fees and taxes on airline tickets, aviation fuel, and aircraft parts. A more detailed discussion of the Capital Improvement Program can be found in Chapter Six of the Master Plan. Private funding is also anticipated for the bulk of the development of new landside facilities including at least partial contribution towards the new terminal building. Private funding sources represent approximately 43 percent of the total capital program.

With the Airport Master Plan Update completed, the most important challenge is implementation. The cost of developing and maintaining aviation facilities is an investment which yields impressive benefits for the City of Chandler. This plan and associated development program provide the tools the City will require to meet the challenges of the future. By providing a safe and efficient facility, CHD will continue to be a valuable asset to the City of Chandler and the surrounding region.

TABLE ID
Development Funding Summary
Chandler Municipal Airport

Planning Horizon	Total Cost	AIP-Eligible Share	ADOT Share	Airport Sponsor Share	Private Funding
Short-Term Program	\$21,030,775	\$12,569,012	\$3,404,474	\$5,057,289	\$0
Intermediate-Term Program	\$49,856,500	\$20,982,045	\$1,029,977	\$2,395,977	\$17,448,500
Long-Term Program	\$29,985,200	\$2,351,169	\$115,415	\$1,415,415	\$26,103,200
Total Program Costs	\$100,872,475	\$35,902,226	\$4,549,867	\$8,868,682	\$43,551,700

Note: Funding subtotals do not add up to the estimated total cost due to the uncertainty of funding sources for the new terminal building, which is estimated at \$8,000,000.

Sources: Project cost estimates prepared by Dibble Engineering and project staging established by City of Chandler and Coffman Associates.