
FINAL
ENVIRONMENTAL ASSESSMENT

PROPOSED NEW AIRPORT TRAFFIC CONTROL TOWER

Phoenix-Mesa Gateway Airport
Mesa, Arizona

Prepared for:

PHOENIX-MESA GATEWAY AIRPORT AUTHORITY

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by:

Landrum & Brown, Incorporated

November 2017

This environmental assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.



Responsible FAA Official

11/29/2017

Date

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT IS IN THIS DOCUMENT? This document is a Final Environmental Assessment (EA) for a new Airport Traffic Control Tower (ATCT) for the Phoenix-Mesa Gateway Airport (IWA). The Proposed Action includes the construction of a new tower on Airport property located approximately 410 feet to the northwest of the existing tower and the demolition of the existing tower. The Phoenix-Mesa Gateway Airport Authority (PMGAA), in cooperation with the Federal Aviation Administration (FAA), prepared this EA document to disclose the analysis and findings of the potential environmental impacts of the Proposed Action and the No Action Alternative.

BACKGROUND. The Draft EA was released for public and agency review on October 19, 2017. The notice of availability of the Draft EA was advertised in the Arizona Business Gazette newspaper to inform the general public and other interested parties. No comments related to the Draft EA were received by the FAA or PMGAA during the comment period. The document presented herein represents the Final EA for the federal decision-making process, in fulfillment of FAA's policies and procedures relative to NEPA and other related federal requirements.

WHAT HAPPENS AFTER THIS? Following review of the Final EA, the FAA will either issue a Finding of No Significant Impact (FONSI) or decide to prepare an Environmental Impact Statement (EIS).

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ACRONYMS

The following is a list of acronyms used in the EA:

AFTIL	Airport Facilities Terminal Integration Laboratory
AGL	Above Ground Level
APE	Area of Potential Effect
ATCT	Airport Traffic Control Tower
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalencies
EA	Environmental Assessment
EDDA	Environmental Due Diligence Audits
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FR	Federal Register
GA	General Aviation
GHG	Greenhouse Gas
HFC	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
IWA	Phoenix-Mesa Gateway Airport
LOS	Line of Sight
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAS	National Airspace System
NAVAID	Navigational Aids
NEPA	National Environmental Policy Act of 1969
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NOA	Notice of Availability
NPL	National Priorities List
NRHP	National Register of Historic Places
O ₃	Ozone
Pb	Lead
PFC	Perfluorocarbons
PM	Particulate Matter (PM ₁₀ & PM _{2.5})
PMGAA	Phoenix-Mesa Gateway Airport Authority
SF ₆	Sulfur Hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SRMP	Safety Risk Management Panel
TERPS	Terminal Instrument Procedures
USC	United States Code

ACRONYMS

USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compounds

CHAPTER 1: PURPOSE AND NEED

1.1 INTRODUCTION

The Phoenix-Mesa Gateway Airport Authority (PMGAA), the owner and operator of the Phoenix-Mesa Gateway Airport (IWA) in Maricopa County, Mesa, Arizona proposes to construct a replacement of the Airport Traffic Control Tower (ATCT), with no change in aircraft operation number or type of aircraft at IWA. This Environmental Assessment (EA) analyzes the potential environmental effects of the proposed new ATCT, the demolition of the existing ATCT, and connecting utilities to the proposed facilities (the Proposed Action).

This EA has been prepared pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA) ((42 United States Code (USC) 4321 et seq.)), implementing NEPA regulations issued by the Council on Environmental Quality (40 Code of Federal Regulations (CFR) 1500-1508)¹, and the Airport and Airway Improvement Act of 1982 (Public Law 97-248), as amended.

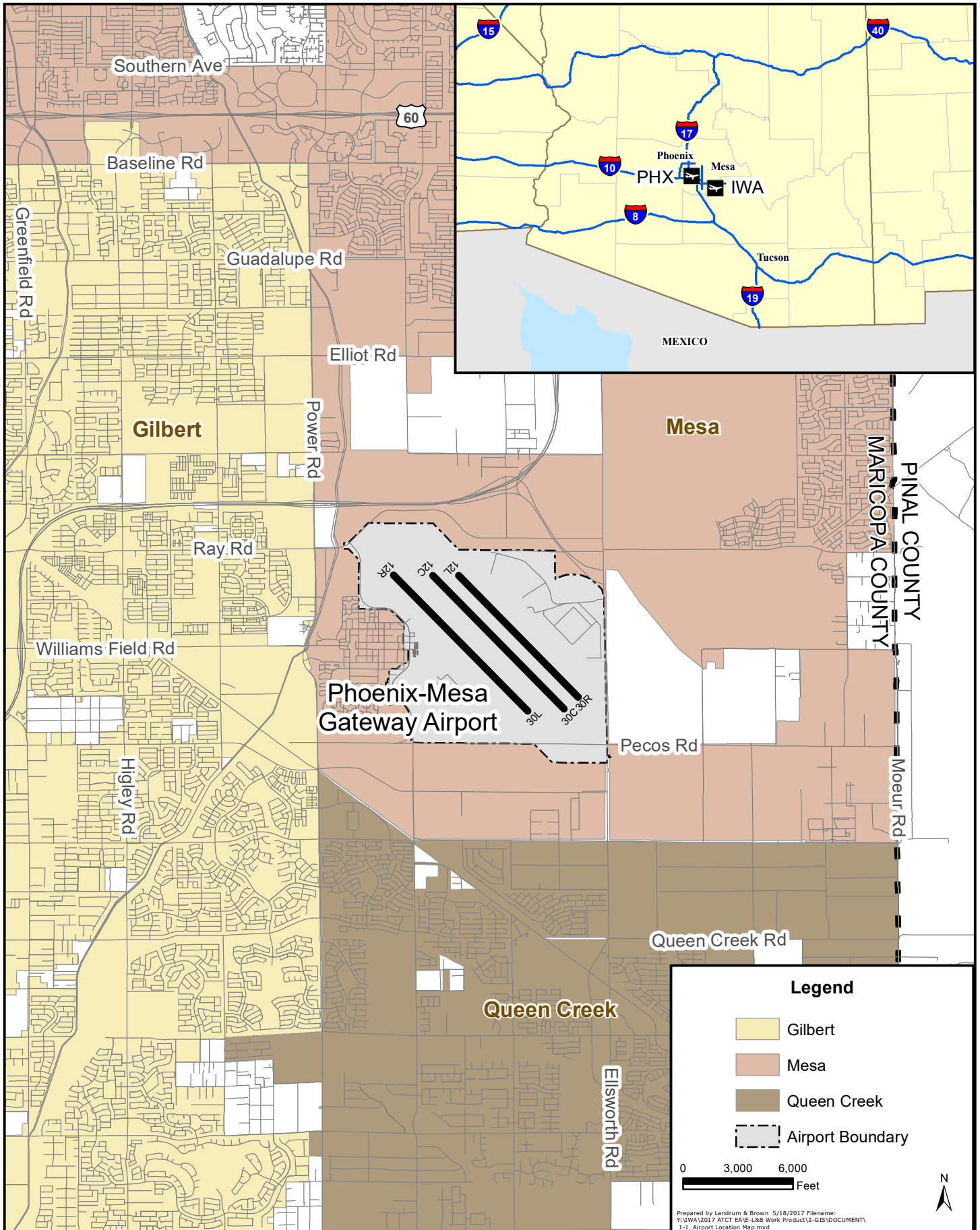
The purpose of this EA is to identify and assess the potential environmental impacts of the Proposed Action and its reasonable alternatives. Depending upon whether certain environmental thresholds of significance are exceeded or not, this EA may lead either to a Finding of No Significant Impact (FONSI) or to the requirement for the preparation of an Environmental Impact Statement (EIS). The Federal Aviation Administration (FAA) is the lead Federal agency to ensure compliance with NEPA for this Proposed Action; therefore, this EA has also been prepared in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.

1.2 BACKGROUND

IWA is located on approximately 3,000 acres on the southeast portion of Maricopa County with Pinal County located approximately six miles south and three miles east of IWA as shown on **Exhibit 1-1**. Although IWA is located entirely within the City of Mesa, immediately adjacent to the west is the Town of Gilbert; to the south is the Town of Queen Creek; to the east and north is the City of Mesa. The City of Phoenix is located approximately 25 miles west of IWA. IWA is bordered on the west by South Sossaman Road, to the south by the East Pecos Road, to the east by South Ellsworth Road and to the north by the East Ray Road and the Santan Freeway also known as the Loop 202.

The Phoenix-Mesa Gateway Airport was created as a result of the 1993 Base Realignment and Closure program. Williams Air Force Base was an active training base for the United States Army Air Forces and the United States Air Force from 1941 until 1993. In 1994, the base was officially reopened as the Williams Gateway Airport, with a 2008 name change to Phoenix-Mesa Gateway Airport. IWA currently hosts more than 40 companies, commercial service to more than 45 cities, and contributes approximately \$1.3 billion annually to the Arizona economy.

¹ P.L. 91-190, 42 U.S.C. 4321, et. seq., *National Environmental Policy Act*, 1969, Section 102(2)(c).



IWA consists of three parallel runways. Runway 12R/30L is 10,401 feet long and 150 feet wide. Runway 12C/30C is 10,201 feet long and 150 feet wide. Runway 12L/30R is 9,301 feet long and 150 feet wide. Aircraft operations are generally from one air carrier and several flight training, corporate, and aircraft repair facilities. According to PMGAA data collected from July 1, 2016 to June 30, 2017 there were 273,261 aircraft operations at IWA.

Currently operations are controlled from the existing tower, which is 127 feet above ground level (AGL) to the top of the tower and with an air traffic controller eye height of 106 feet AGL. The ATCT was built by the Air Force in 1970 and is located in the southwestern portion of the Airport. The existing tower is owned and maintained by PMGAA and the operations are contracted to Serco Management Services in order to provide approach and departure clearances and ground control. The tower, with a cab of approximately 225 square feet, operates 19 hours per day from 5:00 a.m. to 12:00 a.m. daily and is typically the busiest commercial contract tower in operation within the United States.

1.3 PURPOSE AND NEED FOR THE PROPOSED ACTION

FAA Purpose and Need of the Proposed Action

FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the United States. FAA must ensure that the Proposed Action does not derogate the safety of aircraft and operations of IWA. The role of an ATCT is to provide directions to pilots, and to help effectively and efficiently direct aircraft movements.

PMGAA Purpose of the Proposed Action

The purpose of the Proposed Action for PMGAA is to provide an ATCT capable of allowing personnel to see, monitor, communicate with, and direct operations at IWA, as well as provide the necessary utilities and infrastructure to operate the ATCT. There are a multitude of requirements for ATC personnel to see (visually), communicate with, observe (remotely or otherwise), direct, and control operations within the areas designated as the control (movement) area.

PMGAA Need for the Proposed Action

The existing tower has become antiquated over time and has fallen in disrepair. The ATCT is currently occupied and operating with only four air traffic controller positions with no air traffic controller in charge dedicated space. The tower has been maintained the last 20 years well enough to continue its operation but does not provide adequate line of sight to runway ends 30R and 30C and the area around Runway end 12R and Taxiway F. In addition, the tower cab is not currently compliant with the Americans with Disabilities Act and the existing ATCT faces other issues with electrical, mechanical, and structural systems. For example, in 2017, the aging elevator in the existing ATCT had mechanical issues and staff were unable to use it for several weeks. The existing ATCT cannot be renovated economically or physically to meet the current codes and in time will not provide the services needed to accommodate the operations at IWA. The Proposed Action includes increasing both the tower height and square footage of cab space to enhance the safety, efficiency, and service of the existing airfield.

1.4 DESCRIPTION OF THE PROPOSED ACTION

The Proposed Action at IWA includes the following project components:

- Construct a new ATCT;
- Connect utilities, airfield control lighting, and Navigational Aids (NAVAID) control lines to the proposed tower, move equipment to the new ATCT; and,
- Demolish the existing ATCT.

Construct a New ATCT

PMGAA proposes to construct a new ATCT approximately 410 feet to the northwest of the existing tower. The new ATCT structure will be 194 feet AGL to the top of the tower with an air traffic controller eye height of 164 feet AGL and a tower cab approximately 550 square feet in area, as determined by a siting study completed in accordance with FAA Order 6480.4A. The site of the proposed ATCT is shown in **Exhibit 1-2**. The proposed ATCT would replace the existing control tower and be constructed, owned, and maintained by PMGAA. The new facility would continue to be operated by Serco Management Services contract air traffic controllers and comply with FAA Order J07210.54C FAA Contract Tower Operation and Administration effective date May 16, 2016.

Connect Utilities, Airfield Control Lighting, and NAVAID Control Lines to the Proposed Tower and move equipment to the new ATCT

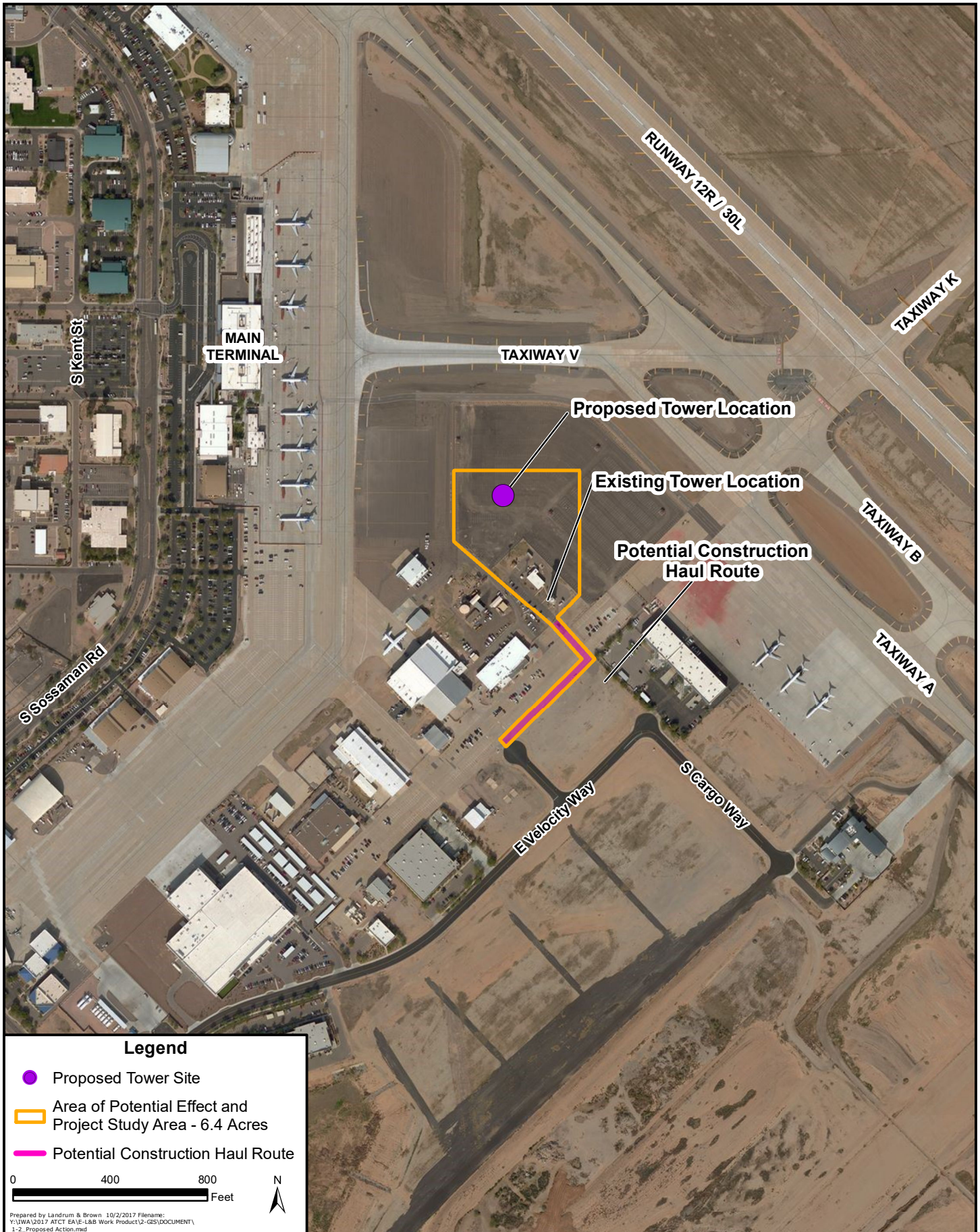
The utilities to the existing tower would be extended an additional 410 feet in order to service the new proposed ATCT. It is anticipated that the utilities required would include telecommunications, electric, water, sanitary sewer, airfield lighting, communication, and NAVAID control. The routing and final length of the utility extension could vary slightly depending upon the final detailed design. In addition, equipment that still could be utilized would be moved from the existing ATCT to the proposed new ATCT.

Demolish the Existing ATCT

The Proposed Action includes the demolition of the existing ATCT after the proposed ATCT is built and fully operational. After the demolition, the area would be graded and maintained as a paved surface similar to the surrounding conditions.

1.5 REQUESTED FEDERAL ACTIONS

- *Unconditional approval of the portion of the ALP that depicts the proposed construction of the ATCT and removal of the existing ATCT pursuant to 49 USC §47107(a)(16).*
- *Approval of project design, and a Construction Safety and Phasing Plan, as applicable, to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular 150/5370-2F, Operation Safety on Airports during Construction (49 USC 44706).*
- *Determination of eligibility for federal assistance for the proposed construction of an ATCT under Airport and Airway Improvement Act of 1982, as amended (49 USC 47101 et. seq.).*



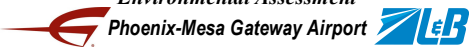
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- Proposed Tower Site
- Area of Potential Effect and Project Study Area - 6.4 Acres
- Potential Construction Haul Route



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*Proposed Airport Traffic Control Tower
Environmental Assessment*



Proposed Action

EXHIBIT:
1-2

1.6 TIMEFRAME OF THE PROPOSED ACTION

Initiation of the Proposed Action would only occur after the FAA has issued a NEPA finding on this EA. If the FAA approves the Proposed Action by the end of 2017, design of the project would begin in 2018. Construction of the new ATCT is expected to be completed in one year, followed by demolition of the existing ATCT. Opening of the new ATCT would occur in 2021. Actual timing will be subject to the availability of funding.

1.7 EA DOCUMENT ORGANIZATION

The EA contains the following content:

- **Table of Contents:** The table of contents lists the chapters, exhibits, and tables presented throughout the EA. It will also list the appendices and the acronym list.
- **Chapter 1 – Purpose and Need:** This chapter describes the underlying purpose and need for the Proposed Action. It presents the problem being addressed and describes what the PMGAA is trying to achieve. This chapter also provides a detailed description of the Proposed Action.
- **Chapter 2 – Alternatives:** This chapter provides a comparative analysis of the No Action alternative, the Proposed Action, and other reasonable alternatives to fulfill the purpose and need for the action, to sharply define the issues, and provide a clear basis for choice among options by the approving official. This section provides an overview of the identification and screening of alternatives considered, the process used to screen and evaluate reasonable alternatives, the alternatives carried forward for detailed environmental evaluation, and brief description of those alternatives considered but dismissed.
- **Chapter 3 – Affected Environment, Environmental Consequences, and Mitigation:** This chapter will describe existing environmental conditions within the project study area as well as discuss and compare potential environmental impacts/consequences associated with the Proposed Action, the No Action alternative, and mitigation.
- **Chapter 4 – Coordination and Public Involvement:** This chapter discusses agency coordination and public involvement associated with this EA process.
- **Chapter 5 – List of Preparers:** This chapter includes the names, and qualifications (e.g., expertise experience, professional disciplines) of the staff that were primarily responsible for preparing the EA.
- **Chapter 6 – References:** This chapter includes references used in the EA.
- **Appendices:** This section of the EA consists of material that substantiates any analysis that is fundamental to the EA.

CHAPTER 2: ALTERNATIVES

2.1 INTRODUCTION

The Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14) for implementing the NEPA requires that the Federal decision-makers perform the following tasks:

- Evaluate all reasonable alternatives, including alternatives not within the jurisdiction of the Federal agency, and for alternatives that were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- Devote substantial treatment to each alternative considered in detail, including a No Action alternative and the Proposed Action, so that reviewers may evaluate their comparative merits.

This chapter describes alternatives to the Proposed Action, and evaluates the ability of the alternatives to meet the purpose and need described in **Chapter 1**. Federal guidelines concerning the environmental review process require that a reasonable range of alternatives that are feasible or practical and might accomplish the objectives of a project must be identified and evaluated.² Federal agencies may consider the applicant's purposes and needs and common sense realities of a given situation in the development of alternatives.³

2.2 ALTERNATIVES SCREENING

FAA Order 6480.4A defines the methods used to complete the ATCT siting process in a consistent manner, and establishes the criteria and procedures for evaluation and approval for the height and location of an ATCT to ensure safety within the National Airspace System (NAS). The site selection criteria includes:

1. **Visibility Performance Requirements:** Visibility from the ATCT cab shall allow an unobstructed view of all controlled movement areas of an airport, including all runways, taxiways, and any other landing areas, and of air traffic in the vicinity of the airport.
2. **Object Discrimination:** ATCT distance from critical airport locations and ATCT height shall support requirements for object visibility from the ATCT cab.
3. **Line of Sight (LOS) Angle of Incidence:** ATCT distance from critical airport locations and ATCT height shall support requirements for viewing objects on the airport movement areas, taxiways, and non-movement areas from the ATCT cab.
4. **Terminal Instrument Procedures (TERPS):** The ATCT shall be sited such that it does not degrade any current or planned TERPS.

² CEQ Memorandum to Agencies, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, Answers to Question 2A, March 23, 1981.

³ *Guidance Regarding NEPA Regulations*, CEQ, 48 Federal Register 34263 (July 28, 1983).

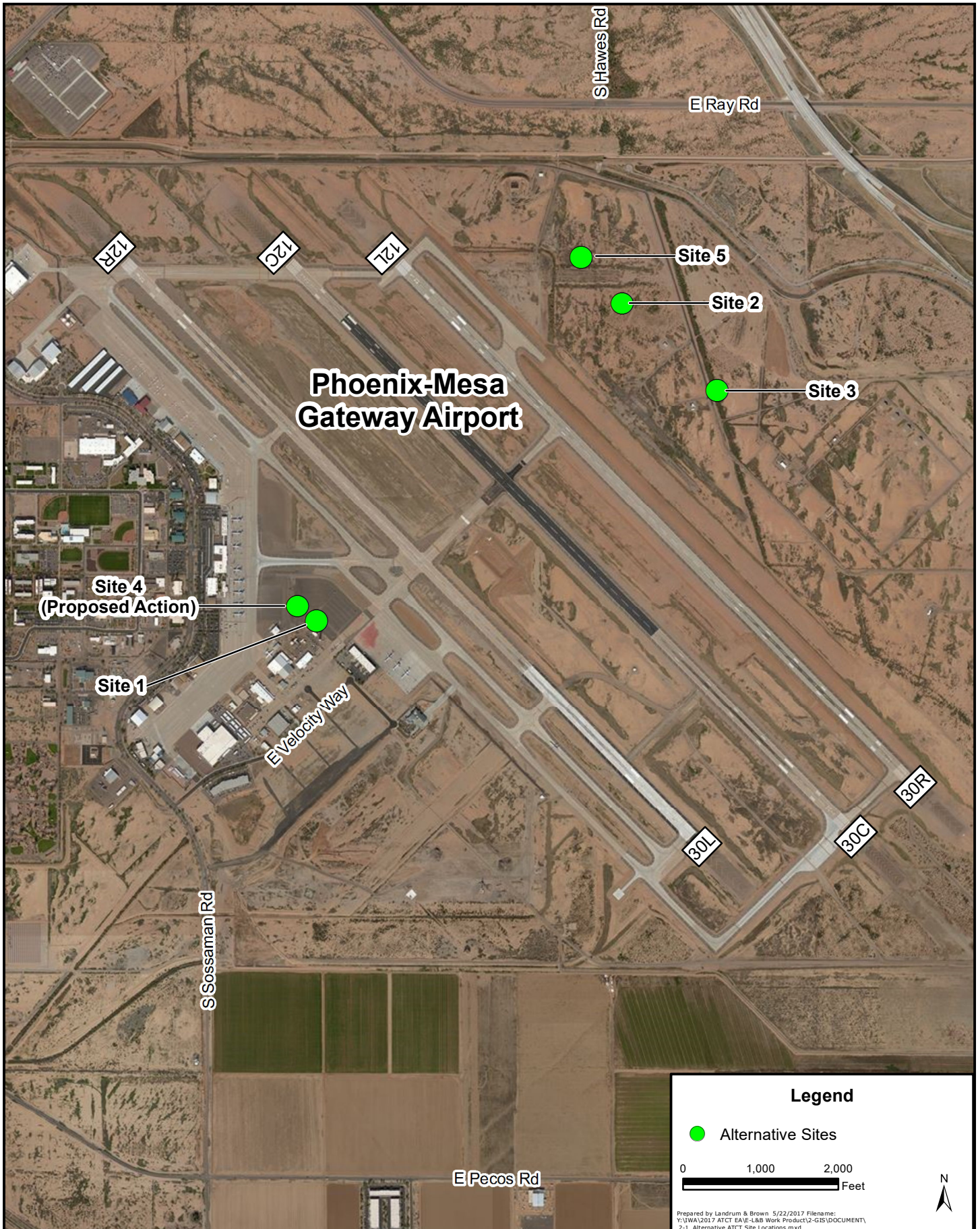
5. **Communications, Navigation, and Surveillance Equipment:** The ATCT shall be sited where it does not degrade or affect the performance of existing or planned facilities and/or equipment, unless deviations are necessary to meet other siting criteria and/or mitigation strategies are implemented.
6. **Operational Requirements:** For any given site, the ATCT shall be constructed at the minimum height required to satisfy all siting criteria.
7. **Economic Considerations:** Consideration shall be given to economic factors when proposing ATCT sites (i.e., ATCT height, future land use planning, utilities and cabling, access roads and security compliance).
8. **Site Access:** Site access shall not require crossing of aircraft operations.
9. **ATCT Orientation:** The tower cab should be oriented to face north or alternatively east, west, or south in order of preference. Visibility should not be impaired by sunlight, indirect external light sources, or thermal distortion.
10. **Federal Aviation Regulations, Part 77:** Objects Affecting Navigable Airspace should be compliant.

The site selection criteria also serve as the criteria for the alternatives analysis in this NEPA document because they comprise the FAA standards. Meeting these standards to the extent practicable is key to satisfying the project purpose and need.

The FAA, utilizing the Airport Facilities Terminal Integration Laboratory (AFTIL), conducted an ATCT Siting Study to determine the appropriate location and height of a new ATCT at IWA. A Safety Risk Management Panel (SRMP) consisting of representatives from Phoenix-Mesa Gateway Airport ATCT, PMGAA, FAA Phoenix Airports District Office, FAA Western Flight Procedures Office, FAA Real Estate, FAA Western Flight Standards office, and the FAA Western Service Center offices of Terminal Engineering and Plans & Requirements was assembled to evaluate potential ATCT sites. Two trips to the AFTIL by the SRMP were conducted to evaluate the line of sight from the prospective ATCT site to IWA movement areas, as well as the orientation and equipment layout of the cab. The first trip occurred May 12, 2015 to May 14, 2015. The orientation and layout of the cab was discussed during the second trip to AFTIL from September 22, 2015 to September 24, 2015.

Prior to the AFTIL visit, the PMGAA identified three potential ATCT sites. During discussions at the AFTIL lab, two additional sites were added, and each quadrant of IWA was analyzed for potential sites. This EA reviewed the siting study and found that no other appropriate sites exist, other than the sites previously identified. **Exhibit 2-1** shows all ATCT site locations considered based on applicable criteria.

Site 1 – This site is located southeast of Runway 12R/30L approximately 250 feet from of the existing ATCT. The AFTIL simulation revealed a good line of sight to IWA in general and to the General Aviation (GA) ramp. However, sun glare issues were identified for Site 1 during morning hours. Site 1 did not have any adverse effect on existing TERPS and all hazards identified for this site were of low risk. Site 1 had the same economic cost as Site 4.



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● Alternative Sites

0 1,000 2,000
 Feet

N

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Site 1 was eliminated because the ATCT Siting Study identified several hazards that would occur during ATCT construction. The main hazard was found to be the blockage of Runway 12C. The LOS would be blocked during the ATCT construction with the only way to avoid the hazard would be to suspend arrivals on this runway during construction.

Site 2 – This site is located north of Runway 12L/30R on undeveloped land on PMGAA property. Site 2 was eliminated because the line of sight to the GA ramp was limited, and it created severe sun glare for air traffic controllers due to the westward facing orientation.

Site 3 – This site is located north of Runway 12L/30R on undeveloped land on PMGAA property. Site 3 was eliminated because the line of sight to the GA ramp was limited, and it created severe sun glare for air traffic controllers due to the westward facing orientation.

Site 4 (Proposed Action) – This site is located southeast of Runway 12R/30L approximately 410 feet to the northwest of the existing ATCT. The AFTIL simulation revealed Site 4 provided the best overall view of IWA and to the GA ramp. Site 4 did not have any adverse effect on existing TERPS. Site 4 had the same economic cost as Site 1. Sun glare issues were identified for Site 4 during morning hours; however, the sun glare issues were determined not to be as much of a hazard as for Site 1.

The Safety Risk Management Panel recommended Site 4 as the location for the new ATCT. Site 4 was selected for detailed evaluation because it provided the best LOS to IWA. Site 4 is identified as the Proposed Action and is PMGAA's Preferred Alternative.

Site 5 – This site is located north of Runway 12L/30R on undeveloped land on PMGAA property. The AFTIL simulation revealed LOS for Site 5 would be restricted to the GA Ramp.

Site 5 was eliminated because it was determined air traffic controllers would encounter issues with intense sun glare for two to three hours during high traffic periods along with overall glare from artificial lighting. In addition, the estimated cost for Site 5 was higher than for Site 1 and Site 4, because at this location, an access road would have to be constructed and there would be extensive utility relocation required.

2.3 ALTERNATIVES CARRIED FORWARD FOR DETAILED EVALUATION

No Action Alternative

To satisfy the intent of NEPA, FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*; FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; and other special purpose environmental laws, a No Action Alternative is carried forward in the analysis of environmental consequences. With the No Action Alternative, the Proposed Action would not be constructed and the existing tower would operate the same as current conditions. The No Action Alternative does not meet the stated purpose and need for this project. Although not always feasible nor practical, the No Action Alternative is a required alternative under NEPA and serves as the baseline for the assessment of future conditions/impacts.

Proposed Action Alternative (Site 4)

Site 4 is identified as the Proposed Action and is PMGAA's Preferred Alternative.

The Proposed Action includes the following project components:

- Construct a new ATCT approximately 410 feet to the northwest of the existing ATCT. The new ATCT structure will be 194 feet AGL to the top of the tower with an air traffic controller eye height of 164 feet AGL and a tower cab approximately 550 square feet in area;
- Connect utilities, airfield control lighting, and NAVAID control lines to the proposed tower; move equipment to the new ATCT; and,
- Demolish the existing ATCT.

2.4 LIST OF PERMITS REQUIRED FOR THE PROPOSED ACTION

In accordance with FAA Order 1050.1F, a preliminary list of permits that would be required for implementation of the Proposed Action is provided in **Table 2-1**.

Table 2-1
LIST OF PERMITS REQUIRED FOR THE PROPOSED ACTION

ISSUING AGENCY	PERMIT NAME/TYPE
Maricopa County Air Quality Department	Dust Control Permit
Arizona Department of Environmental Quality	Construction General Permit – Stormwater Pollution Prevention Plan
Authorities having Jurisdiction	All associated permits for construction and demolition including fire marshal inspections and elevator inspections

Source: Phoenix-Mesa Gateway Airport Authority, 2017.

2.5 LISTING OF FEDERAL LAWS AND REGULATIONS CONSIDERED

The federal laws and statutes, executive orders, U.S. Department of Transportation (USDOT) and FAA orders, FAA Advisory Circulars, and other federal guidance considered during the preparation of this EA are listed in **Table 2-2**.

**Table 2-2
LISTING OF FEDERAL LAWS AND REGULATIONS CONSIDERED**

FEDERAL LAWS AND STATUTES	
National Environmental Policy Act of 1969	42 U.S.C. 4321 et seq.
Clean Air Act of 1970, as amended	42 U.S.C. 7401 et seq.
Bald and Golden Eagle Protection Act	16 U.S.C. 668 et seq.
Endangered Species Act of 1973	16 U.S.C. 1531 et seq.
Fish and Wildlife Coordination Act of 1958	16 U.S.C. 661 et seq.
Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended	16 U.S.C. 1801 et seq.
Migratory Bird Treaty Act	16 U.S.C. 703 et seq.
Land and Water Conservation Fund Act of 1965	16 U.S.C. 4601 et seq.
Department of Transportation Act, Section 4(f)	49 U.S.C. 303(c)
Farmland Protection Policy Act	7 U.S.C. 4201 et seq.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Community Environmental Response Facilitation Act of 1992	42 U.S.C. 9601 et seq.
Federal Facilities Compliance Action	42 U.S.C. 6961
Hazardous Materials Transportation Act of 1975	49 U.S.C. 5101 et seq.
Oil Pollution Control Act of 1990	33 U.S.C. 2701 et seq.
Pollution Prevention Act	42 U.S.C. 13101 et seq.
Resource Conservation and Recovery Act of 1976, as amended by the Solid Waste Disposal Act of 1980	42 U.S.C. 6901 et seq.
Toxic Substances Control Act	15 U.S.C. 2601 et seq.
American Indian Religious Freedom Act	42 U.S.C. 1996
Antiquities Act of 1906	54 U.S.C. 320301 et seq.
Archaeological and Historic Preservation Act	54 U.S.C. 312501 et seq.
Archaeological Resources Protection Act	16 U.S.C. 470 et seq.
National Historic Preservation Act	54 U.S.C. 300101 et seq.
Native American Graves Protection and Repatriation Act	25 U.S.C. 3001 et seq.
Airport and Airway Improvement Act of 1982, as amended	49 U.S.C. 47101 et seq.
Energy Independence and Security Act	42 U.S.C. 17001 et seq.
Energy Policy Act	42 U.S.C. 15801 et seq.
Aviation Safety and Noise Abatement Act of 1979	49 U.S.C. 47501 et seq. (14 CFR Part 150)
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970	42 U.S.C. 61 et seq.
Clean Water Act	33 U.S.C. 1251 et seq.
National Flood Insurance Act	42 U.S.C. 4001 et seq.

Rivers and Harbors Act	33 U.S.C. 401 et seq.
FEDERAL LAWS AND STATUTES, Continued	
Safe Drinking Water Act of 1974	42 U.S.C. 300 et seq.
Wild and Scenic Rivers Act	16 U.S.C. 1271 et seq.
Federal Aviation Act of 1958, as amended	49 U.S.C. 40101 et seq.
Protection of Historic and Cultural Properties	36 CFR 800
EXECUTIVE ORDERS	
Executive Order 13112, Invasive Species	64 FR 6183 (February 8, 1999)
Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds	66 FR 3853 (January 17, 2001)
Executive Order 12088, Federal Compliance with Pollution Control Standards	43 FR 47707 (October 13, 1978)
Executive Order 13308, Superfund Implementation as amended	68 FR 37691 (June 20, 2003)
Executive Order 11593, Protection and Enhancement of the Cultural Environment	36 FR 8921 et. seq. (May 13, 1971)
Executive Order 13175, Consultation and Coordination with Indian Tribal Governments	65 FR 67249 (November 9, 2000)
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	59 FR 7629 et. seq. (February 11, 1994)
Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks	62 FR 19885 et seq. (April 23, 1997)
Executive Order 11990, Protection of Wetlands	42 FR 26961 et. seq. (May 24, 1977)
Executive Order 11988, Floodplain Management	42 FR 26951 et. seq. (May 25, 1977)
U.S. DEPARTMENT OF TRANSPORTATION AND FAA ORDERS	
U.S. DOT, FAA Order 1050.1F: Environmental Impacts: Policies and Procedures	
U.S. DOT, FAA Order 5050.4B: National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions	
U.S. DOT Order 5650.2: Floodplain Management and Protection	
U.S. DOT Order 5650.2: 6480.4A Airport Traffic Control Tower Siting Process	
U.S. DOT Order 5660.1A: Preservation of the Nation's Wetlands	
U.S. DOT Order 5610: Environmental Justice in Minority and Low-Income Populations	
U.S. DOT Order 5650.1: Protection and Enhancement of the Cultural Environment	
ADVISORY CIRCULARS	
FAA Advisory Circular 150/5200-33B: Hazardous Wildlife Attractants On or Near Airports	
FAA Advisory Circular 150/5300-13, Airport Design	
FAA Advisory Circular 150/5325-4B, Runway Length Requirements for Airport Design	
FAA Advisory Circular 150/5370-10G, Standards for Specifying Construction of Airports	
CODE OF FEDERAL REGULATIONS	
Title 32 CFR Part 989: Environmental Impact Analysis Process (EIAP)	
Title 14 CFR Part 71, Designation of Class A, Class B, Class C, Class D, and Class E Airspace Areas; Airways; Routes; and Reporting Points	
Title 14 CFR Part 77, Objects Affecting Navigable Airspace	
Title 14 CFR Part 150, Airport Noise Compatibility Planning	

Title 40 CFR Part 50 National Primary and Secondary Ambient Air Quality Standards
Title 40 CFR Part 81 Designations of Air Quality Control Regions
CODE OF FEDERAL REGULATIONS, Continued
Title 40 CFR Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans, Subpart B
Title 40 CFR Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System
Title 40 CFR Part 123, State Program Requirements
Title 40 CFR Part 124, Procedures for Decision-making
Title 40 CFR Part 172, Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
Title 40 CFR Parts 1500–1508, President’s Council on Environmental Quality

Source: FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, and 1050.1F Desk Reference, July 2015.

CHAPTER 3: AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION

3.1 INTRODUCTION

Pursuant to the environmental documentation requirements of Federal Aviation Administration (FAA) Orders 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, and 1050.1F, *Environmental Impacts, Policies, and Procedures*, this chapter succinctly describes existing environmental conditions of the potentially affected geographic area for the proposed construction of the Airport Traffic Control Tower (ATCT) at the Phoenix-Mesa Gateway Airport (IWA). This chapter also describes the potential impacts resulting from the Proposed Action and No Action alternatives required to be addressed in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, Exhibit 4-1.

3.2 PROJECT STUDY AREA

A Project Study Area has been defined for this EA. The Project Study Area covers 6.4 acres and is defined as the area where potential environmental impacts resulting from the Proposed Action and No Action alternatives may occur. The Project Study Area is contained entirely on PMGAA property and was previously used as a parking lot. The area is currently impervious surface, has no vegetation or water features, and is not suitable for wildlife habitat. The Project Study Area is shown on Exhibit 1-2 in Chapter 1.

3.3 RESOURCE CATEGORIES NOT AFFECTED

Based on the results of a project site visit, database search, and scoping, the Proposed Action would have no direct or indirect impact to the following categories because these resources do not occur within the Project Study Area or at IWA. **Table 3-1** provides the environmental resource categories that have been eliminated from further consideration and evaluation in this EA.

**Table 3-1
RESOURCE CATEGORIES NOT AFFECTED
Phoenix-Mesa Gateway Airport**

RESOURCE CATEGORY	RATIONALE	EFFECT/ IMPACT
Biological Resources (Federally-listed species & critical habitats)	No suitable habitat and no Federally listed species have been observed in the Project Study Area. No loss of critical habitat.	No Effect
Biological Resources (State – listed species)	No suitable habitat and no state species of concern have been observed in the Project Study Area.	No Effect
Coastal Resources	No Coastal Resources within Project Study Area and/or IWA.	No Impact
Department of Transportation Act, Section 4(f)	There are no public parks, recreation facilities, or wildlife or waterfowl refuges located in the Project Study Area or at IWA. There are four historic hangars located at IWA but are outside the APE. These hangars were constructed in 1942 and 1943. The nearest one of these hangars is 1,200 feet west of the proposed new ATCT. The Proposed Action would not directly or indirectly impact these hangars.	No Use
Farmlands	No Farmlands within Project Study Area or at IWA.	No Impact
Land Use	The Project Study Area is entirely on PMGAA property. No Land Use/Zoning Change necessary.	No Impact
Socioeconomics	The Proposed Action is located on an existing vacant lot at IWA. No changes to community tax base or economic activity would occur. There would be no shift in population. No residential or business relocation required due to the Proposed Action. There would be no disruption of established communities. There would be a short-term temporary increase in employment due to construction activities. The use of the proposed construction haul route would not reduce level of service on any roadways or result in any road closures.	No Impact
Environmental Justice	The Project Study Area is entirely on PMGAA property- No minority and low-income populations affected.	No Impact
Children’s Environmental Health and Safety	No other significant environmental impacts have been identified that would cause disproportionate health and safety risks to children such as air or water quality. The construction site would be fenced off to prevent access to the site by unauthorized personnel.	No Impact

RESOURCE CATEGORY	RATIONALE	EFFECT/ IMPACT
Noise and Noise-Compatible Land Use	No change in aircraft operations, fleet mix, or runway use. There would be a temporary increase in noise levels due to construction activity and construction vehicles in use during the construction process. The nearest residential area is located approximately 9,000 feet south-southeast of the construction site (Arizona State University Housing is approximate 3,700 feet west of the construction site). Due to the location of the proposed construction site in relation to the nearest residential areas and the noise of normal airport operations, noise from construction activity would not be noticeable at these residential areas.	No Impact
Surface Waters	There are no streams, rivers, lakes, ponds, estuaries, oceans, or other surface waters in the Project Study Area. No new additional impervious surface would be created due to the Proposed Action. During construction, PMGAA would ensure temporary measures would be implemented to control water pollution, soil erosion, and siltation, and limit indirect impacts through the use of silt fences, berms, dikes, dams, sediment basins, gravel, and/or other erosion control devices or methods. All necessary construction permits would be obtained as appropriate.	No Impact
Groundwater	No sole-source aquifers directly beneath the Project Study Area. Groundwater table is located approximately 140 to 160 feet below ground surface. Proposed Action construction would not come near that depth. Temporary measures discussed above would be employed during construction to limit runoff and erosion and limit any indirect impacts.	No Impact
Floodplains	The Project Study Area was previously used as a parking lot and is currently impervious surface. As a result, there would be no increase in impervious surfaces or stormwater runoff. IWA is depicted on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel #04013C2770L. The Project Study Area is located in an area designated as Zone D and not within a 100-year floodplain. There would be no encroachment on floodplains due to the Proposed Action and construction and operation of the Proposed Action would not cause an impact on natural and beneficial floodplain values. (See Appendix A for concurrence from the Flood Control District of Maricopa County).	No Impact
Wetlands	No Wetlands are located within Project Study Area or at IWA. There would be no indirect impacts on wetlands from the Proposed Action.	No Impact
Wild and Scenic Rivers	No Wild and Scenic River segments in the Project Study Area or at IWA.	No Impact

Source: Phoenix-Mesa Gateway Airport Authority and Landrum & Brown, 2017.

3.4 RESOURCE CATEGORIES POTENTIALLY AFFECTED

The following sections describe and disclose the potential environmental impacts resulting from the Proposed Action and the No Action alternatives. The analysis includes considerations of direct, indirect, and cumulative impacts including potential impacts from construction and demolition activities.

Direct impacts, as defined by 40 CFR § 1508.8(a), CEQ Regulations, are caused by the Proposed Action and occur at the same time and place. Indirect impacts per 40 CFR § 1508.8(b) are caused by the Proposed Action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts per 40 CFR § 1508.7 are the impacts on the environment which results from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

3.5 AIR QUALITY

The Clean Air Act, including the 1990 Amendments, (CAA) provides for the establishment of standards and programs to evaluate, achieve, and maintain acceptable air quality in the U.S. Under the CAA, the United States Environmental Protection Agency (USEPA) established a set of standards, or criteria, for six pollutants determined to be potentially harmful to human health and welfare.⁴ The USEPA considers the presence of the following six criteria pollutants to be indicators of air quality ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM₁₀ and PM_{2.5})⁵, sulfur dioxide (SO₂), and, lead (Pb).⁶

If the air quality assessment for the Proposed Action were to show that any of the Federal *de minimis* thresholds established under the CAA were equaled or exceeded, further, more detailed analysis to demonstrate conformity would be required, which is referred to as a General Conformity Determination.⁷ Conversely, if the analysis were to show that none of the relevant thresholds were equaled or exceeded, the Proposed Action at IWA would be presumed to conform to the applicable State Implementation Plan (SIP) and no further analysis would be required under NEPA and the CAA.

⁴ USEPA, Code of Federal Regulations, Title 40, Part 50 (40 CFR Part 50) *National Primary and Secondary Ambient Air Quality Standards (NAAQS)*, July 2011.

⁵ PM₁₀ and PM_{2.5} are airborne inhalable particles that are less than ten micrometers (coarse particles) and less than 2.5 micrometers (fine particles) in diameter, respectively.

⁶ Airborne lead in urban areas is primarily emitted by vehicles using leaded fuels. The chief source of lead emissions at airports would be the combustion of leaded aviation gasoline in small piston-engine general aviation aircraft.

⁷ 40 CFR Part 93.153.

Existing Conditions

IWA is located within Maricopa County, Arizona, which is included in the Maricopa Intrastate Air Quality Control Region.⁸ The USEPA has designated Maricopa County as moderate non-attainment for O₃ and serious non-attainment for course PM₁₀. In the past, Maricopa County was designated as nonattainment for CO; however, on April 8, 2005, the USEPA determined the area had attained the CO standard and the region was redesignated to attainment. The area now operates under a maintenance plan for CO. Maricopa County is designated attainment for all other Federally regulated pollutants, which are, SO₂, NO₂, fine PM_{2.5}, and Pb.⁹

There are no *de minimis* thresholds to which a Federal agency would compare ozone emissions. This is because ozone is not directly emitted from a source. Rather, ozone is formed through photochemical reactions involving emissions of the precursor pollutants nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of abundant sunlight, and heat. Therefore, emissions of ozone on a project level are evaluated based on the rate of emissions of the ozone precursor pollutants, NO_x and VOC.

Environmental Consequences

Proposed Action

The impacts to air quality due to the Proposed Action were determined in accordance with the guidelines provided in FAA, *Aviation Emissions and Air Quality Handbook Version 3*,¹⁰ and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, which together with the guidelines of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, constitute compliance with all the relevant provisions of NEPA and the CAA.

The Proposed Action would not change vehicles accessing IWA, or cause a change in aircraft activity, fleet mix or a change in runway use patterns or taxi time. Therefore, no impacts from ground access vehicles or aircraft emissions would occur. Therefore, the potential increase in emissions would be limited to temporary emissions from construction activity. A construction emissions inventory was calculated for the Proposed Action using USEPA NONROAD and MOVES emission factors to calculate emissions from construction equipment. Construction of the new ATCT is expected to be completed in one year, followed by demolition of the existing ATCT. Emissions were assumed to occur all in one year to show a worst-case scenario. The emissions estimated to occur during construction of the Proposed Action and demolition activities are provided in **Table 3-2** along with the relevant *de minimis* thresholds.

⁸ U.S. Environmental Protection Agency (USEPA), 40 CFR § 81.36, *Maricopa Intrastate Air Quality Control Region*.

⁹ USEPA, Arizona Nonattainment/Maintenance Status for Each County by Year for All Pollutants, (Current as of June 20, 2017). https://www3.epa.gov/airquality/greenbook/anayo_az.html

¹⁰ FAA, *Aviation Emissions and Air Quality Handbook Version 3 Update 1*, January 2015.

**Table 3-2
CONSTRUCTION EMISSIONS INVENTORY SUMMARY
Phoenix-Mesa Gateway Airport**

ANNUAL EMISSIONS SUMMARY				
CONSTRUCTION YEAR	CRITERIA AND PRECURSOR POLLUTANTS (tons per year)			
	CO	VOC	NO _x	PM ₁₀
	CAA DE MINIMIS THRESHOLDS			
	100	100	100	70
2020	6.96	1.52	7.86	1.06

Note: Emissions of ozone on a project level are evaluated based on the rate of emissions of the ozone precursor pollutants, VOC and NO_x.

Source: Landrum & Brown Analysis, 2017.

The air quality assessment demonstrates that the Proposed Action would not cause an increase in air emissions above the applicable *de minimis* thresholds. Therefore, the Proposed Action conforms to the SIP and the CAA and would not create any new violation of the National Ambient Air Quality Standards (NAAQS), delay the attainment of any NAAQS, nor increase the frequency or severity of any existing violations of the NAAQS. As a result, no adverse impact on local or regional air quality is anticipated due to construction of the Proposed Action. No further analysis or reporting is required under the CAA or NEPA.

No Action

The No Action alternative does not involve any construction activities and therefore would not cause any impacts to air quality not already occurring or expected to occur.

Mitigation

While the construction of the Proposed Action would not exceed *de minimis* thresholds, it would be anticipated to contribute to fugitive dust in and around the construction site. The PMGAA as the Sponsor would ensure that all possible measures would be taken to reduce fugitive dust emissions by adhering to guidelines included in FAA Advisor Circular 150/5370-10G, *Standards for Specifying Construction of Airports*,¹¹ and Maricopa County dust control regulations.

Methods of controlling dust and other airborne particles would be implemented to the maximum possible extent and may include, but not limited to, the following:

- Using water sprinkler trucks.
- Using covered haul trucks.
- Using plastic sheet coverings.

¹¹ FAA Advisory Circular, *Standards for Specifying Construction of Airports*, Item P-156, *Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*, Advisory Circular 150/5370-10G (July 21, 2014)

3.6 CLIMATE

Existing Conditions

The Intergovernmental Panel on Climate Change (IPCC) estimates that aviation accounted for 4.1% percent of global transportation Greenhouse gas (GHG) emissions. In the United States, USEPA data indicate that commercial aviation contributed 6.6% percent of total CO₂ emissions in 2013, compared with other sources, including the remainder of the transportation sector (20.7 percent), industry (28.8 percent), commercial (16.9 percent), residential (16.9 percent), agricultural (9.7 percent), and U.S. territories (.05 percent).¹²

Scientific research is ongoing to better understand climate change, including any incremental atmospheric impacts that may be caused by aviation. Uncertainties are too large to accurately predict the timing, magnitude, and location of aviation's climate impacts; however, it is clear that minimizing GHG emissions and identifying potential future impacts of climate change are important for a sustainable national airspace system.

Increasing concentrations of GHGs in the atmosphere affect global climate.¹³ GHG emissions result from anthropogenic sources including the combustion of fossil fuels. GHGs are defined as including CO₂, methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).¹⁴ CO₂ is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

Climate change is a global phenomenon that can have local impacts. Scientific measurements show that Earth's climate is warming, with concurrent impacts including warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Research has shown there is a direct correlation between fuel combustion and GHG emissions.

The FAA has not identified significant thresholds for climate (FAA Order 1050.1F, Exhibit 4-1).

Environmental Consequences

Proposed Action

The Proposed Action would not change vehicles accessing IWA, or cause a change in aircraft activity, fleet mix or a change in runway use patterns or taxi time. Therefore, no climate impacts from ground access vehicles or aircraft emissions would occur. However, temporary GHG emissions would occur due to construction

¹² GHG allocation by economic sector. Environmental Protection Agency (2015). *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2013*. Available at: <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html#fullreport>

¹³ IPCC (2014). *Fifth Assessment Report*. Available at: <https://www.ipcc.ch/report/ar5/syr/> United States Global Change Research Program (2009). *Global Climate Change Impacts in the United States*. Available at: <http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climate-change-impacts-in-the-us-2009>.

¹⁴ Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*. Available at: <https://www.whitehouse.gov/the-press-office/2015/03/19/executive-order-planning-federal-sustainability-next-decade>

activities. **Table 3-3** provides an estimate of GHG emissions due to construction and demolition activities of the Proposed Action. These estimates are provided for information only as no federal NEPA standard for the significance of GHG emissions from individual projects on the environment has been established.

**Table 3-3
CONSTRUCTION GHG EMISSIONS INVENTORY SUMMARY
Phoenix-Mesa Gateway Airport**

ANNUAL EMISSIONS SUMMARY				
CONSTRUCTION YEAR	GREENHOUSE GAS POLLUTANTS (metric tons per year)			
	CO₂	CH₄	N₂O	CO₂E
2020	4,668.94	0.10	0.02	4,677.40

CO₂: Carbon Dioxide

CH₄: Methane

N₂O: Nitrous oxide

CO₂E: Carbon Dioxide equivalent

Note: Global warming potential for CO₂=1; CH₄= 25; N₂O=298

Source: Landrum & Brown Analysis, 2017.

The potential for flooding, increases in temperature, and erosion associated with climate change pose no threat to IWA. The Proposed Action would not have an adverse impact to climate change nor would the potential changes in climate have an impact on the Proposed Action.

No Action

The No Action alternative does not involve any construction activities and therefore would not cause any impacts to climate not already occurring or expected to occur.

3.7 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

FAA Order 1050.1F does not provide a specific threshold of significance for hazardous material and solid waste impacts. However, the FAA Order does offer that if actions violate applicable Federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management; involve property listed (or potentially listed) on the National Priorities List (NPL); produce an appreciably different quantity or type of hazardous waste; generate an appreciably different quantity or type of solid waste, or use a different method of collection or disposal and/or would exceed local capacity; or adversely affect human health and the environment, the action would be considered significant.

Existing Conditions

In the past, the PMGAA has identified areas of potential concern at or near IWA resulting from its former use as Williams Air Force Base. These sites include landfills, fire protection training areas, pesticide burial areas, former skeet ranges, firing ranges, and hazardous materials storage areas. These areas require special handling

and treatment prior to being used for other purposes. Remediation efforts due to fuel storage and groundwater contamination are currently ongoing at several locations near the proposed ATCT site. PMGAA conducted a Phase I Environmental Due Diligence Audit (EDDA)¹⁵ for the proposed ATCT location. The Phase I EDDA identified any contaminated sites at the Project Study Area or in the immediate vicinity of the Project Study Area. The closest remediation activity associated with the former base is located 1,500 feet west-southwest of the Project Study Area. Groundwater located approximately 150 feet below ground surface is also contaminated with jet fuel and is actively under remediation. Based on the EDDA and coordination with PMGAA staff, there are no known hazardous waste sites, including those listed on the NPL within the Project Study Area.

Environmental Consequences

Proposed Action

The Proposed Action would not interfere with the existing remediation efforts. Recent surveys of the existing ATCT including an asbestos survey¹⁶ and a lead based paint survey¹⁷ indicate the potential for asbestos-containing materials in the drywall of the existing ATCT and that lead based paint may be present on stairwell railings. These materials are not considered to be uncommon and disposal practices exist to handle and dispose of the materials safely. All asbestos and lead based paint would be handled and disposed of during demolition activities per applicable Federal, state, or local regulations including 29 CFR 1926.1101.

Additional solid waste would be generated from construction and demolition debris. Construction activities associated with the Proposed Action are expected to include the short-term use or generation of hazardous and non-hazardous materials and waste common to construction including petroleum hydrocarbon-based fuels, lubricants, and oils, paints, and cleaning solvents for the construction equipment. These materials would be handled and stored in accordance with all applicable Federal, state, or local regulations. Appropriate materials management measures would be followed to prevent pollution and to minimize the use and manage disposal of hazardous and non-hazardous substances.

The Proposed Action would neither generate an unmanageable volume of solid waste nor affect IWA's existing solid waste management program. This solid waste would be disposed of per applicable regulations. Facilities and processes are available within the City of Mesa or in Maricopa County to accommodate the proper disposal of solid waste. Recycling of materials from demolition activities would be utilized to the extent possible.

No significant impacts related to hazardous materials or solid waste would occur as a result of the Proposed Action because the Proposed Action would not have the potential to 1) violate applicable laws and regulations; 2) the Proposed Action does not involve a site listed on the National Priorities List; 3) the Proposed Action does

¹⁵ Amec Foster Wheeler Environment & Infrastructure, Inc. Phase I EDDA AFTIL Tower Site, November 5, 2015.

¹⁶ Envirocheck, Limited Asbestos Survey, May 24 2017.

¹⁷ Envirocheck, Limited Lead-Based Pain Survey, May 23, 2017 and MSE environmental, Limited Lead Based Paint Inspection Report, May 9, 2017.

not produce an appreciably different quantity or type of hazardous waste; 4) generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would not exceed local capacity; or 5) adversely affect human health and the environment.

No Action

Under the No Action alternative, there would be no development that would impact any sites containing hazardous materials and no additional solid waste would be generated.

Mitigation

Prior to the demolition of the existing ATCT, PMGAA or its contractor would conduct additional surveying and testing to ensure all hazardous materials are identified and properly disposed of to prevent contamination. It would be the responsibility of PMGAA to ensure that the contractor would arrange for the transportation and disposal of all hazardous materials associated with the demolition in accordance with Federal, state, and other applicable regulations.

3.8 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The National Historic Preservation Act of 1966 (54 USC §§ 300101 et seq.) (often referred to as Section 106 process) requires Federal agencies to take into account the effects of their undertakings on historic properties that are listed in or determined eligible for inclusion in the National Register of Historic Places (NRHP). The requirements of Section 106 are implemented under Title 36 CFR Part 800, *Protection of Historic Properties*. The FAA has not established a significant threshold for Historical, Architectural, Archaeological, and Cultural Resources. However, the result of Section 106 process (i.e., an adverse effect finding) would be considered in determining significance threshold.

Existing Conditions

The Area of Potential Effect (APE) consists of an approximately 6.4-acre area located within PMGAA property as shown on Exhibit 1-2 in Chapter 1. There are four historic hangars that are outside the APE. These hangars were constructed in 1942 and 1943. The nearest one of these hangars is 1,200 feet west of the proposed new ATCT. The Proposed Action would not impact these hangars.

The existing ATCT was constructed in 1970 and is not eligible for inclusion in the NRHP. From previous surveys conducted at IWA there are no cultural or archeological sites within the APE.

Environmental Consequences

Proposed Action

No known archeological sites are located within the APE; therefore, project activities will not affect archeological resources. The existing tower is 47 years old, thus not eligible for inclusion in the NRHP. As a result, the FAA has made a finding of "no

historic properties affected" for the proposed action. The State Historic Preservation Office (SHPO) concurred with the FAA's finding on June 29, 2017. (**Appendix A**).

In addition, the FAA has conducted government-to-government consultation with the following Native American tribes: Gila River Indian Community, Ak-Chin Indian Community, Hopi Tribe, Salt River Pima-Maricopa Indian Community, and Tohono O'odham Nation. Response letters from the Gila River Indian Community and Hopi Tribe were received. The Gila River Indian Community identified no religious or culturally significant sites with the project area and looked forward to reviewing the EA when complete. The Hopi Tribe requested additional consultation if any resources were found. SHPO and government-to government correspondence is included in **Appendix A**.

No Action

Under the No Action alternative, there would be no development and no impacts to historic resources would occur.

Unanticipated Discovery Measure

If previously unidentified cultural materials are encountered during construction, work shall cease immediately at that location, and the FAA, SHPO, and/or appropriate tribes will be notified as soon as possible to determine the appropriate course of action.

3.9 NATURAL RESOURCES AND ENERGY SUPPLY

The FAA has not established a significance threshold for consumable natural resources and energy supply. Significant impacts would occur when a proposed action's construction or operation would cause demand for scarce consumable natural resources and energy to exceed available or future supplies.

Existing Conditions

The area around IWA is a well-developed urban area with adequate access to natural resources for stationary facility operation, aircraft operations, and construction projects. Energy sources are not in short supply at IWA.

Stationary facilities require electricity and natural gas for lighting, cooling, and heating. Electricity provides cooling and lighting for buildings, lighting for aircraft and vehicle parking areas, and lighting systems for the airfield (runway, taxiways, and aircraft aprons). The Salt River Project provides electricity to IWA. Natural gas provides heat and hot water for airport buildings. Southwest Gas Corporation, a subsidiary of Southwest Gas Holdings Inc., provides natural gas to IWA.¹⁸ Southwest Gas serves more than 1.9 million customers in Arizona, Nevada, and portions of California.

¹⁸ Southwest Gas Corporation, *About Us*, On-line at: <https://www.swgas.com/en/about-us/>. Retrieved May , 2017.

Environmental Consequences

Proposed Action

The Proposed Action would consume natural resources for both construction and operation of the new ATCT. Final design of the proposed ATCT is not complete so specific types and quantities of materials and natural resources needed for construction are not known. However, the Proposed Action would require the use of readily available construction materials such as sand, stone, aggregate, water, wood, steel, glass, and other building materials. These materials are not in short supply in the Phoenix or Mesa regions.

Operation of the Proposed Action would require electricity and natural gas for heating, cooling, and interior and exterior lighting of the new ATCT. The use of electricity and natural gas for lighting, cooling, and heating would be very similar to that currently being used by the existing ATCT. Heating and cooling is primarily used just for the cab space and not the tower. The Proposed Action would increase the cab space from 225 square feet to 550 square feet. It is anticipated both Salt River and Southwest Gas would have no difficulty in providing adequate capacity to meet the demand of the additional 225 square feet of cab space.

The Proposed Action would not consume a notable quantity of natural resources, nor would it exceed local supplies for fuel and energy. Therefore, the Proposed Action would not cause a significant increase in resources or energy consumption for IWA or result in demand exceeding available or future supplies of these resources.

It is anticipated that, if approved, PMGAA would consider as options to the extent practicable during the design process, construction/operation techniques such as low energy lighting fixtures and other techniques to improve energy savings and water efficiency.

No Action

With the No Action Alternative, the existing conditions at IWA would remain in place. Therefore, there would be no impacts to natural resources and energy supply not already occurring or expected to occur.

3.10 VISUAL EFFECTS (INCLUDING LIGHT EMISSIONS)

FAA Order 1050.1F states that the Visual Effects environmental impacts category deals with the extent to which the Proposed Action would have the potential to either 1) produce light emissions that create annoyance or interfere with normal activities or affect the visual character of the area, including the importance, uniqueness and aesthetic value of the affected visual resources; or 2) affect the nature of the visual resources or visual character of the area, including the importance, uniqueness and aesthetic value of the affected visual resources, including by contrasting with, or detracting from, the visual resources and/or the visual character of the existing environment or blocking or obstructing the views of visual resources, including whether those resources would still be viewable from other locations.

Existing Conditions

For clarity and uniformity, this section is broken into the two categories set forth in FAA Order 1050.1F: 1) light emissions and 2) visual character.

Light Emissions: IWA is illuminated by various types of lighting. Some of those lights are critical to safe airport operation, while others provide light for nighttime use of the airport facilities. IWA has approach lights, terminal area and landside lighting fixtures, taxiway and ramp lighting, runway/taxiway signage, and obstruction lighting. Building and apron security lighting consists of roof perimeter lights and lighting from the interior of the structures, including hangers. Most light fixtures are shielded to direct light within the designated area on PMGAA property. Roadway lighting and parking lot lights consist of lower intensity white light. Such lighting, similar to building light, is directed downward and does not typically spill more than 30 to 50 feet away from the light source. The existing ATCT has a rotating beacon on top of the tower to indicate the tower's position at night.

Visual Character: IWA is largely surrounded by aviation land uses to the west, including commercial land uses occupied by large structures and hangars. There is open land to the north and to the east. The nearest residential land uses to the existing ATCT are located approximately 9,000 feet to the southeast in the Queens Park neighborhood (Arizona State University Polytechnic campus housing is located approximately 3,700 feet to the west). Photographs provided in **Appendix B** were taken around the perimeter of IWA to document the existing visual character of the area.

Environmental Consequences

Proposed Action

Light Emissions: The Proposed ATCT would have a rotating beacon on top of the tower to indicate the tower's position at night. Similar to the existing tower the lighting from the Proposed Action would be visible from some of the nearby residential and commercial areas. The rotating beacon on top of the proposed tower would be similar in brightness and direction to the existing ATCT but at a higher elevation. Therefore, the Proposed Action would not interfere with normal activities from light emissions and would not affect the visual character of the area, including the importance, uniqueness, and aesthetic value of the area. The Proposed Action does not include high-intensity strobe lights that would shine directly into residences. Therefore, no special lighting study is warranted and the Proposed Action would not result in significant light emission impacts.

Visual Character: The existing ATCT and a rendering of the Proposed Action are shown on **Exhibit 3-1**. An analysis was conducted to determine the potential visual impact of the Proposed Action. As discussed in **Appendix B**, the Proposed Action would not significantly alter, contrast, or obstruct the existing views due to the distance from residential areas and the obstacles in the way and because the new tower is next to the existing tower and similar in character. Therefore, there would be no significant change to the visual character with implementation of the Proposed Action.

No Action

Under the No Action alternative, there would be no development. The existing lighting and visual character remain the same.

3.11 CUMULATIVE IMPACTS

The evaluation of cumulative impacts in this EA considers the past, present, and reasonably foreseeable future projects within the Project Study Area and/or IWA. Past actions are those actions known to have occurred within the past five years. Present actions are those projects or actions which are ongoing and under construction. Reasonably foreseeable future actions are those actions that PMGAA has determined may occur within the next five years.

Existing Conditions

The Past, Present, and Reasonably Foreseeable Future Actions included for the EA are listed in **Table 3-4** and are shown on **Exhibit 3-2**.

Environmental Consequences

Proposed Action

Significant cumulative impacts are determined according to the same thresholds of significance used in the evaluation of each environmental resource category. As disclosed in this EA, the Proposed Action would not have the potential to contribute significant impacts on the environment and would have effects on the environment similar to those that already exist.

All of the past, present, and reasonably foreseeable future action projects identified in **Table 3-4** have independent utility from, and are not connected with the Proposed Action. It is assumed reasonably future projects would comply with all local, state, and Federal standards. **Table 3-5** provides the potential cumulative impacts of the Proposed Action.

EXISTING CONDITIONS



PROPOSED ACTION



Note: Final design of the proposed ATCT is not complete. For the Proposed Action, a computer generated rendering of the proposed ATCT is provided using a picture of a similar ATCT recently built at Palm Beach International Airport.
Source: Photos and rendering courtesy of Landrum & Brown Inc, 2017, FAA 2016

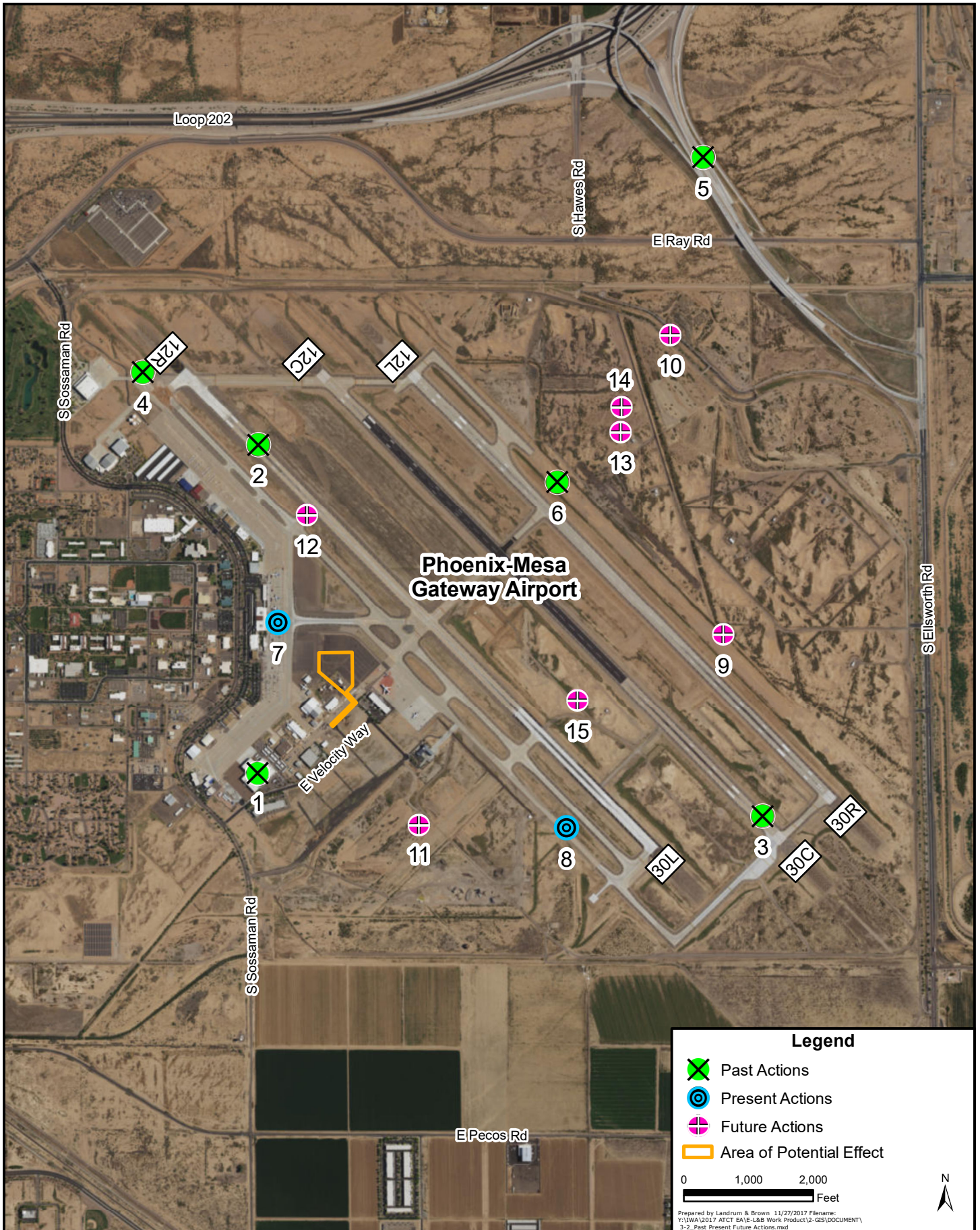
DRAFT

Prepared by Landrum & Brown 8/15/2017 Filename:
Y:\WA\2017 ATCT EA\LE-L&B Work Product\2-GIS\DOCUMENT\
3-1_Visual Character.mxd

**Table 3-4
PAST, PRESENT, AND FORESEEABLE FUTURE ACTIONS
Phoenix-Mesa Gateway Airport**

SITE ID	PROJECT TITLE	DESCRIPTION	STATUS
<i>Past Actions</i>			
1	Construction of Able Engineering Building	Constructed new industrial office building	Complete
2	Rehabilitation of Runway 12R	Replaced 1,000 feet of runway including shoulders, lighting, drainage and marking	Complete
3	Rehabilitation of Runway 30C	Replaced 1,000 feet of runway including shoulders, lighting, drainage and marking	Complete
4	Rehabilitation of Taxiway G	Rehabilitation at Taxiway B Hammerhead including shoulders, lighting, drainage, signage and marking	Complete
5	SR202 Freeway Connection	Arizona Department of Transportation constructed elevated ramps connecting SR202 to SR24 to South Ellsworth Road	Complete
6	Taxiway C Construction, Phase II	Construction of new taxiway from Taxiway J to Taxiway L including shoulders, lighting, drainage, signage and markings	Complete
7	North Apron Rehabilitation	Replace concrete apron from Spot 10 north to T-Hangars	Complete
<i>Present Actions</i>			
8	Rehabilitation of Taxiway A	Replacing 3,000 feet of taxiway from Taxiway N to Taxiway L including shoulders, lighting, drainage, signage and markings	Earliest completion early 2018
<i>Future Actions</i>			
9	Taxiway C Construction, Phase III	Construction of new taxiway from Taxiway L to Taxiway P including shoulders, lighting, drainage, signage and markings	Estimated in 2018
10	Construction of Ellsworth Channel	Relocation of a portion of the existing channel to support the development of the northeast area of IWA to include northeast area entrance	Estimated in 2019
11	Development of the Gateway Aerospace Park	Construct industrial park	Estimated in 2019
12	Rehabilitation of Taxiway H	Reconstruction of taxiway between Taxiway B and Runway 12R to include shoulders, lighting, drainage, signage and markings	Estimated in 2020
13	Construction of northeast area access road and terminal road	Construct a new access road from Ellsworth Road into the northeast area and construct a new roadway for the future terminal	Estimated in 2020
14	Construction of northeast area apron, Phase I and II	Construct a new apron for the future terminal	Estimated in 2021
15	Construction of Taxiway L Extension, Phase III	Construct taxiway between Runway 30C and 30L including shoulders, drainage and lighting	Estimated in 2023

Source: Phoenix-Mesa Gateway Airport Authority, 2017.



Legend

- Past Actions
- Present Actions
- Future Actions
- Area of Potential Effect

0 1,000 2,000
Feet

Prepared by Landrum & Brown, 11/27/2017 File name: Y:\UWA\2017 ATCT EA\E-L&B Work Product\12-GIS\DOCUMENT\3-2_Past Present Future Actions.mxd



**Table 3-5
CUMULATIVE IMPACTS
Phoenix-Mesa Gateway Airport**

RESOURCE CATEGORY	CUMULATIVE EFFECTS
Air Quality	Construction of the Proposed Action would cause a temporary increase in emissions. The results of the air quality analysis completed for this EA show that implementation of the Proposed Action as compared to the No Action would result in <i>de minimis</i> (negligible and insignificant) increases in air emissions during construction. Therefore, the <i>de minimis</i> emissions defined for the Proposed Action, when combined with the present and future projects would not have the potential to change the current status of the air quality in Maricopa County and would not result in significant cumulative impacts.
Climate	The potential increase in GHG emissions due to construction activities would be temporary. The cumulative impact of this Proposed Action on the global climate when added to the other past, present, and reasonably foreseeable future actions is not currently scientifically predictable, however it would represent an extremely small percentage of U.S. and global GHG emissions.
Hazardous Materials, Solid Waste, and Pollution Prevention	The potential increase in hazardous materials and solid waste are not significant when properly disposed of. Therefore, combining the impacts of the past, present, or reasonably foreseeable projects with those of the Proposed Action would not result in additional impacts from hazardous materials.
Historical, Architectural, Archaeological, and Cultural Resources	The Proposed Action would not impact Historical, Architectural, Archaeological, and Cultural Resources. Therefore combining the Proposed Action to the past, present, or reasonably foreseeable projects would not result in any additional impacts to these resources.
Natural Resources and Energy Supply	The assessment of natural resource and energy supply for the Proposed Action in this EA concluded that, while there would be relatively small increases in the need for building materials such as sand, gravel, metal, wood, or other materials, the necessary resources are not in low supply. Other projects may have the potential to increase demand for energy and consumption of natural resources. However, because IWA is within a highly urbanized setting in which energy and natural resources are not in short supply, it is not anticipated that the cumulative demand for energy or natural resources would exceed capacity of the local energy suppliers or deplete the supply of natural resources.
Visual Effects	The visual analysis indicates the Proposed Action would not alter the existing views due to the distance from residential areas and the obstacles in the way and because the new tower is next to the existing tower and similar in character. Therefore combining the impacts of the past, present, or reasonably foreseeable projects with those of the Proposed Action would not result in additional visual impacts.

Source: Phoenix-Mesa Gateway Airport Authority and Landrum & Brown, 2017.

CHAPTER 4: COORDINATION AND PUBLIC INVOLVEMENT

4.1 AGENCY AND PUBLIC SCOPING

In an effort to identify potential issues associated with the Proposed Action, letters were sent in April 2017 to key stakeholders and agencies seeking input regarding the potential environmental resources, which may be impacted by the Proposed Action. A total of six comments were received. A list of agencies and stakeholders contacted can be found in **Appendix A**. In general, comments received focused on three specific areas listed below. Copies of the responses are provided in **Appendix A**.

- Comments in support of the Proposed Action
- No comments or concerns
- Comments requesting continued notification and opportunities for review and comment as the EA progresses

4.2 AVAILABILITY OF THE DRAFT EA

A Notice of Availability (NOA) announcing the availability of the Draft EA was published on October 19, 2017 in the Arizona Business Gazette (See **Appendix A**). All stakeholders and agencies contacted or who submitted comments during the EA scoping process were sent a notice of the draft EA availability for review via email or letter. The Draft EA was available for review by the public and agencies for 30 days online at PMGAA's website:

<http://www.gatewayairport.com>

Copies of the Draft EA were also available for public review at PMGAA and FAA offices and the following local libraries during normal business hours.

Phoenix-Mesa Gateway Airport Authority
5835 South Sossaman Road
Mesa, AZ 85212-0919

City of Mesa Library
64 East 1st Street
Mesa, AZ, 85201

Federal Aviation Administration
Western-Pacific Region, Airports Division
Phoenix Airports District Office
3800 N Central Avenue
Suite 1025, 10th Floor
Phoenix, AZ 85012

Southeast Regional Library
775 N. Greenfield Road
Gilbert, AZ 85234

Queen Creek Library
21802 S. Ellsworth Road
Queen Creek, AZ 85142

4.3 COMMENTS RECEIVED ON THE DRAFT EA

Anyone wishing to comment on the Draft EA was offered the opportunity to do so in writing. The written comment deadline was 5:00 p.m. Mountain Standard (MST), Monday, November 20, 2017. Comments could be submitted by mail to the following:

Mr. Tony Bianchi
Phoenix-Mesa Gateway Airport Authority
5835 South Sossaman Road
Mesa, Arizona 85212-0919

Or by email to:

tbianchi@gatewayairport.com

No comments related to the Draft EA were received by the FAA or PMGAA.

4.4 FINAL EA

The Draft EA has been revised as necessary to address any inconsistencies or reflect updated information since publication of the Draft EA. Specifically, Exhibit 3-2 was updated to more accurately reflect the locations of the past, present, and future action locations. The Final EA was submitted by PMGAA to the FAA for their review and determination of whether to issue a Finding of No Significant Impact (FONSI) or to prepare an Environmental Impact Statement (EIS). Copies of the Final EA and the FAA's finding will be available for review at the PMGAA offices and the FAA Airports District Office in Phoenix, Arizona.

CHAPTER 5: LIST OF PREPARERS

The following section provides a list of individuals that were primarily responsible for preparing the EA.

5.1 FEDERAL AVIATION ADMINISTRATION PRINCIPAL REVIEWER

Dee Phan, Environmental Protection Specialist, Phoenix Airports District Office (M.A. Environmental Studies; B.S. Earth Science). Ms. Phan has 12 years of experience. She is responsible for detailed evaluation of Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements as well as coordination with various federal and state agencies in Arizona and Nevada for FAA airport projects.

5.2 PHOENIX-MESA GATEWAY AIRPORT AUTHORITY

Tony Bianchi, GISP, Airport Planner (B.S. Geography; M.P.A). Mr. Bianchi has more than 15 years of project management experience and analysis within the fields of planning, development, engineering, and information technology. He is responsible for project oversight for PMGAA.

5.3 LANDRUM & BROWN, INCORPORATED

Rob Adams, Principal, Environmental Planning Services, Landrum & Brown (B. Urban Planning). Mr. Adams has over 20 years of experience. He is the L&B Officer in Charge responsible for project oversight.

Chris Babb, Managing Consultant, Environmental Planning Services, Landrum & Brown (B.S. Aerospace; M.S. Aeronautical Science). Mr. Babb has over 15 years of experience. He is the Project Manager responsible for management and technical documentation of the EA.

Chuck Lang, Senior Consultant, Environmental Planning Services, Landrum & Brown (B.S. Geography). Mr. Lang has over 16 years of experience. He is responsible for the preparation of GIS mapping and land use analysis. Additionally, he is responsible for the preparation of exhibits for the EA.

Gabriela Elizondo, Analyst, Environmental Planning Services, Landrum & Brown (B.S. Civil Engineering; M. Community Planning). Ms. Elizondo has one year of experience. She is responsible for supporting the preparation of NEPA analyses for the EA. She will build upon previous experience that includes technical analysis/review and development of NEPA documents and airport/community noise and air quality studies for the EA.

CHAPTER 6: REFERENCES

The following provides a list of references used in preparing the EA. The federal laws and statutes, executive orders, USDOT and FAA orders, FAA Advisory Circulars, and other federal guidance considered during the preparation of this EA are listed in Chapter 2, Table 2-2.

6.1 REFERENCES

Amec Foster Wheeler Environment & Infrastructure, Inc. *Phase I Environmental Due Diligence Audit AFTIL Tower Site*, November 5, 2015.

Arizona Game and Fish Department, *Arizona Environmental Online Review Tool Report*, April 24, 2017.

Coffman Associates, Inc., *Airport Master Plan for Phoenix-Mesa Gateway Airport*, Mesa, Arizona, February 2009.

Envirocheck, *Limited Asbestos Survey*, May 24 2017.

Envirocheck, *Limited Lead-Based Pain Survey*, May 23, 2017.

Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook Version 3 Update 1*, January 2015.

MSE environmental, *Limited Lead Based Paint Inspection Report*, May 9, 2017.

Matos, Maylisse, *Airport Traffic Control Tower Site Survey Final Report*, April 15, 2016.

Phoenix Mesa Gateway Airport, *Historic Properties and Archaeological Sites*, May 2013.

Phoenix Mesa Gateway Airport, *Past Present Future Projects spreadsheet*, May 30, 2017.

U.S. Department of Transportation, Federal Aviation Administration, Terminal Area Forecast Summary, Fiscal Years 2016–2045, <https://taf.faa.gov/> (accessed May 11, 2017).

U.S. Environmental Protection Agency, Criterial Pollutant Nonattainment Summary Report, http://www3.epa.gov/airquality/greenbook/anayo_az.html (accessed June 30, 2017).

U.S. Fish & Wildlife Service, *Official species list*, April 21, 2017.

APPENDIX A PUBLIC AND AGENCY COORDINATION

A.1 SCOPING CONTACT LIST

Scoping letters were sent to the following:

Keisha Tatem
U.S. Department of Agriculture
Natural Resources Conservation
Service
Arizona State Office
230 N. First Avenue, Suite 509
Phoenix, AZ 85003

Alan Hansen
Team Leader
U.S. Department of Transportation
Federal Highway Administration,
Arizona Division
Planning, Environment, Air Quality and
Realty
4000 N. Central Avenue, Suite 1500
Phoenix, AZ 85012

Miseal Cabrera, P.E.
Director
Arizona Department of Environmental
Quality
1110 W. Washington Street
Phoenix, AZ 85007

Lisa Atkins
Commissioner
Arizona State Land Department
1616 W. Adams
Phoenix, AZ 85007

Michael Klein
Aeronautics Group Manager
Arizona Department of Transportation
1801 W. Jefferson Street, Mail Drop
426M
Phoenix, AZ 85007

Daren Frank
Director
Maricopa County
Planning & Development Department
501 N. 44th Street, Suite 200
Phoenix, AZ 85008

William Wiley
Chief Engineer & General Manager
Maricopa County
Flood Control District
2801 W. Durango Street
Phoenix, AZ 85009

Eric Anderson
Transportation Director
Maricopa Association of Governments
302 N. 1st Avenue, Suite 200
Phoenix, AZ 85003

Bryant Powell
City Manager
Apache Junction
300 E. Superstition Blvd.
Apache Junction, AZ 85119

Patrick Banger
Town Manager
Town of Gilbert
50 E. Civic Center Drive
Gilbert, AZ 85296

Chris Brady
City Manager
City of Mesa
PO Box 1466
Mesa, AZ 85211

Jim Bennett
Aviation Director
City of Phoenix
3400 E. Sky Harbor Blvd., Suite 3300
Phoenix, AZ 85003

John Kross
Town Manager
Town of Queen Creek
22350 S. Ellsworth Road
Queen Creek, AZ 85242

Melissa McCaffrey
Western Pacific Regional Manager
AOPA
421 Aviation Way
Frederick, MD 21701

Steve Kasteler
ICE/Swift
2406 S. 24th Street
Phoenix, AZ 85034

Matt Huse
Forest Service
6335 S. Downwind
Mesa, AZ 85212

Neil O'Connor
IAR
6250 S. Taxiway Circle
Mesa, AZ 85212

Philip Oppenheimer
Top Aces
6355 S. Sossaman Road, Bldg A
Mesa, AZ 85212

Xavier Mendoza
Intel
5000 W. Chandler Blvd.
Chandler, AZ 85226

Bill Irland
Air Methods
6203 S. Sossaman Road
Mesa, AZ 85212

Suhani Schottenheimer
Allegiant
1201 N. Town Center Drive
Las Vegas, NV 89144

Rex Ginder
UND
5733 S. Sossaman Road
Mesa, AZ 85212

Josh Klein
ATP
5661 S. Sossaman Road
Mesa, AZ 85212

Brian Koselke
Embraer
5643 S. Avery Circle
Mesa, AZ 85212

Chris Scheideler
SW Jet Center
14988 N. 78th Way
Scottsdale, AZ 85260

Larry Randle, Jr.
General Manager
Textron Aviation
5533 S. Sossaman Road
Mesa, AZ 85212

Joe Rainey
HDH Systems
259 E 500 S
Bountiful, UT 84010

Kathleen Johnson
Director, Enforcement Division
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
Mail Code ENF-1
San Francisco, CA 94105

A.2 GOVERNMENT-TO-GOVERNMENT CONSULTATION CONTACT LIST

Government-to-Government consultation letters were sent to the following:

Stephen Roe Lewis
Governor
Gilar River Indian Community
P.O. Box 97
Sacaton, AZ 85147

Edward D. Manuel
Chairman
Tohono O'odham Nation
P.O. Box 837
Sells, AZ 85634

Delbert Ray
President
Salt River Pima-Maricopa
Indian Community
10005 East Osborn Road
Scottsdale, AZ 85256

Herman G. Honanie
Chairman
Hopi Tribe
P.O. Box 123
Kykotsmovi, AZ 86039

Robert Miguel
Chairman
Ak-Chin Indian Community
42057 W. Peters & Nall Road
Maricopa, AZ 85138

A.3 SCOPING RESPONSES

The following responses are included in this appendix.

- City of Phoenix Response Email dated April 27, 2017
- City of Apache Junction Response Email dated April 27, 2017
- Town of Queen Creek Response Letter dated May 11, 2017
- FHWA Arizona Division Response Email dated May 22, 2017
- Hopi Tribe Response Letter dated June 5, 2017
- Gila River Indian Community Response Letter dated June 21, 2017
- Section 106 Consultation Letter signed June 29, 2017
- Flood Control District of Maricopa County Email dated August 10, 2017

A.4 COMMENTS ON THE DRAFT EA

No comments related to the Draft EA were received by the FAA or PMGAA.

Chris Babb

Subject: FW: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

From: James E Bennett [mailto:james.bennett@phoenix.gov]
Sent: Thursday, April 27, 2017 5:09 PM
To: Chris Babb <cbabb@landrum-brown.com>
Cc: Stephanie Carver <SCarver@gatewayairport.com>; Jordan D Feld <jordan.feld@phoenix.gov>
Subject: RE: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

Ms. Carver, thank you for your “request for resource information and comments” in regards to a proposed ATCT replacement at IWA. The City of Phoenix Aviation is an affected agency from the proposed action and respectfully requests continued notification and opportunities for review and comment as the EA progresses. The City of Phoenix Aviation Department does not anticipate impacts to PHX, DVT and GYR from the proposed action nor do we have knowledge of resources that impact or could be impacted by the proposed action. Please contact Jordan Feld, copied on this email, if you have questions or concerns.

Regards,

Jim Bennett
Director of Aviation Services
City of Phoenix

From: Chris Babb [mailto:cbabb@landrum-brown.com]
Sent: Thursday, April 27, 2017 12:23 PM
To: James E Bennett <james.bennett@phoenix.gov>
Cc: Stephanie Carver <SCarver@gatewayairport.com>
Subject: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

Hello,

On behalf of the Phoenix-Mesa Gateway Airport Authority (PMGAA), please find attached a request for resource information and comments concerning the Proposed New Airport Traffic Control Tower (ATCT) for the Phoenix-Mesa Gateway Airport in Mesa, Arizona. The PMGAA, in cooperation with the Federal Aviation Administration (FAA), is initiating the preparation of an Environmental Assessment (EA) to investigate, analyze, and disclose any potential environmental impacts associated with the Proposed Action. We would appreciate your assistance and request that your comments are returned within 30 days or at your earliest convenience.

Thanks,

Chris Babb | Landrum & Brown
11279 Cornell Park Drive Cincinnati, OH 45242
513.560.1242

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Chris Babb

Subject: FW: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

From: Bryant Powell [mailto:bpowell@AJCity.Net]
Sent: Thursday, April 27, 2017 5:14 PM
To: Chris Babb <cbabb@landrum-brown.com>
Cc: Stephanie Carver <SCarver@gatewayairport.com>
Subject: RE: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

Hi Chris,

The City of Apache Junction has no comments nor concerns.

Thank you for the opportunity to provide input.

Bryant Powell
City Manager, Apache Junction

From: Chris Babb [<mailto:cbabb@landrum-brown.com>]
Sent: Thursday, April 27, 2017 12:23 PM
To: Bryant Powell <bpowell@AJCity.Net>
Cc: Stephanie Carver <SCarver@gatewayairport.com>
Subject: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

Hello,

On behalf of the Phoenix-Mesa Gateway Airport Authority (PMGAA), please find attached a request for resource information and comments concerning the Proposed New Airport Traffic Control Tower (ATCT) for the Phoenix-Mesa Gateway Airport in Mesa, Arizona. The PMGAA, in cooperation with the Federal Aviation Administration (FAA), is initiating the preparation of an Environmental Assessment (EA) to investigate, analyze, and disclose any potential environmental impacts associated with the Proposed Action. We would appreciate your assistance and request that your comments are returned within 30 days or at your earliest convenience.

Thanks,

Chris Babb | Landrum & Brown
11279 Cornell Park Drive Cincinnati, OH 45242
513.560.1242

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TOWN OF
QUEEN CREEK
ARIZONA

May 11, 2017

Phoenix-Mesa Gateway Airport Authority
Attn: Stephanie Carver
5835 South Sossaman Road
Mesa, AZ 85212-0919

Re: Request for Resource Information and Comments
Proposed New Airport Traffic Control Tower Environmental Assessment
Phoenix-Mesa Gateway Airport, Maricopa County, Mesa, Arizona

Dear Ms. Carver:

This letter is in response to your request for comments or concerns related to the proposed demolition of the existing air traffic control tower at Phoenix-Mesa Gateway Airport, and the construction of a new tower on Airport property located approximately 410 feet to the northwest of the existing tower.

The Town of Queen Creek does not have any comments or concerns related to this Proposed Action, and is in support of the construction of a new air traffic control tower at Phoenix-Mesa Gateway Airport.

We appreciate the opportunity to comment on this Proposed Action as part of the coordination process, and look forward to the Airport moving forward with this project.

Sincerely,

A handwritten signature in black ink, appearing to read "John Kross". The signature is fluid and cursive, with a large initial "J" and "K".

John Kross, ICMA-CM
Town Manager

Chris Babb

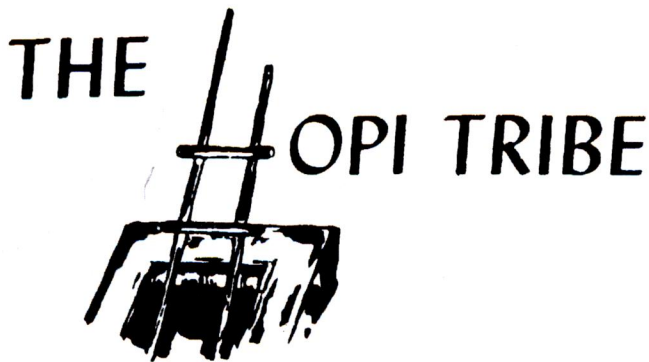
Subject: FW: Environmental Assessment for proposed new airport tower

From: Hansen, Alan (FHWA) [<mailto:Alan.Hansen@dot.gov>]
Sent: Monday, May 22, 2017 2:50 PM
To: Stephanie Carver <SCarver@gatewayairport.com>
Subject: Environmental Assessment for proposed new airport tower

Dear Stephanie Carver,

We have received your letter regarding the environmental assessment for the proposed new airport traffic control tower at the Phoenix-Mesa Gateway Airport in Mesa, Arizona. We have reviewed the information that you submitted and do not have any comments or resource information that we think would be useful to your study at this time. We appreciate the opportunity to review the information. Thank you,

Alan R. Hansen, P.E.
Team Leader
Planning, Environment, Realty and Civil Rights
FHWA Arizona Division
(602) 382-8964



Herman G. Honanie
CHAIRMAN

Alfred Lomahquahu Jr.
VICE-CHAIRMAN

RECEIVED

JUN 26 2017

Federal Aviation Administration
Western-Pacific Region
Airports Division - AWP-600

June 5, 2017

Mark A. McClardy, Manager, Airports Division
Attention: Dee Phan, Environmental Protection Specialist
Federal Aviation Administration
P.O. Box 92007
Los Angeles, California 90009-2007

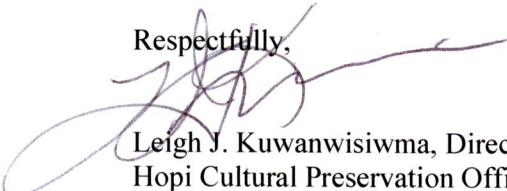
Dear Mr. McClardy,

This letter is in response to your correspondence dated May 24, 2017, regarding a new airport traffic control tower at the Phoenix-Mesa Gateway Airport in Mesa, Arizona. The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Arizona. The Hopi Cultural Preservation Office supports identification and avoidance of prehistoric archaeological sites and Traditional Cultural Properties, and we consider the archaeological sites that are "footprints" of our ancestors to be Hopi Traditional Cultural Properties. Therefore, we appreciate your solicitation of our input and your efforts to address our concerns.

The Hopi Cultural Preservation Office understands this proposal involves construction of a new traffic control tower. We request consultation on any proposal on the Forest with the potential to adversely affect prehistoric cultural resources in Arizona, and we are aware of archaeological sites at the Phoenix-Mesa Gateway Airport. Therefore, if the cultural resource report of the area of potential effect identifies prehistoric sites that may be adversely affected by project activities, please provide us with copies of the cultural resources report and any proposed treatment plans for review and comment.

We also recommend that if any cultural features or deposits are encountered during project activities, these activities must be discontinued in the immediate area of the remains, and the State Historic Preservation Office must be consulted to evaluate their nature and significance. If any Native American human remains or funerary objects are discovered during construction they must be immediately reported as required by law. Should you have any questions or need additional information, please contact Terry Morgart at tmorgart@hopi.nsn.us. Thank you for your consideration.

Respectfully,



Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Arizona State Historic Preservation Office



GILA RIVER INDIAN COMMUNITY

POST OFFICE BOX 2193, SACATON, AZ 85147

TRIBAL HISTORIC PRESERVATION OFFICE

(520) 562-7162

Fax: (520) 562-5083

June 21, 2017

Mark A. McClardy, Director, Office of Airports
U.S. Department of Transportation
Federal Aviation Administration
Western-Pacific Region
Airports Division
15000 Aviation Boulevard
Lawndale, California 90261

RE: Proposed New Airport Traffic Control Tower Phoenix-Mesa Gateway Airport, Mesa,
Maricopa County, Arizona

Dear Mr. McClardy,

The Gila River Indian Community Tribal Historic Preservation Office (GRIC-THPO) has received your consultation letter dated May 24, 2017. The Federal Aviation Administration (FAA) and the Phoenix-Mesa Gateway Airport Authority (PMGAA) are preparing an Environmental Assessment (EA) for the construction of a new Airport Traffic Control Tower at the Phoenix-Mesa Gateway Airport. The FAA and PMGAA are seeking information for sites of religious or cultural significance.

The GRIC-THPO identifies no religious or culturally significant sites within the project area at this time. The GRIC-THPO will continue to participate in the consultation process for this undertaking. We look forward to reviewing the EA when completed. The proposed project area is within the ancestral lands of the Four Southern Tribes (Gila River Indian Community; Salt River Pima-Maricopa Indian Community; Ak-Chin Indian Community and the Tohono O'Odham Nation).

Thank you for consulting with the GRIC-THPO. If you have any questions please do not hesitate to contact me or Archaeological Compliance Specialist Larry Benallie, Jr. at 520-562-7162.

Respectfully,

Barnaby V. Lewis
Tribal Historic Preservation Officer
Gila River Indian Community

2017-0489 (137607)



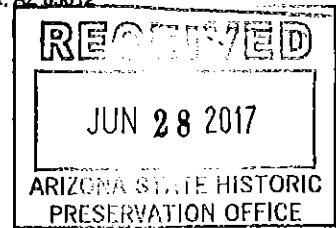
U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
Phoenix Airport District Office

3800 N. Central Avenue
Suite 1025, 10th Floor
Phoenix, AZ 85012

June 28, 2017

Kathryn Leonard
State Historic Preservation Officer
Arizona State Parks
1100 West Washington Street
Phoenix, AZ 85007



**RE: Proposed New Airport Traffic Control Tower, Phoenix-Mesa Gateway Airport, Mesa
Maricopa County, Arizona
SHPO- 2017-0489
Section 106 Consultation- "No Historic Properties Affected"**

Dear Ms. Leonard:

The Phoenix-Mesa Gateway Airport Authority (PMGAA), in coordination with the Federal Aviation Administration (FAA), is proposing to construct a new air traffic control tower (ATCT) at Phoenix-Mesa Gateway Airport (IWA) to address line of sight issues. As the proposed project would utilize federal fund and require the FAA approval of an airport layout plan change, it constitutes a federal undertaking subject to review under Section 106 of the National Historic Preservation Act as amended, and its implementing regulations, 36 CFR part 800. The proposed undertaking will not affect the number and type of aircraft operations at the airport, and will include the following components:

- Construct a new ATCT approximately 410 feet to the northwest of the existing tower. The new ATCT structure will be 194 feet in height and the tower cab will be approximately 550 square feet in area.
- Connect utilities, airfield control lighting, and Navigational Aids control lines to the new tower; move existing equipment to the new ATCT;
- Demolish the existing ATCT built in 1970.

The FAA defines the Area of Potential Effect (APE) to consist of approximately 6.4-acre area located within the airport property (see attached APE map). The FAA has conducted government-to-government consultation with the following Native American tribes: Gila River Indian Community, Ak-Chin Indian Community, Hopi Tribe, Salt River Pima-Maricopa Indian Community, and Tohono O'odham Nation. Responses from Gila River Indian Community and Hopi Tribe were received (see attached).

No known archeological sites are located within the APE; therefore, project activities will not affect archeological resources (see attached exhibit). In addition, there are no historic-age resources within or adjacent to the APE. The existing tower is 47 years old, thus not eligible for inclusion in the National Register of Historic Places. Based on the above, FAA has made a finding of "no historic properties affected" for the proposed undertaking. If previously unidentified cultural materials are encountered during construction, work shall cease immediately at that location, and the FAA, SHPO, and/or appropriate tribes will be notified as soon as possible to determine the appropriate course of action.

Please review the information provided in this letter and attached project map/exhibit. If you agree with the above determination, please respond with a concurrence. Should you have any questions or require additional information, please contact me at (602) 792-1066 or email (dee.phan@faa.gov). Thank you for your assistance.

Sincerely,

Dee Phan
Environmental Protection Specialist

No Historic Properties Affected

29 JUNE 17

Attachments: Area of Potential Effect Map and Exhibit, Gila River Indian Community and Hopi Tribe responses

Arizona State Historic Preservation Office

Copy (electronic): David Jacobs, Compliance Specialist, Arizona State Parks
Stephanie Carver, Environmental & Archaeological Coordinator, PMGAA

Chris Babb

Subject: FW: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

From: Michael Jones - FCDX [mailto:MichaelJones@mail.maricopa.gov]
Sent: Thursday, August 10, 2017 4:32 PM
To: Chris Babb <cbabb@landrum-brown.com>
Cc: Tony Bianchi <TBianchi@gatewayairport.com>
Subject: RE: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

The District has no objections to this work and the work will not require a permit from the District.

Michael J. Jones, P.E.

Senior Civil Engineer
Civil Structures Branch



Flood Control District of Maricopa County

2801 W Durango St, Phoenix, AZ 85009
(O) 602-506-4718 (C) 602-723-5595
michaeljones@mail.maricopa.gov
www.fcd.maricopa.gov



How are we doing? Click [here](#) to leave your feedback

From: Chris Babb [mailto:cbabb@landrum-brown.com]
Sent: Thursday, August 10, 2017 1:06 PM
To: Michael Jones - FCDX <MichaelJones@mail.maricopa.gov>
Cc: Tony Bianchi <TBianchi@gatewayairport.com>
Subject: Phoenix-Mesa Gateway Airport Proposed ATCT Environmental Assessment

Hello,

The Phoenix-Mesa Gateway Airport Authority (PMGAA), in cooperation with the Federal Aviation Administration (FAA), is preparing an Environmental Assessment (EA) to investigate, analyze, and disclose any potential environmental impacts associated with the demolition of the existing Airport Traffic Control Tower (ATCT) and the construction of a new ATCT on Airport property located approximately 410 feet to the northwest of the exiting tower. I have attached two exhibits to help identify the project location. The Proposed Action site was previously used as a parking lot. As a result there would be no increase in impervious surfaces or stormwater runoff. The Airport is depicted on the FEMA Flood Insurance Rate Map (FIRM) Panel #04013C2770L. The Project site is located in an area designated as Zone D and not within a 100-year floodplain. There would be no encroachment on floodplains due to the Proposed Action and construction and operation of the Proposed Action would not cause an impact on natural and beneficial floodplain values.

We are requesting identification of any specific areas of concern. If you would like additional information on the project or EA please let me know. Your prompt response is appreciated.

Thanks,

Chris Babb | Landrum & Brown
11279 Cornell Park Drive Cincinnati, OH 45242
513.560.1242

AFFIDAVIT OF PUBLICATION

PHOENIX-MESA GATEWAY AIRPORT

AUTHORITY

5835 South Sossaman Road

Mesa, AZ 85212

Order # 0008733250 # of Affidavits 1

P.O # ~~EA~~ EA for new Airport Traffic Tower

Published Date(s):

10/19/17, 10/26/17

STATE OF ARIZONA

COUNTY OF

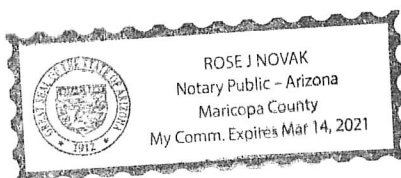
} SS.

I, being first duly sworn, upon oath deposes and says: That I am the legal clerk of the Arizona Business Gazette, a newspaper of general circulation in the counties of Maricopa, Coconino, Pima and Pinal, in the State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper on the dates indicated.

Sworn to before me this

26 TH day of

OCTOBER 2017

Notary Public

Notice of Availability of a Draft Environmental Assessment for the Proposed New Airport Traffic Control Tower at Phoenix-Mesa Gateway Airport

ACTION: The Phoenix-Mesa Gateway Airport Authority (PMGAA) is preparing an Environmental Assessment (EA) to address the proposed new Airport Traffic Control Tower at the Phoenix-Mesa Gateway Airport (IWA). The EA is being prepared to comply with the National Environmental Policy Act of 1969.

The PMGAA has published a Draft EA document and copies will be available for public review during normal business hours beginning October 19, 2017 at the following locations:

Phoenix-Mesa Gateway Airport Authority, Administrative Offices, 5835 South Sossaman Road, Mesa, AZ 85212.

Federal Aviation Administration, Phoenix Airports District Office, 3800 N. Central Avenue, Suite 1025, 10th Floor, Phoenix, AZ 85012.

City of Mesa Library 64 East 1st Street, Mesa, AZ, 85201

Southeast Regional Library, 775 N. Greenfield Road, Gilbert, AZ 85234

Queen Creek Library, 21802 S. Ellsworth Road, Queen Creek, AZ 85142

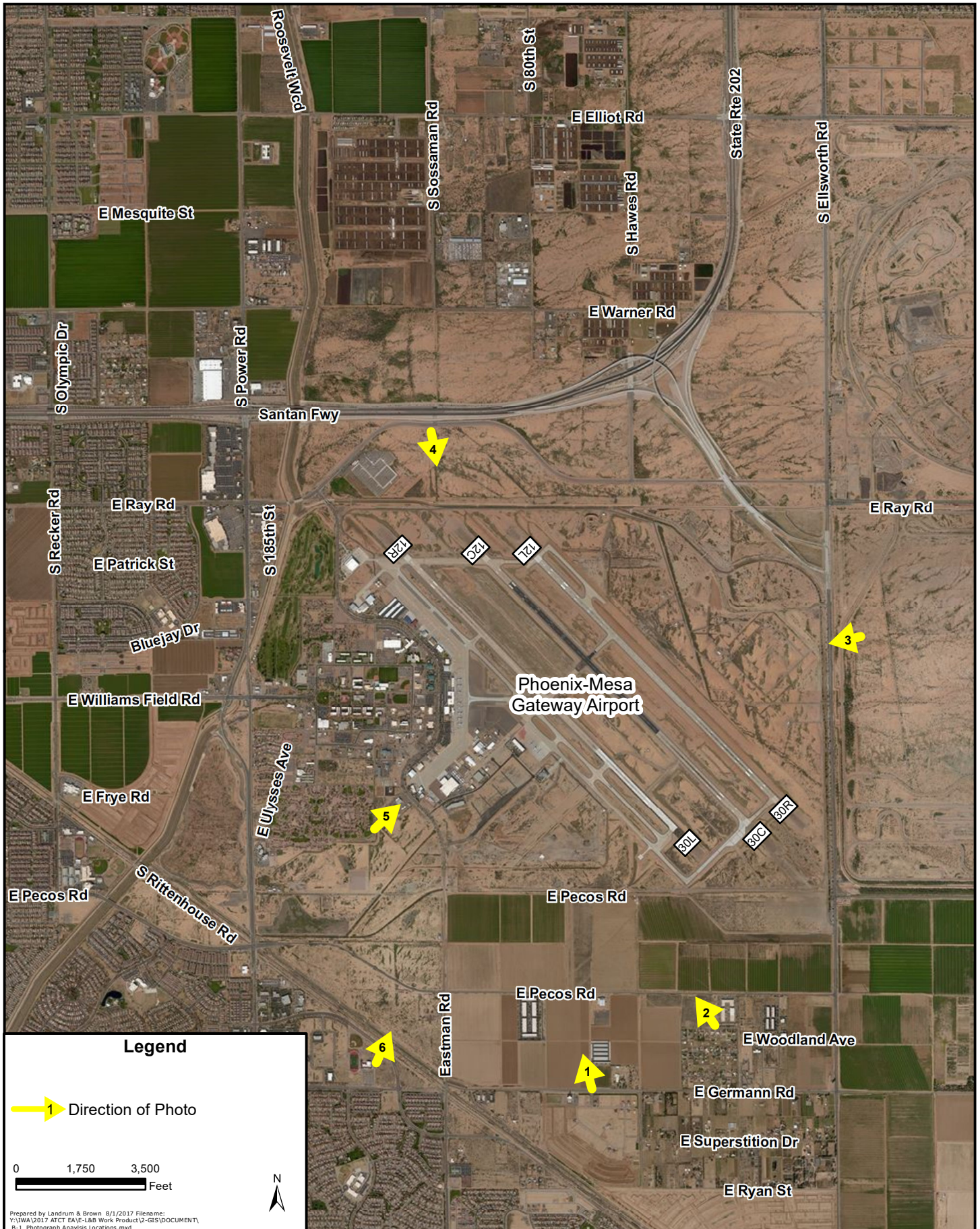
Website: <http://www.gatewayairport.com>

Comments on the Draft EA may be submitted to: Tony Bianchi, Phoenix-Mesa Gateway Airport Authority, 5835 South Sossaman Road, Mesa, AZ 85212; by email to: tbianchi@gatewayairport.com. All comments must be received by November 20, 2017.


Pub: Oct 19, 26, 2017

APPENDIX B VISUAL CHARACTER ANALYSIS


A visual impact analysis was conducted for this EA. A reconnaissance of the airport perimeter was performed to identify potential areas that may be affected by the Proposed Action. These locations, shown on **Exhibit B-1**, included residential areas and schools. A photograph was taken at each location. This photograph formed the baseline condition and was the basis for determining the existing visual character of the area. To determine the potential impact of the Proposed Action, computer software, 3ds Max, a three dimensional visualization program was used to digitally place the new ATCT to scale at the correct height and location on the same photo. The existing ATCT was then digitally removed with Adobe Photoshop CC software to show the new visual character with the Proposed Action. The determination of potential impact at each location is found in this appendix.



Legend

 Direction of Photo

0 1,750 3,500
Feet



Prepared by Landrum & Brown, 8/1/2017 Filename: Y:\UWA\2017 ATCT EA (E-LSB Work Product)\2-IGIS\DOCUMENT\B-1_Photograph Analysis Locations.mxd

No Action

Proposed Action



Site 1: Germann Road and 198th Street (Site of La Jara Farms II residential development)

Determination: There would be no significant change due to the Proposed Action. Site 1 would maintain a similar visual character.

No Action

Proposed Action



Site 2: Woodland Road

Determination: There would be no significant change due to the Proposed Action. Site 2 would maintain a similar visual character.

No Action

Proposed Action



Site 3: Ray Road (New residential area)

Determination: There would be no significant change due to the Proposed Action. Site 3 would maintain a similar visual character.

No Action

Proposed Action



Site 4: Ray Road (by the 202)

Determination: There would be no significant change due to the Proposed Action. Site 4 would maintain a similar visual character.

No Action

Proposed Action



Site 5: South Verona and Avery Road (Arizona State University South Desert Village housing)

Determination: There would be no significant change due to the Proposed Action. Site 5 would maintain a similar visual character.

No Action

Proposed Action



Site 6: Germann Road (Benjamin Franklin High School)

Determination: There would be no significant change due to the Proposed Action. Site 6 would maintain a similar visual character.