



Douglas Municipal Airport (DGL) Public Workshop

10/4/2016 from 5-7pm

Attendees included:

- Kimley-Horn – Pam Keidel-Adams
- Kimley-Horn – Colin Wheeler
- Kimley-Horn – Thomas Gibson
- Genesis – Mary Ortega-Itsell
- Genesis – Rick Crosman
- Luis Pedroza
- Alejandro Teran
- Lynn Kartchner
- Four members of the Douglas Rotary Club

The presentation from the DGL Master Plan public workshop is provided at the conclusion of the meeting notes. The following summarizes the discussion from the workshop, organized around specific topics discussed during the meeting:

- **The Rotary Club**
 - The Rotary Club meets at noon on Tuesdays.
 - The members that attended the public workshop did not hear about the public workshop until the day of the workshop and made suggestions regarding future announcements to provide more opportunity for more members and the general public to participate in meetings.
 - The Rotary Club is very interested in receiving more information regarding the sweep of aviation funding from the State Aviation Fund. They requested information so they can write letters supporting the State Aviation Fund.
 - The Club would like to have a signed petition for the Rotary/locals to send to AzAA and legislators.
- **The Douglas Municipal Airport Fly-in**
 - The Rotary Club noted they held a fly-in at Douglas Municipal on October 1, 2016. They have photos of the fly-in on their website.
 - Next year's fly-in is scheduled for October 7th, 2017.
- **Airport Improvement Questions**
 - Meeting attendees expressed interest in a courtesy car to make more appealing for transient aircraft.
 - The Rotary Club showed concern towards the condition of the runway, and asked questions about how and when the runway will get rehabilitated.
 - Alex noted that there was previously a deck/porch at Lifeline facility. Individuals who work for Lifeline asked if that structure could be rebuilt.
- **Future Community Outreach**
 - Genesis asked about the most effective way to communicate activities or meetings in Douglas and at the Airport. The public noted that Facebook is an effective way to disseminate information.
 - There was a question whether public workshops could be advertised on the City's Facebook page and if the Airport could develop a Facebook page.

DOUGLAS

Municipal Airport

MASTER PLAN



Kimley»Horn

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



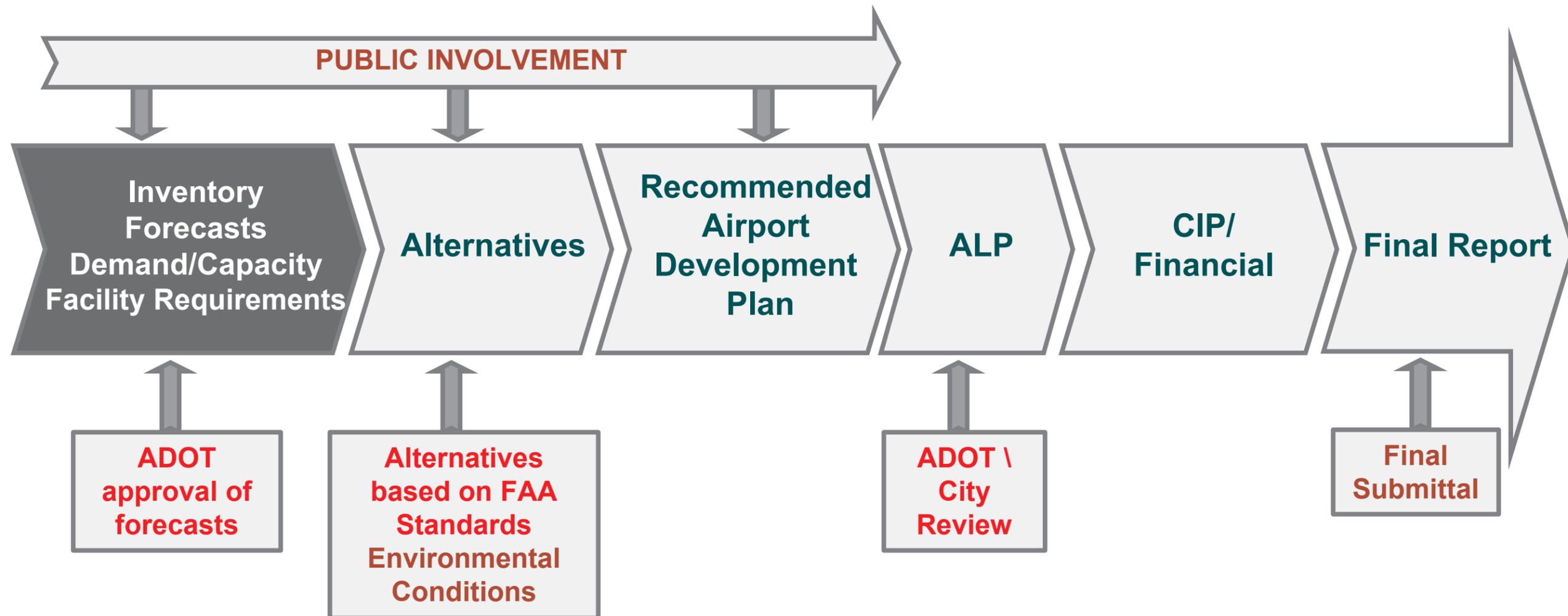
Overview of Airport Master Plans

- **Define concept for development over a 20-year planning period**
- **Framework to guide future airport development**
 - **Meet State standards and general FAA design criteria for safe and efficient airport**
 - **Satisfy aviation demand**
 - **Consider potential environmental and socioeconomic impacts**
 - **Establish reasonable plan for capital improvements**

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



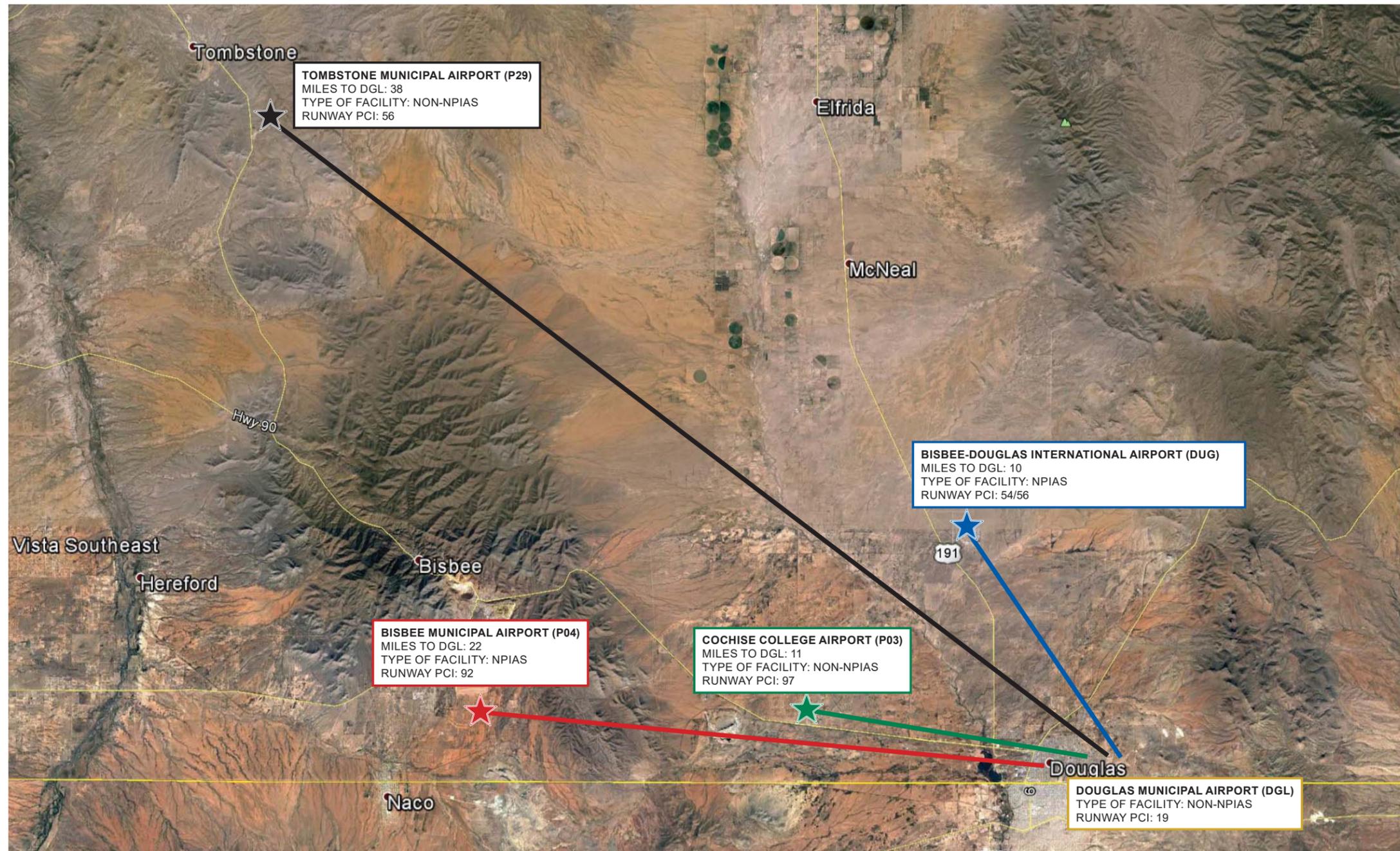
Master Plan Process



DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



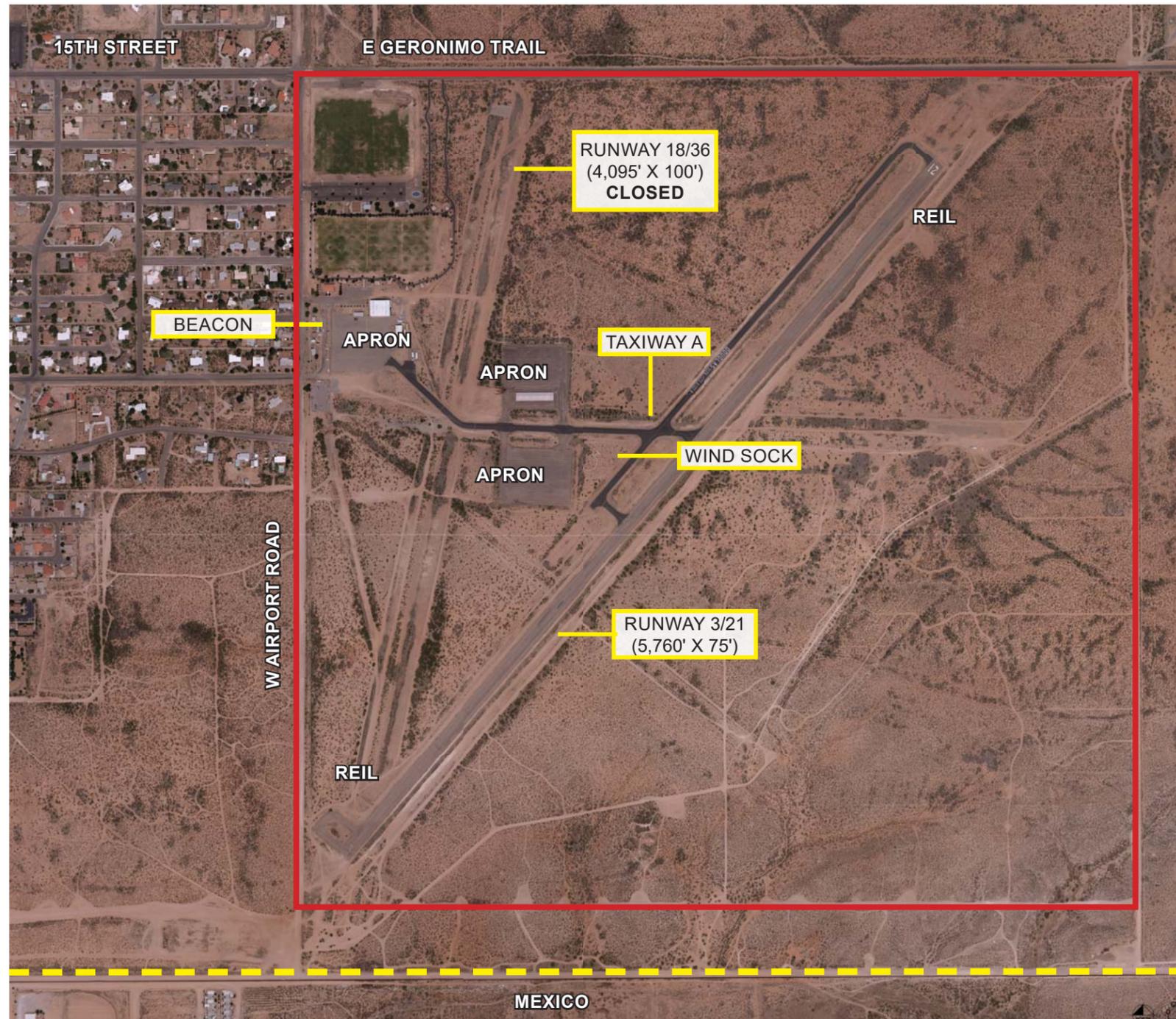
DGL – Regional Airport Map



DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Airfield Facilities

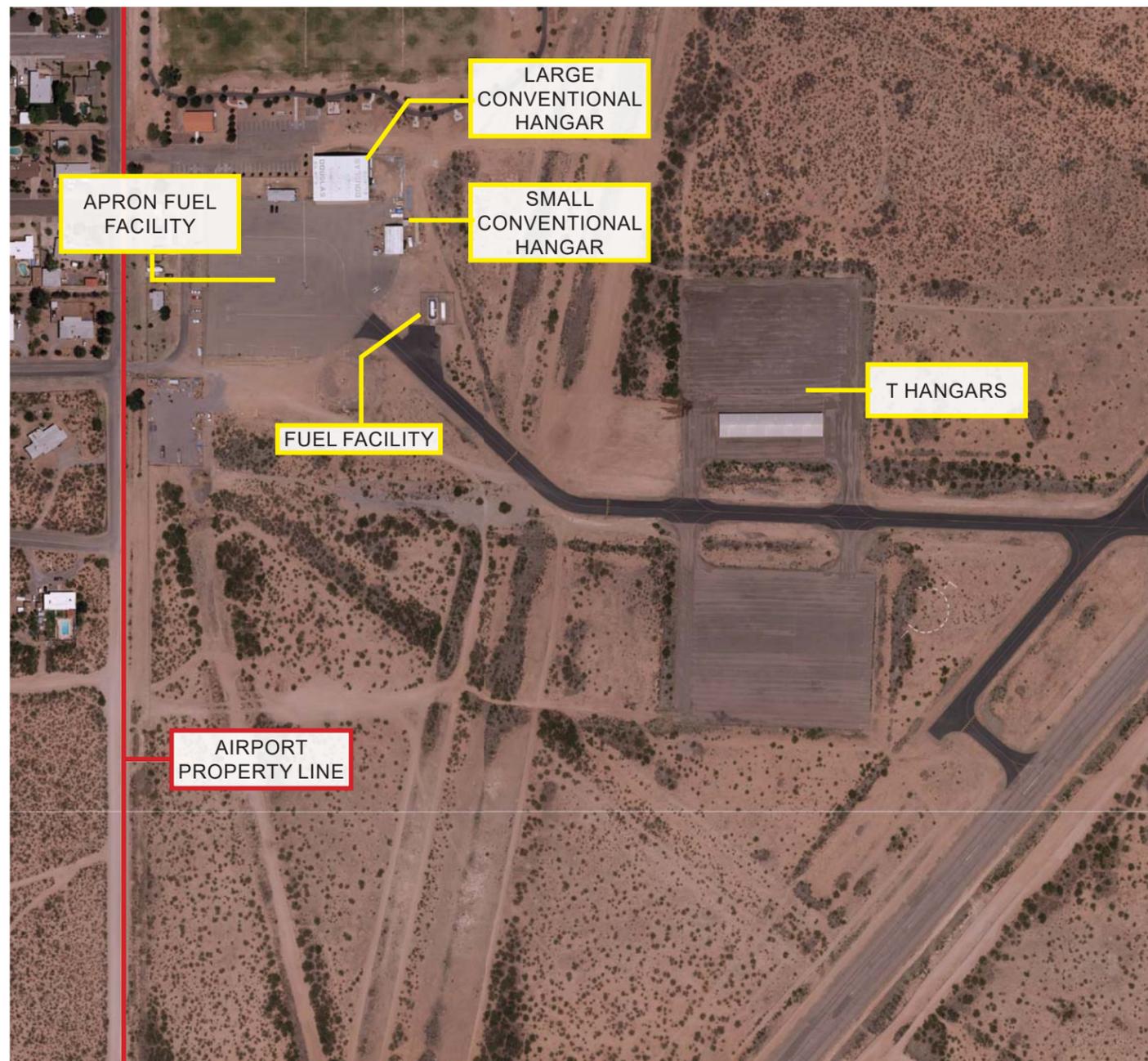


- Runway 03/21 - 5,760' x 75'
- Partial Parallel Taxiway A
- ± 48,000 sf of Apron Space
- Airport Reference Code (ARC) = B-II

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Landside/Support Facilities



- Fuel Facility = 12,000 gal. Jet A and AvGas
- 10-unit T-Hangar
- ± 15,000 sf. Aircraft Storage Hangars

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Based Aircraft Methodologies

Historical	Population Variable BAC	Employment Variable BAC	PCPI Variable BAC	Total Retail Sales Variable BAC	AZ Market Share Variable BAC	Regional Market Share Variable BAC
2016	12	12	12	12	12	12
Projected						
2021	13	13	13	14	13	13
2026	14	14	14	15	14	13
2036	16	17	17	20	16	14
CAGR 2016-2036	1.45%	1.79%	1.76%	2.51%	1.58%	0.77%

CAGR = Compounded Annual Growth Rate. CAGR is a measurement that calculates a constant rate of change.

Sources: Airport Management, Woods and Poole Economics, Inc., Kimley-Horn and Associates

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN

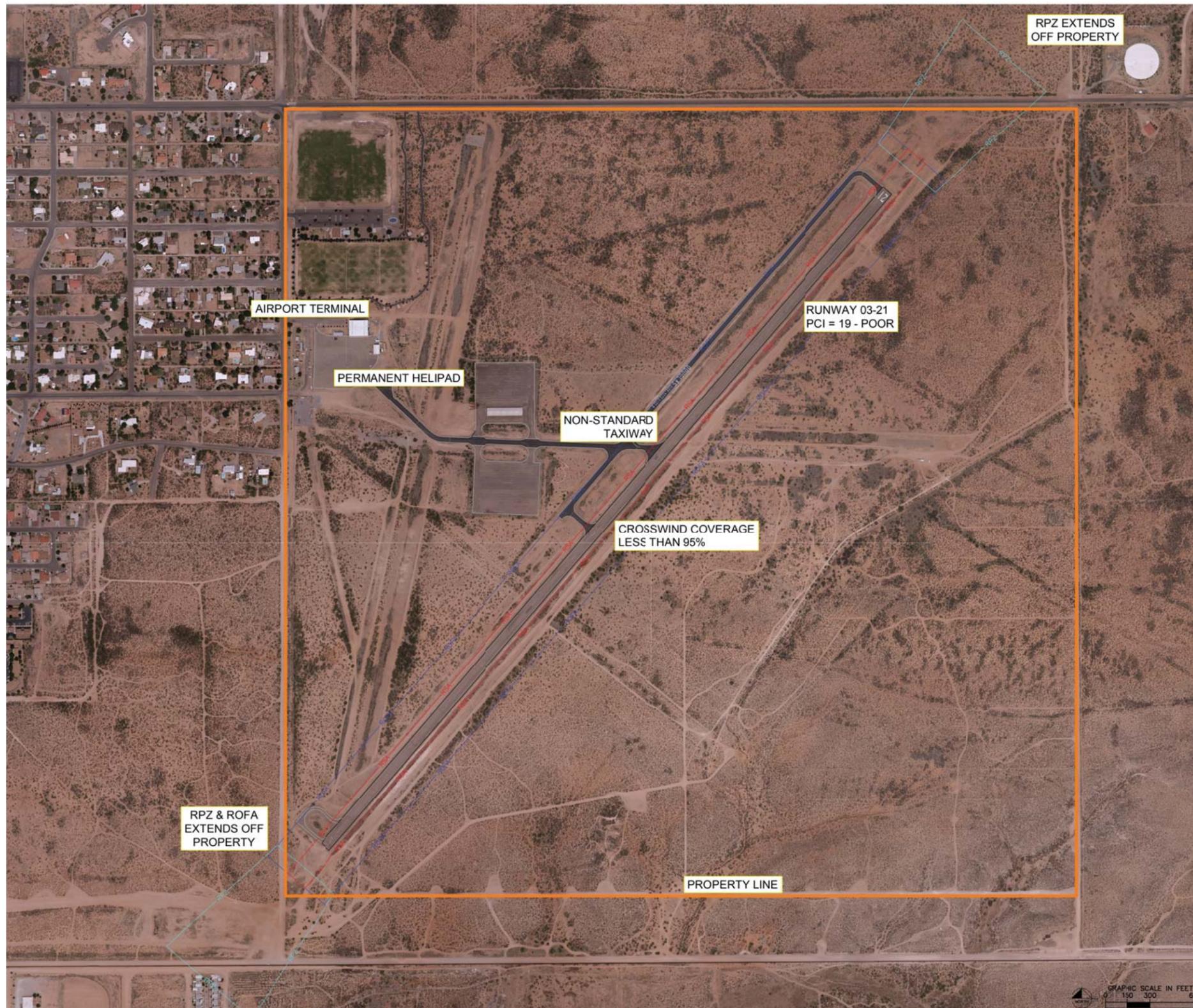


Operations Methodologies

Historical	Population Variable Operations	Employment Variable Operations	PCPI Variable Operations	Total Retail Sales Variable Operations	AZ Market Share Variable Operations	Regional Market Share Variable Operations	OPBA Variable
2016	2,600	2,600	2,600	2,600	2,600	2,600	2,600
Projected							
2021	2,820	2,830	2,800	2,950	2,630	2,860	2,820
2026	3,030	3,090	3,040	3,340	2,670	3,030	2,820
2036	3,470	3,710	3,680	4,270	2,750	3,580	3,030
CAGR 2016-2036	1.45%	1.79%	1.76%	2.51%	0.27%	1.61%	0.77%

Sources: Woods and Poole Economics, Inc., Airport Management and tenant estimates, Kimley-Horn and Associates

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Business Plan Analysis

- **Conduct S.W.O.T. Analysis**
- **Collect and Review all Background Data**
- **Collect and Review Financial Data**
- **Conduct Situational Analysis**
- **Alignment of Priorities and Goals**

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Business Plan vs. Master Plan

Airport Master Plan	Airport Strategic Business Plan
Formation of long term physical needs	Establish strategies to achieve business goals and objectives
Twenty year time frame	Mission and vision of airport
Determine aviation needs	Maximize revenue and development potential
Address concerns of a development plan	Funding
	Focus strategies for development

DOUGLAS MUNICIPAL AIRPORT MASTER PLAN



Project Schedule

Number	Task Name	Months after Notice-to-Proceed											
		1	2	3	4	5	6	7	8	9	10	11	12
		May	June	July	August	Sept	Oct	Nov	Dec	Jan	Feb	March	April
1	Pre-planning and Project Initiation												
2	Coordination and Public Outreach												
3	Introduction and Inventory												
4	Forecasts												
5	Demand/Capacity and Facility Requirements												
6	Airport Alternatives												
7	Airport Development Plans (MPU Concept)												
8	Financial Management and Development Program												
9	Airport Layout Plans												
10	Airport Business Plan												
	Kick-Off Meeting Overview of Business Plan Process		▲										
	SWOT Analysis					▲							
	Working Paper Nol. 1						▲						
	Business Plan Alternatives							▲					
	Business Plan Development Ares									▲			
	Priority Reconciliation with Financial & Airport Develop									▲			
	Working Paper No 2									▲			
	Final Document												
11	Final Reports and Approvals										▲		
	Local Coordination Meeting										●		
	PAC and/or Business Plan Working Group Meeting		▲				▲			▲			▲
	Public Workshop					★				★			★

Legend	
●	Local Coordination Meeting
▲	Business Plan Working Group Meeting
▲	PAC Meeting
★	Public Workshop
	Task Work Underway

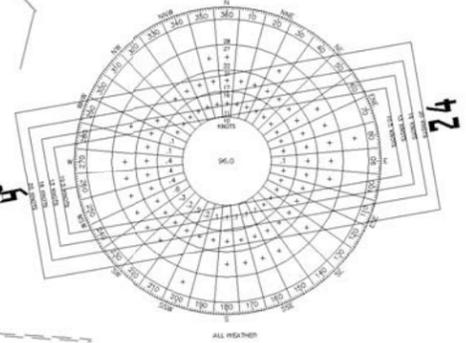
CITY OF TOMBSTONE APPROVAL	
RECOMMENDED BY:	DATE:
_____ Airport Engineer Name Airport Engineer	_____
_____ Airport Manager	_____
APPROVED BY:	_____
_____ Approver Name Director of Airports	_____

- GENERAL NOTES**
- PROTECTION ZONES WERE DETERMINED USING THE FAA RUNWAY DESIGN STANDARDS PRESENTED IN AC 150/5300-13A USING THE PUBLISHED RUNWAY END POINTS AS THE BASE POINTS.
 - COORDINATES ARE PRESENTED IN NORTH AMERICAN DATUM OF 1983 (NAD83) ARIZONA STATE PLANES, EAST ZONE, IN U.S. SURVEY FEET.
 - ELEVATIONS ARE PRESENTED IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) IN HEIGHT ABOVE MEAN SEA LEVEL (MSL).

LEGEND	
DESCRIPTION	EXISTING
AIRPORT PROPERTY LINE (PL)	—
AIRPORT REFERENCE POINT (ARP)	◆
RUNWAY OBSTACLE FREE AREA (ROFA)	—
RUNWAY OBSTACLE FREE ZONE (ROFZ)	—
RUNWAY SAFETY AREA (RSA)	—
APPROACH RUNWAY PROTECTION ZONE (RPZ)	—
DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	—
AIRPORT FENCE	—

ANNUAL WIND COVERAGE (%)			
	10.5 KNOT	13 KNOT	16 KNOT
ALL WEATHER	92.80%	96.30%	99.00%
VFR	76.60%	83.90%	92.00%
IFR	88.00%	93.60%	98.20%

RUNWAY ELEVATION DATA	
ITEM	ELEVATION
RUNWAY END	6 END
	24 END
HIGH POINT	
LOW POINT	



RUNWAY DATA		
ITEM	RW 06-24 (EXISTING & FUTURE)	
APPROACH REFERENCE CODE	A - I - SMALL	
APPROACH TYPE	VISUAL	
FAR PART 77 APPROACH SLOPE	20:1	
RW PROTECTION ZONES	LENGTH	1000'
	INNER WIDTH	250'
	OUTER WIDTH	450'
RUNWAY LENGTH	4430'	
RUNWAY WIDTH	60'	
RUNWAY & TAXIWAY PAVEMENT	ASPHALT	
RUNWAY LIGHTING	NONE	
APPROACH LIGHTING	NONE	
RUNWAY MARKING	BASIC	
VISUAL APPROACH AIDS	NONE	
NAVIGATIONAL AIDS	NONE	
DESIGN AIRCRAFT	CRITICAL AIRCRAFT	CESSNA 172 SKYHAWK
	APPROACH SPEED (KNOTS)	54 KNOTS
	WINGSPAN/LENGTH	36'-1"
	MAX. CERTIFIED TAKEOFF WEIGHT (LBS)	2450
RUNWAY SAFETY AREA (RSA)	LENGTH BEYOND RW END	240'
	LENGTH PRIOR TO THRESHOLD	240'
	WIDTH	120'
RUNWAY OBJECT FREE AREA (ROFA)	LENGTH BEYOND RW END	240'
	WIDTH	400'
RUNWAY OBSTACLE FREE ZONE (ROFZ)	LENGTH BEYOND RW END	200'
	WIDTH	250'



CITY OF TOMBSTONE
DEPARTMENT OF PUBLIC WORKS
611 E ALLEN ST, PO BOX 339, TOMBSTONE, AZ, 85638



Kimley»Horn

REVISIONS	BY	APPROVED	DATE

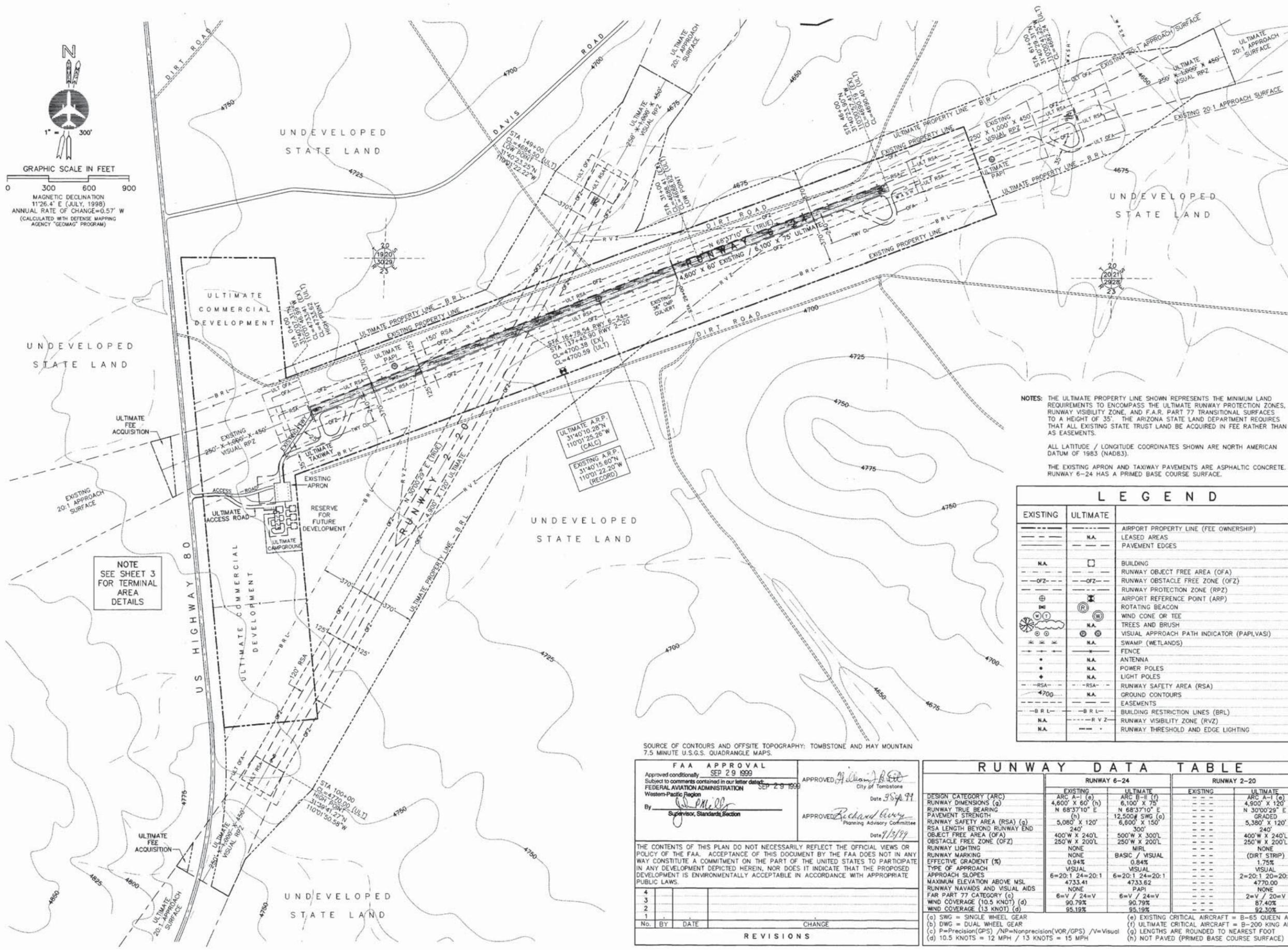
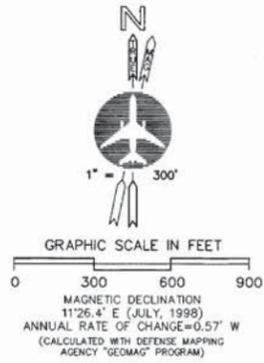
COORDINATE INDEX	
_____ N _____ E	_____ S _____ W
CONST. COMPL. _____	FIELD REVISIONS _____

TOMBSTONE MUNICIPAL AIRPORT
A COCHISE COUNTY AVIATION FACILITY - TOMBSTONE, ARIZONA
AIRPORT LAYOUT PLAN DRAWINGS
AIRPORT LAYOUT PLAN

SOURCE:
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), OCTOBER 2007

SCALE HOR	1"=300'	VERT	N/A
SHEET 2 OF SHEETS		OCTOBER 2007 MAGNETIC DECLINATION	

2 AIRPORT LAYOUT PLAN.dwg Thursday, Sep 29 2016 3:44pm



NOTE
SEE SHEET 3
FOR TERMINAL
AREA
DETAILS

NOTES: THE ULTIMATE PROPERTY LINE SHOWN REPRESENTS THE MINIMUM LAND REQUIREMENTS TO ENCOMPASS THE ULTIMATE RUNWAY PROTECTION ZONES, RUNWAY VISIBILITY ZONE, AND F.A.R. PART 77 TRANSITIONAL SURFACES TO A HEIGHT OF 35'. THE ARIZONA STATE LAND DEPARTMENT REQUIRES THAT ALL EXISTING STATE TRUST LAND BE ACQUIRED IN FEE RATHER THAN AS EASEMENTS.

ALL LATITUDE / LONGITUDE COORDINATES SHOWN ARE NORTH AMERICAN DATUM OF 1983 (NAD83).

THE EXISTING APRON AND TAXIWAY PAVEMENTS ARE ASPHALTIC CONCRETE. RUNWAY 6-24 HAS A PRIMED BASE COURSE SURFACE.

LEGEND		
EXISTING	ULTIMATE	
---	---	AIRPORT PROPERTY LINE (FEE OWNERSHIP)
---	---	LEASED AREAS
---	---	PAVEMENT EDGES
N.A.	□	BUILDING
---	---	RUNWAY OBJECT FREE AREA (OFA)
---	---	RUNWAY OBSTACLE FREE ZONE (OFZ)
---	---	RUNWAY PROTECTION ZONE (RPZ)
⊕	⊕	AIRPORT REFERENCE POINT (ARP)
⊕	⊕	ROTATING BEACON
⊕	⊕	WIND CONE OR TEE
⊕	⊕	TREES AND BRUSH
⊕	⊕	VISUAL APPROACH PATH INDICATOR (PAPI/VASI)
⊕	⊕	SWAMP (WETLANDS)
---	---	FENCE
⊕	⊕	ANTENNA
⊕	⊕	POWER POLES
⊕	⊕	LIGHT POLES
---	---	RUNWAY SAFETY AREA (RSA)
4700	4700	GROUND CONTOURS
---	---	EASEMENTS
---	---	BUILDING RESTRICTION LINES (BRL)
---	---	RUNWAY VISIBILITY ZONE (RVZ)
N.A.	---	RUNWAY THRESHOLD AND EDGE LIGHTING

SOURCE OF CONTOURS AND OFFSITE TOPOGRAPHY: TOMBSTONE AND HAY MOUNTAIN 7.5 MINUTE U.S.G.S. QUADRANGLE MAPS.

FAA APPROVAL
SEP 29 1999
Approved conditionally
Subject to comments contained in our letter dated SEP 29 1999
FEDERAL AVIATION ADMINISTRATION
Western-Pacific Region

APPROVED: *[Signature]*
City of Tombstone
Date: 9/29/99

APPROVED: *[Signature]*
Planning Advisory Committee
Date: 9/13/99

By: *[Signature]*
Supervisor, Standards Section

THE CONTENTS OF THIS PLAN DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS DOCUMENT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED HEREIN, NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

No.	BY	DATE	CHANGE
4			
3			
2			
1			

REVISIONS

DESIGN CATEGORY (ARC)	RUNWAY 6-24		RUNWAY 2-20	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY DIMENSIONS (g)	4,600' x 60' (h)	6,100' x 75'	4,900' x 120'	ARC A-1 (e)
RUNWAY TRUE BEARING	N 68°37'10" E	N 68°37'10" E	N 30°00'29" E	ARC A-1 (e)
PAVEMENT STRENGTH	(h)	12,500 SWG (g)	GRADED	
RUNWAY SAFETY AREA (RSA) (g)	5,080' x 120'	6,600' x 150'	5,380' x 120'	
OBJECT FREE AREA (OFA)	400' W x 240' L	500' W x 300' L	400' W x 240' L	
OBSTACLE FREE ZONE (OFZ)	250' W x 200' L	250' W x 200' L	250' W x 200' L	
RUNWAY LIGHTING	NONE	MIRL	NONE	
RUNWAY MARKING	NONE	BASIC / VISUAL	(DIRT STRIP)	
EFFECTIVE GRADIENT (%)	0.94%	0.84%	1.75%	
TYPE OF APPROACH	VISUAL	VISUAL	VISUAL	
APPROACH SLOPES	6=20:1 24=20:1	6=20:1 24=20:1	2=20:1 20=20:1	
MAXIMUM ELEVATION ABOVE NSL	4733.41	4733.62	4770.00	
RUNWAY NAVIGATIONAL AIDS	NONE	PAPI	NONE	
FAR PART 77 CATEGORY (c)	6=V / 24=V	6=V / 24=V	2=V / 20=V	
WIND COVERAGE (10.5 KNOTS) (d)	90.79%	90.79%	87.40%	
WIND COVERAGE (13 KNOTS) (d)	95.19%	95.19%	92.30%	

(c) SWG = SINGLE WHEEL GEAR
(d) DWG = DUAL WHEEL GEAR
(e) P=Precision(GPS) / NP=Nonprecision(VOR/GPS) / V=Visual
(f) 10.5 KNOTS = 12 MPH / 13 KNOTS = 15 MPH
(g) EXISTING CRITICAL AIRCRAFT = B-65 QUEEN AIR
(h) ULTIMATE CRITICAL AIRCRAFT = B-200 KING AIR
(i) LENGTHS ARE ROUNDED TO NEAREST FOOT
(j) NOT PAVED (PRIMED BASE COURSE SURFACE)



DOUGLAS

Municipal Airport **AIRPORT BUSINESS PLAN**

Oct 3 2016



