

**Draft  
Environmental Assessment for  
Installation Development  
Nellis Air Force Base, Nevada**

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**April 2022**



**Prepared for:  
United States Air Force  
99th Air Base Wing**

**Nellis Air Force Base, Nevada**



This EA is provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) NEPA Regulations (40 CFR Parts 1500–1508), and 32 CFR Part 989, *Environmental Impact Analysis Process (EIAP)*.

The EIAP provides an opportunity for public input on Air Force decision-making, allows the public to offer inputs on alternative ways for the Air Force to accomplish what it is proposing, and solicits comments on the Air Force's analysis of environmental effects.

Public commenting allows the Air Force to make better, informed decisions. Letters or other written or oral comments provided may be published in the EA. As required by law, comments provided will be addressed in the EA and made available to the public. Providing personal information is voluntary. Any personal information provided will be used only to identify your desire to make a statement during the public comment portion of any public meetings or hearings or to fulfill requests for copies of the EA or associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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## COVER SHEET

### Draft Environmental Assessment for Installation Development

a. *Responsible Agency: United States Air Force (Air Force)*

b. *Cooperating Agency: None*

c. *Proposals and Actions:*

The United States (U.S.) Air Force (Air Force), Air Combat Command (ACC) at Nellis Air Force Base (AFB), Nevada, has identified construction, renovation, infrastructure, and demolition projects and proposes to implement them over a six-year period (fiscal year [FY] 2022–FY 2027). The proposed projects were identified as priorities for the Installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

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e. *Designation:* Draft EA

f. *Abstract:*

This Environmental Assessment (EA) has been prepared pursuant to provisions of the National Environmental Policy Act, Title 42 *United States Code*, §§ 4321–4370, implemented by Council on Environmental Quality Regulations at Title 40, *Code of Federal Regulations* (CFR) Parts 1500–1508, and 32 CFR Part 989, *Environmental Impact Analysis Process (EIAP)*. Potentially affected environmental resources were identified in coordination with local, state, and federal agencies. Specific environmental resources with the potential for environmental consequences include noise; safety; air quality; biological resources; water resources; soils; land use; socioeconomics; environmental justice and protection of children; cultural resources; hazardous materials and waste, contaminated sites, and toxic substances; and infrastructure, transportation, and utilities.

The purpose of the Proposed Action is to support Nellis AFB's future mission and training requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facility and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and U.S. Department of Defense (DoD) current and future mission requirements relative to state and federal requirements.

The analysis of the affected environmental and environmental consequences of implementing the Proposed Action and Alternatives concluded that by implementing standing environmental protection measures and Best Management Practices, there would be no significant adverse impacts from the actions at Nellis AFB on the following resources: noise; safety; air quality; biological resources; water resources; soils; land use; socioeconomics; environmental justice and protection of children; cultural resources; hazardous materials and wastes, contaminated sites, and toxic substances; and infrastructure, transportation, and utilities. Nellis AFB is an active installation with aircraft operations, demolition, and new construction actions currently under way as well as future development currently in the planning phase. Impacts associated with construction, demolition, and renovation would be minor; therefore, significant cumulative impacts are not anticipated from activities associated with the Proposed Action and Alternatives when considered with past, present, or reasonably foreseeable future actions.

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**ENVIRONMENTAL ASSESSMENT (EA)  
FOR  
INSTALLATION DEVELOPMENT AT NELLIS AIR BASE, NEVADA**

**PREPARED FOR:  
DEPARTMENT OF THE AIR FORCE**

**APRIL 2022**

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## TABLE OF CONTENTS

	<u>Page</u>
<b>1 PURPOSE AND NEED FOR THE PROPOSED ACTION .....</b>	<b>1-1</b>
1.1 INTRODUCTION .....	1-1
1.2 PURPOSE OF THE ACTION .....	1-1
1.3 NEED FOR THE ACTION .....	1-2
1.4 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATION.....	1-2
1.4.1 Interagency and Intergovernmental Coordination and Consultation.....	1-2
1.4.2 Government-to-Government Consultation .....	1-2
1.4.3 Other Agency Consultations .....	1-3
1.5 PUBLIC AND AGENCY REVIEW.....	1-3
1.6 DECISION TO BE MADE.....	1-3
1.7 SCOPE OF THE ENVIRONMENTAL ASSESSMENT .....	1-3
1.8 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS.....	1-4
1.8.1 National Environmental Policy Act .....	1-5
1.8.2 The Environmental Impact Analysis Process.....	1-5
<b>2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES .....</b>	<b>2-1</b>
2.1 PROPOSED ACTION.....	2-1
2.2 SELECTION STANDARDS FOR ALTERNATIVE SCREENING .....	2-12
2.3 ALTERNATIVES.....	2-12
2.3.1 Alternative 1 .....	2-12
2.3.1.1 Demolition Projects .....	2-13
2.3.1.2 Renovation Projects.....	2-13
2.3.1.3 Building Construction Projects.....	2-13
2.3.1.4 Additions to Buildings.....	2-13
2.3.1.5 Infrastructure Construction Projects .....	2-13
2.3.2 Alternative 2 .....	2-13
2.3.2.1 Demolition Projects .....	2-13
2.3.2.2 Renovation Projects.....	2-14
2.3.2.3 Building Construction Projects.....	2-14
2.3.2.4 Additions to Buildings.....	2-14
2.3.2.5 Infrastructure Construction Projects .....	2-14
2.3.3 No Action Alternative.....	2-15
2.4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES .....	2-15
<b>3 BACKGROUND ENVIRONMENT .....</b>	<b>3-1</b>
3.1 NOISE .....	3-1
3.1.1 Definition of Resource .....	3-1
3.1.2 Existing Condition.....	3-1
3.2 SAFETY .....	3-2
3.2.1 Definition of the Resource .....	3-2
3.2.2 Existing Conditions .....	3-2
3.3 AIR QUALITY.....	3-3
3.3.1 Definition of the Resource .....	3-3
3.3.2 Criteria Pollutants .....	3-3
3.3.2.1 Greenhouse Gases .....	3-5
3.3.3 Existing Conditions .....	3-5
3.3.3.1 Regional Climate.....	3-5
3.3.3.2 Air Emission Sources at Nellis AFB .....	3-6
3.4 BIOLOGICAL RESOURCES .....	3-6
3.4.1 Definition of the Resource .....	3-6
3.4.1.1 Endangered Species Act .....	3-6

3.4.1.2	Migratory Bird Treaty Act .....	3-7
3.4.1.3	Bald and Golden Eagle Protection Act .....	3-7
3.4.1.4	Wetlands .....	3-7
3.4.2	Existing Conditions .....	3-8
3.4.2.1	Regional Biological Setting .....	3-8
3.4.2.2	Threatened and Endangered Species and/or Species of Concern .....	3-9
3.4.2.3	Invasive Species and Noxious Weeds.....	3-9
3.5	WATER RESOURCES .....	3-9
3.5.1	Definition of the Resource .....	3-9
3.5.1.1	Surface Water .....	3-10
3.5.1.2	Floodplains.....	3-10
3.5.2	Existing Conditions .....	3-10
3.5.2.1	Surface Water and Stormwater .....	3-10
3.5.2.2	Groundwater .....	3-11
3.5.2.3	Floodplains.....	3-11
3.5.2.4	Wetlands .....	3-12
3.6	GEOLOGICAL RESOURCES .....	3-12
3.6.1	Definition of the Resource .....	3-12
3.6.2	Existing Conditions .....	3-12
3.6.2.1	Regional Geology .....	3-12
3.6.2.2	Topography .....	3-12
3.6.2.3	Soils .....	3-13
3.6.2.4	Prime Farmland .....	3-13
3.7	LAND USE .....	3-13
3.7.1	Definition of the Resource .....	3-13
3.7.2	Existing Conditions .....	3-14
3.8	SOCIOECONOMICS .....	3-14
3.8.1	Definition of the Resource .....	3-14
3.8.2	Existing Conditions .....	3-14
3.8.2.1	Population .....	3-14
3.8.2.2	Employment .....	3-15
3.8.2.3	Housing .....	3-16
3.8.2.4	Schools .....	3-16
3.9	ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN .....	3-16
3.9.1	Definition of the Resource .....	3-16
3.9.2	Existing Conditions .....	3-17
3.10	CULTURAL RESOURCES (ARCHAEOLOGICAL, ARCHITECTURAL, TRADITIONAL) .....	3-18
3.10.1	Definition of Resource .....	3-18
3.10.2	Existing Conditions .....	3-19
3.10.2.1	Cultural Context .....	3-19
3.10.2.2	Archaeological Properties .....	3-20
3.10.2.3	Traditional Cultural Properties .....	3-20
3.10.2.4	Architectural Resources .....	3-20
3.11	HAZARDOUS MATERIALS AND WASTES, TOXIC SUBSTANCES, AND CONTAMINATED SITES .....	3-21
3.11.1	Definition of the Resource .....	3-21
3.11.1.1	Asbestos .....	3-23
3.11.1.2	Lead-Based Paint .....	3-23
3.11.1.3	Radon .....	3-23
3.11.1.4	Polychlorinated Biphenyls.....	3-23
3.11.2	Existing Conditions .....	3-24
3.11.2.1	Hazardous Materials and Wastes.....	3-24
3.11.2.2	Environmental Restoration Program Sites.....	3-24
3.11.2.3	Asbestos and Lead-Based Paint .....	3-24
3.11.2.4	Radon .....	3-24
3.11.2.5	Polychlorinated Biphenyls.....	3-24
3.12	INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES .....	3-25

3.12.1	Definition of the Resource .....	3-25
3.12.2	Existing Conditions .....	3-26
3.12.2.1	Transportation .....	3-26
3.12.2.2	Electricity and Natural Gas .....	3-26
3.12.2.3	Liquid Fuel Storage .....	3-27
3.12.2.4	Potable Water Supply .....	3-27
3.12.2.5	Sanitary Sewer System and Stormwater Channels .....	3-27
3.12.2.6	Solid Waste Management .....	3-27
<b>4</b>	<b>ENVIRONMENTAL IMPACTS.....</b>	<b>3-28</b>
4.1	NOISE .....	4-1
4.1.1	Evaluation Criteria .....	4-1
4.1.2	Alternative 1 .....	4-1
4.1.3	Alternative 2 .....	4-2
4.1.4	No Action Alternative .....	4-2
4.2	SAFETY .....	4-2
4.2.1	Evaluation Criteria .....	4-2
4.2.2	Alternative 1 .....	4-2
4.2.3	Alternative 2 .....	4-2
4.2.4	No Action Alternative .....	4-3
4.3	AIR QUALITY .....	4-3
4.3.1	Evaluation Criteria .....	4-3
4.3.2	Alternative 1 .....	4-4
4.3.3	Alternative 2 .....	4-6
4.3.4	No Action Alternative .....	4-7
4.3.5	Climate Change Considerations .....	4-8
4.4	BIOLOGICAL RESOURCES .....	4-8
4.4.1	Evaluation Criteria .....	4-8
4.4.2	Alternative 1 .....	4-9
4.4.2.1	Vegetation .....	4-9
4.4.2.2	Wildlife .....	4-9
4.4.2.3	Threatened and Endangered Species .....	4-9
4.4.2.4	Invasive Species .....	4-9
4.4.3	Alternative 2 .....	4-10
4.4.4	No Action Alternative .....	4-10
4.5	WATER RESOURCES .....	4-10
4.5.1	Evaluation Criteria .....	4-10
4.5.2	Alternative 1 .....	4-10
4.5.2.1	Surface Water and Stormwater .....	4-10
4.5.2.2	Groundwater .....	4-11
4.5.3	Floodplains .....	4-11
4.5.4	Alternative 2 .....	4-11
4.5.5	No Action Alternative .....	4-11
4.6	GEOLOGICAL RESOURCES .....	4-12
4.6.1	Evaluation Criteria .....	4-12
4.6.2	Alternative 1 .....	4-12
4.6.3	Alternative 2 .....	4-12
4.6.4	No Action Alternative .....	4-12
4.7	LAND USE .....	4-13
4.7.1	Evaluation Criteria .....	4-13
4.7.2	Alternative 1 .....	4-13
4.7.3	Alternative 2 .....	4-13
4.7.4	No Action Alternative .....	4-13
4.8	SOCIOECONOMICS .....	4-14
4.8.1	Evaluation Criteria .....	4-14
4.8.2	Alternative 1 .....	4-14

4.8.3	Alternative 2 .....	4-14
4.8.4	No Action Alternative .....	4-14
4.9	ENVIRONMENTAL JUSTICE .....	4-15
4.9.1	Evaluation Criteria .....	4-15
4.9.2	Alternative 1 .....	4-15
4.9.3	Alternative 2 .....	4-15
4.9.4	No Action Alternative .....	4-15
4.10	CULTURAL RESOURCES .....	4-15
4.10.1	Evaluation Criteria .....	4-15
4.10.2	Alternative 1 .....	4-16
4.10.3	Alternative 2 .....	4-16
4.10.4	No Action Alternative .....	4-16
4.11	HAZARDOUS MATERIALS AND WASTES, CONTAMINATED SITES, AND TOXIC SUBSTANCES .....	4-16
4.11.1	Evaluation Criteria .....	4-16
4.11.2	Alternative 1 .....	4-16
4.11.2.1	Hazardous Materials and Wastes .....	4-16
4.11.2.2	Environmental Restoration Program Sites .....	4-17
4.11.2.3	Asbestos and Lead-Based Paint .....	4-17
4.11.2.4	Radon .....	4-18
4.11.2.5	Polychlorinated Biphenyls .....	4-18
4.11.3	Alternative 2 .....	4-18
4.11.4	No Action Alternative .....	4-18
4.12	INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES .....	4-18
4.12.1	Evaluation Criteria .....	4-18
4.12.2	Alternative 1 .....	4-19
4.12.2.1	Transportation .....	4-19
4.12.2.2	Electricity and Natural Gas .....	4-19
4.12.2.3	Liquid Fuel Storage .....	4-20
4.12.2.4	Potable Water Supply .....	4-20
4.12.2.5	Sanitary Sewer .....	4-20
4.12.2.6	Solid Waste Management .....	4-20
4.12.3	Alternative 2 .....	4-21
4.12.4	No Action Alternative .....	4-21
5	LIST OF PREPARERS .....	5-1
6	REFERENCES .....	6-1
<b>APPENDICES</b>		
<b>APPENDIX A. FIGURES</b>		
<b>APPENDIX B. INTERAGENCY AND INTERGOVERNMENTAL AGENCY COORDINATION AND CONSULTATION</b>		

## LIST OF TABLES

	<u>Page</u>
Table 2-1.	Summary of Alternatives .....
Table 2-2.	Proposed Installation Development Projects at Nellis Air Force Base – Alternative 1 .....
Table 2-3.	Proposed Installation Development Projects at Nellis Air Force Base – Alternative 2 .....
Table 2-4.	Comparison of Alternatives .....
Table 2-5.	Summary of Environmental Consequences .....

Table 3-1.	National Ambient Air Quality Standards .....	3-4
Table 3-2.	Nellis Air Force Base Mobile and Stationary Source Emission Summary .....	3-6
Table 3-3.	Federally and State-Listed Species with the Potential to Occur Regionally .....	3-9
Table 3-4.	Population in the Nellis AFB Region of Influence as Compared to Nevada and the United States (2000–2019) .....	3-15
Table 3-5.	Personnel at Nellis AFB, Creech AFB, and the NTTR 2017 .....	3-15
Table 3-6.	Housing .....	3-16
Table 3-7.	Total Population and Populations of Concern .....	3-17
Table 3-8.	Construction Date and Building Number Associated with Renovation and Demolition Projects .....	3-21
Table 3-9.	Environmental Restoration Program Sites in the Vicinity of Alternative 1 and/or Alternative 2 .....	3-25
Table 3-10.	Traffic Counts at Nellis AFB Gates – December 2018 to March 2019 .....	3-26
Table 4-1.	Peak Sound Pressure Level of Construction Equipment from a Distance of 50 Feet .....	4-1
Table 4-2.	SO <sub>2</sub> and PM <sub>2.5</sub> Emission Estimates for Alternative 1 Proposed Demolition/Renovation/Construction at Nellis AFB .....	4-4
Table 4-3.	General Conformity Applicability Emissions Estimates for Alternative 1 Proposed Demolition/Renovation/Construction Activities at Nellis AFB .....	4-5
Table 4-4.	SO <sub>2</sub> and PM <sub>2.5</sub> Emission Estimates for Alternative 2 Proposed Demolition/Renovation/Construction at Nellis AFB .....	4-6
Table 4-5.	General Conformity Applicability Emissions Estimates for Alternative 2 Proposed Demolition/Renovation/Construction Activities at Nellis AFB .....	4-7
Table 4-6.	Maximum Annual Greenhouse Gas Emissions under Alternatives 1 and 2 .....	4-8
Table 4-7.	Alternative 1 ERP Potential Impacts .....	4-17

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## ACRONYMS AND ABBREVIATIONS

°F	degree Fahrenheit
99 ABW	99th Air Base Wing
ACAM	Air Conformity Applicability Model
ACC	Air Combat Command
ACM	asbestos-containing materials
ADAS	Air Defense Aggressor Squadron
AFB	Air Force Base
AFCEC	Air Force Civil Engineering Center
AFI	Air Force Instruction
AFPD	Air Force Policy Directive
AGE	aerospace ground equipment
AICUZ	Air Installation Compatibility Use Zone
Air Force	United States Air Force
ANG	Air National Guard
AP	Advanced Programs
APE	Area of Potential Effect
APZ	Accident Potential Zone
ARC	Air Reserve Component
AST	aboveground storage tank
BASH	bird/wildlife-aircraft strike hazard
BEA	Bureau of Economic Analysis
BGEPA	Bald and Golden Eagle Protection Act of 1940
BLS	Bureau of Labor Statistics
BMP	best management practice
BP	Before Present
CAA	Clean Air Act of 1963
CAS	Coral Academy of Science
CCDES	Clark County Department of Environment and Sustainability
CCPC	Clark County Planning Commission
CCSD	Clark County School District
CCWRD	Clark County Water Reclamation District
CDC	Child Development Center
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
CS	Communications Squadron
CTS	Combat Training Squadron
CWA	Clean Water Act of 1972
CZ	Clear Zone
DAFMAN	Department of the Air Force Manual
dB	decibel
dBA	A-weighted decibel
DCE	1,2-dichloroethane
DDR	Drug Demand Response Program
DERA	Defense Environmental Restoration Account
DETR	Department of Employment, Training & Rehabilitation
DFAC	Dining Facility
DNL	Day-Night Sound Level
DoD	United States Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process

EIS	Environmental Impact Statement
EO	Executive Order
ERP	Environmental Restoration Program
ESA	Endangered Species Act
FAC	facility
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
ft <sup>2</sup>	square feet
FY	fiscal year
GHG	greenhouse gas
GWP	global warming potential
HAZMAT	hazardous material
ICRMP	Integrated Cultural Resources Management Plan
ISS	Intelligence Support Squadron
JTAC	Joint Terminal; Attack Controller
LBP	lead-based paint
lbs	pounds
LF	linear feet
LRS	Logistics Readiness Squadron
LVVWD	Las Vegas Valley Water District
µg/m <sup>3</sup>	micrograms per cubic meter
MBTA	Migratory Bird Treaty Act
MOVES	Motor Vehicle Emission Simulator
MXS	maintenance squadron
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLVWD	North Las Vegas Water District
NMFS	National Marine Fisheries Service
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NTTR	Nevada Test and Training Range
NV	Nevada
O <sub>3</sub>	ozone
OSHA	Occupational Safety and Health Administration
pCi/L	picocurie per liter
PCB	polychlorinated biphenyl
PCC	Plain Cement Concrete
PCE	perchloroethylene
PM <sub>2.5</sub>	particulate matter less than or equal to 2.5 microns in diameter
PM <sub>10</sub>	particulate matter less than or equal to 10 microns in diameter
ppb	parts per billion
ppm	parts per million
PSD	Prevention of Significant Deterioration
Q-D	Quantity-Distance
RCRA	Resource Conservation and Recovery Act
ROCA	Record of Conformity Analysis
ROI	Region of Influence
RQS	Rescue Squadron
SAPF	Special Access Program Facility
SARA	Superfund Amendments and Reauthorization Act
SCIF	Sensitive Compartmented Information Facility
SHPO	State Historic Preservation Officer

SIP	state implementation plan
SNWA	Southern Nevada Water Authority
SO <sub>2</sub>	sulfur dioxide
TCE	trichloroethylene
TCP	Traditional Cultural Property
tpy	tons per year
TSCA	Toxic Substances Control Act
UFC	Unified Facilities Criteria
U.S.	United States
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USAFWC	United States Air Force Warfare Center
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UST	underground storage tank
UTC	Unit Type Code
VOC	volatile organic compound
WG	Wing

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# 1 PURPOSE AND NEED FOR THE PROPOSED ACTION

## 1.1 INTRODUCTION

The United States (U.S.) Air Force (Air Force), Air Combat Command (ACC) at Nellis Air Force Base (AFB), Nevada (NV), has identified construction, renovation, infrastructure, and demolition projects and proposes to implement them over a six-year period (fiscal year [FY] 2022–FY 2027). This Environmental Assessment (EA) was prepared to evaluate the potential environmental impacts associated with installation development activities in compliance with the *National Environmental Policy Act of 1969* (NEPA) (42 *United States Code* [U.S.C.] §§ 4321–4370); regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 *Code of Federal Regulations* [CFR] Parts 1500–1508<sup>1</sup>); and the Air Force's Environmental Impact Analysis Process (EIAP) Regulations at 32 CFR Part 989, *EIAP*.

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the Installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

ACC organizes, trains, and equips combat-ready forces to provide dominant combat airpower in support of national security strategy implementation. Nellis AFB is home to the 99th Air Base Wing (99 ABW), United States Air Force Warfare Center (USAFWC), 57th Wing, Nevada Test and Training Range (NTTR), elements of the 53rd Wing and 505th Command Control Wing, and more than 52 tenant units and agencies. The 99 ABW is the host wing for Nellis AFB and the NTTR. The 99 ABW is responsible for two groups: the 99th Mission Support Group and the 99th Medical Group.

Nellis AFB, located in Clark County in the southeast corner of the state of Nevada, lies five miles northeast of the city of Las Vegas and adjacent to the city of North Las Vegas (**Appendix A, Figure A-1**). Nellis AFB is the center for ACC training and testing activities at the NTTR, providing logistical and organizational support, aircraft training, and personnel for NTTR. The unincorporated town of Sunrise Manor and undeveloped portions of Clark County surround the majority of Nellis AFB, although open space dominates to the northeast. Covering 16,246 acres, the Base contains three major functional areas. Area I, the Main Base, is located east of U.S. Highway 93 and includes the airfield and most base functions. Area II, northeast of the Main Base, contains the Munitions Storage Area/Weapons Storage Area. Area III, situated northwest of the Main Base, includes a number of facilities such as a hospital, storage, and housing.

The information presented in this EA will serve as the basis for deciding whether the Proposed Action would result in a significant impact to the human or natural environment, requiring the preparation of an Environmental Impact Statement (EIS), or whether no significant impacts would occur, in which case a Finding of No Significant Impact (FONSI) would be issued. If execution of the Proposed Action or Alternatives would unavoidably occur in a wetland or floodplain, a Finding of No Practicable Alternative would be prepared in conjunction with the FONSI, pursuant to the requirements of Executive Order (EO) 11990, *Protection of Wetlands*, and EO 11988, *Floodplain Management*.

## 1.2 PURPOSE OF THE ACTION

The purpose of the Proposed Action is to support Nellis AFB's future mission and training requirements and the arrival of next-generation aircraft. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and U.S. Department of Defense (DoD) current and future mission requirements relative to state and federal requirements.

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<sup>1</sup> This EA is following the September 14, 2020, update to the CEQ rules (85 FR 43304).

### 1.3 NEED FOR THE ACTION

Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units in a manner that:

- Meets all applicable DoD installation master planning criteria, consistent with Unified Facilities Criteria (UFC) 2-100-01, *Installation Master Planning* (30 Sept 2020); Department of the Air Force Manual (DAFMAN) 32-1084, *Standard Facility Requirements* (1 April 2018); Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning* (as amended 4 Jan 2021); and Air Force Policy Directive 32-10, *Installations and Facilities* (20 July 2020);
- Meets applicable DoD antiterrorism and force protection criteria, consistent with UFC 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings* (12 Dec 2018), and the *Air Force Installation Force Protection Guide* (1 Jan 1996);
- Supports and enhances the morale and welfare of personnel assigned to the Base, their families, and civilian staff, consistent with DoD Instruction 1015.10, *Military Morale, Welfare, and Recreation Programs* (as amended 6 May 2011);
- Conforms to the Major Command Civil Engineering Squadron Design Guide and Nellis AFB architectural compatibility guidelines to ensure a consistent and coherent architectural character throughout the Base; and
- Achieves the goals and objectives laid out in the *Nellis AFB Installation Development Plan* (Air Force, 2018a).

### 1.4 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATION

#### 1.4.1 Interagency and Intergovernmental Coordination and Consultation

The environmental analysis process, in compliance with NEPA guidance, includes public and agency review of information pertinent to a proposed action and alternatives. Scoping is an early and open process for developing the breadth of issues to be addressed in an EA and for identifying significant concerns related to an action. Per the requirements of the *Intergovernmental Cooperation Act of 1968* (42 U.S.C. § 4231[a]) and EO 12372, *Intergovernmental Review of Federal Programs*, the Air Force notified federal, state, and local agencies with jurisdiction that could potentially be affected by the Proposed Action and Alternatives during the development of this EA. Interagency and intergovernmental coordination for environmental planning letters and responses are included in **Appendix B**.

#### 1.4.2 Government-to-Government Consultation

The *National Historic Preservation Act* (54 U.S.C. § 300101, et seq.) (NHPA) and its regulations at 36 CFR Part 800 direct federal agencies to consult with Indian tribes when a proposed action or alternatives may have an effect on tribal lands or on properties of religious and cultural significance to a tribe. Consistent with the NHPA, DoD Instruction 4710.02, *Interactions with Federally Recognized Tribes*, and Department of the Air Force Instruction 90-2002, *Air Force Interaction with Federally Recognized Tribes*, the Air Force has invited federally recognized tribes that are historically affiliated with lands in the vicinity of the Proposed Action and Alternatives to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation or the interagency coordination process, and it requires separate notification to all relevant tribes. The timelines for tribal consultation are also distinct from those of the other consultations. The Nellis AFB point of contact for Indian tribes is the Base Commander. The point of contact for consultation with the Tribal Historic Preservation Officer and the Advisory Council on Historic Preservation is the Nellis AFB Cultural Resources Manager. Government-to-government consultation correspondence is included in **Appendix B**.

### 1.4.3 Other Agency Consultations

Implementation of the Proposed Action involves coordination with several organizations and agencies. Compliance with Section 7 of the *Endangered Species Act of 1973*, as amended (16 U.S.C. § 1536) (ESA), and implementing regulations (50 CFR Part 402) require communication with the U.S. Fish and Wildlife Service (USFWS) in cases where a federal action could affect listed threatened or endangered species, species proposed for listing, or candidates for listing. The primary focus of this coordination is to request a determination of whether any of these species occurs in the proposal area. If any protected species is present, a determination would be made of any potential adverse effects on the species. Should no species protected by the ESA be affected by the Proposed Action or Alternatives, no additional consultation is required. Letters will be sent to the appropriate USFWS offices as well as relevant state agencies informing them of the Proposed Action and Alternatives, requesting data regarding applicable protected species, and subsequently requesting concurrence if the Air Force makes a determination of no effect to any federally listed species.

Coordination with the appropriate state government agencies and planning districts is ongoing through publication of the Draft EA for review and comment. Compliance with Section 106 of the NHPA and implementing regulations (36 CFR Part 800) will be accomplished through the State Historic Preservation Officer (SHPO). The Nevada Department of Environmental Protection and Clark County Department of Environment and Sustainability will be included for air and water quality, and the Nevada Department of Wildlife will be included in this coordination on habitat and species of concern. All agency correspondence is included in **Appendix B**.

## 1.5 PUBLIC AND AGENCY REVIEW

A Notice of Availability (NOA) of the Draft EA and FONSI was published in Las Vegas Review Journal and Desert Lightning News newspapers announcing the availability of the EA for review on XX. The NOA invited the public to review and comment on the Draft EA. The public and agency review period ended on XX. The public and agency comments are provided in **Appendix B**.

## 1.6 DECISION TO BE MADE

This EA analyzes the potential environmental consequences of the Proposed Action and Alternatives. The Proposed Action involves construction of new facilities, renovation and repair of existing facilities, implementation of infrastructure improvements, and demolition of obsolete facilities.

Based on the analysis in this EA, the Air Force will make one of three decisions regarding the Proposed Action: 1) choose to implement either Alternative 1 or 2 and sign a FONSI, allowing implementation of the Preferred Alternative; 2) initiate preparation of an EIS if it is determined that implementation of the Proposed Action and Alternatives would cause significant impacts to the human and natural environment; or 3) select the No Action Alternative, whereby the Proposed Action would not be implemented. As required by NEPA and its implementing regulations, preparation of an environmental document must precede final decisions regarding the proposed project and be available to inform decision-makers of the potential environmental impacts.

## 1.7 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

This EA evaluates the potential environmental consequences of implementing the Proposed Action or Alternatives for construction, demolition, and improvement projects at Nellis AFB. This EA has been prepared in accordance with NEPA (42 U.S.C §§ 4321–4370), CEQ regulations (40 CFR Parts 1500–1508), and the Air Force EIAP, 32 CFR Part 989. NEPA is the basic national requirement for identifying environmental consequences of federal decisions. NEPA ensures that environmental information, including the anticipated environmental consequences of a proposed action, is available to the public, federal and state agencies, and the decision-maker before decisions are made and before actions are taken.

Consistent with the CEQ regulations, this EA is organized into the following sections:

- Chapter 1, Purpose and Need for the Proposed Action, includes an introduction, purpose and need statement, interagency and intergovernmental coordination and consultations, a description of public and agency review of the EA, decision to be made, scope of the EA, and applicable laws and environmental regulations.
- Chapter 2, Description of the Proposed Action and Alternatives, includes a description of the Proposed Action, selection standards for alternatives screening, description of the Alternatives and No Action Alternative, and a summary of potential environmental consequences.
- Chapter 3, Affected Environment, includes a description of the natural and man-made environments within Nellis AFB that may be affected by the Proposed Action and Alternatives.
- Chapter 4, Environmental Impacts, includes definitions and discussions of potential direct and indirect impacts, environmental commitments, and best management practices, as applicable.
- Chapter 5, List of Preparers, lists the individuals involved in the preparation of this EA.
- Chapter 6, References, lists bibliographic information for studies, data, and other resources cited in this EA.

Appendices, as required, provide relevant correspondence, studies, figures, and modeling results.

NEPA, which is implemented through the CEQ regulations, requires federal agencies to consider alternatives to the Proposed Action and to analyze potential impacts of alternatives. Potential impacts of the Proposed Action and Alternatives described in this EA will be assessed in accordance with the Air Force EIAP (32 CFR Part 989), which requires that impacts to resources be analyzed in terms of their context, duration, and intensity. To help the public and decision-makers understand the implications of potential impacts, the impacts will be described in the short and long term, cumulatively, and within context. This EA analyzes the following environmental resources:

- Noise;
- Safety;
- Air Quality;
- Biological Resources (flora, fauna, threatened and endangered species, wetlands);
- Water Resources;
- Soils;
- Land Use;
- Socioeconomics;
- Environmental Justice and Protection of Children;
- Cultural Resources (archaeological, architectural, traditional);
- Hazardous Materials and Wastes, Toxic Substances, and Contaminated Sites; and
- Infrastructure, Transportation, and Utilities.

The expected geographic scope of any potential consequences is defined as the Region of Influence (ROI). Nellis AFB and its environs are considered in determining the ROI for each resource. The ROI boundaries would vary depending on the nature of each resource. For example, the ROI for some resources, such as socioeconomics and air quality, extend over a larger jurisdiction unique to the resource.

## **1.8 APPLICABLE LAWS AND ENVIRONMENTAL REGULATIONS**

Implementation of the Proposed Action would involve coordination with several organizations and agencies. Adherence to the requirements of specific laws, regulations, best management practices, and necessary permits are described in detail in each resource section in Chapter 3.



### **1.8.1 National Environmental Policy Act**

NEPA requires that federal agencies consider potential environmental consequences of its proposed actions. The law's intent is to protect, restore, or enhance the environment through well-informed federal decisions. The CEQ was established under NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. In 1978, the CEQ issued *Regulations for Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500–1508).

### **1.8.2 The Environmental Impact Analysis Process**

The EIAP is the process by which the Air Force facilitates compliance with environmental regulations (32 CFR Part 989), including NEPA, which is the primary legislation affecting the agency's decision-making process.

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## 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

### 2.1 PROPOSED ACTION

This EA evaluates the potential environmental impacts that may arise from installation development projects, which include construction of new facilities, renovation and repair of existing facilities, implementation of infrastructure improvements, and demolition of obsolete facilities. Alternatives 1 and 2 include multiple construction, renovation, repair, infrastructure improvement, and demolition activities. Alternative 1 includes substantially more new construction and demolition activities, while Alternative 2 is more focused on renovation of existing facilities. **Table 2-1** summarizes the actions that would occur from the proposed projects. The proposed projects and a description of the size and extent of the projects identified under Alternatives 1 and 2 are listed in **Table 2-2** and **Table 2-3**, respectively. The proposed locations for each specific project are identified on **Figure A-2** and **Figure A-3** in **Appendix A**.

**Table 2-1.**  
**Summary of Alternatives**

Activity	Alternative 1	Alternative 2
<b>Demolition</b>		
Number of actions	9	2
Demolition amount	457,457 ft <sup>2</sup>	174,540 ft <sup>2</sup> demolished
<b>Renovation Only</b>		
Number of actions	0	7
Renovation amount	0	282,934 ft <sup>2</sup> renovated
<b>Building Construction</b>		
Number of actions	8	8
New construction	70,465 ft <sup>2</sup> 1,700 LF of walls/gates	55,754 ft <sup>2</sup> constructed 1,700 LF walls/gates 10,700 ft <sup>2</sup> renovated
<b>Additions to Buildings</b>		
Number of actions	7	7
Project totals	32,014 ft <sup>2</sup> renovation 29,300 ft <sup>2</sup> new construction (additions)	32,014 ft <sup>2</sup> renovation 29,300 ft <sup>2</sup> new construction (additions)
<b>Infrastructure Construction</b>		
Number of actions	8	8
New construction	21,600 ft <sup>2</sup> facilities construction 285,091 ft <sup>2</sup> new impervious surfaces 27,040 LF new fencing 75,600 ft <sup>2</sup> new access road	21,600 ft <sup>2</sup> facilities construction 285,091 ft <sup>2</sup> new impervious surfaces 27,040 LF new fencing 75,600 ft <sup>2</sup> new access road

Note:

ft<sup>2</sup> = square feet, LF = linear feet

Based on Table 2-1, the net impervious coverage for Alternative 1 would increase by 24,599 ft<sup>2</sup> (Note: This includes the square footage for demolition, construction, and pavement of new roads). The net impervious coverage for Alternative 2 would increase by 265,805 ft<sup>2</sup>.

Project initiation would occur over the six-year period FY 2022–FY 2027. The construction schedule for each proposed building is roughly 12 to 18 months and dependent on the timing of the design schedule relative to the weather cycle of the region. Infrastructure construction could range from eight to 12 months depending on the timing of its design schedule relative to the weather cycle of the area.

**Table 2-2.  
Proposed Installation Development Projects at Nellis Air Force Base – Alternative 1**

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-2)
<b>Demolition</b>					
RKMF130140 DEMO B10238, BASEBALL FIELD (AREA 2)	Gate 2B, 4 acres. Demo Facility B10238 baseball field, including area lighting, fencing and associated structures surrounding the field. Install 4" of rock mulch over ground.	2023	174,240 ft <sup>2</sup>	-174,240 ft <sup>2</sup>	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways.	2022	300 ft <sup>2</sup>	-300 ft <sup>2</sup>	2
RKMF130142 DEMO FAC 10236 (Old Gym)	Demolish old prison camp Facility 10236 to include footing and service lines. Install 4" of rock mulch over ground.	2022	14,448 ft <sup>2</sup>	-14,448 ft <sup>2</sup>	3
RKMF130136 DEMO B10235	Gate 2B, 1,800 ft <sup>2</sup> . Demolish B10235 to include foundation and utilities. Install 4" of rock mulch over ground.	2022	1,800 ft <sup>2</sup>	-1,800 ft <sup>2</sup>	4
RKMF200044 DEMO AREA 2 DINING FAC B10206	Demolish B10206, 30,288 ft <sup>2</sup> dining facility Area II to include footing and service lines. Install 4" of rock mulch over ground. State-authorized water quality sample station would remain in place and access would be unfettered during demolition.	2023	30,288 ft <sup>2</sup>	-30,288 ft <sup>2</sup>	5
RKMF190043 DEMO DUNNING CIRCLE FACILITIES	Demolish eight former housing units located at Dunning Circle on the Main Base. Install 4" of rock mulch over ground.	2022	14,904 ft <sup>2</sup>	-14,904 ft <sup>2</sup>	6
RKMF200014 DEMO AREA 3 TEMPORARY LODGING FACILITIES	Demolish Area 3 Temporary Lodging Facilities to include footing and service lines. Install 4" of rock mulch over ground. Building List includes B2935, B2940, B2945, B2950, B2955, B2960, B2965, B2970, B2975.	2025	Total area: 32,919 ft <sup>2</sup> B2935: 2,400 ft <sup>2</sup> B2940: 2,800 ft <sup>2</sup> B2945: 5,773 ft <sup>2</sup> B2950: 2,400 ft <sup>2</sup> B2955: 5,773 ft <sup>2</sup> B2960: 2,800 ft <sup>2</sup> B2965: 2,800 ft <sup>2</sup> B2970: 5,773 ft <sup>2</sup> B2975: 2,400 ft <sup>2</sup>	-32,919 ft <sup>2</sup>	7

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-2)
RKMF200021 DEMO LOMIE HEARD ELEMENTARY SCHOOL, MULTI FAC	Demolition includes ten dependent school facilities that have been replaced by a new charter school. B1781, B1782, B1783, B1784, B1785 B1786, B1787, B1788, B1789, B1790. Include footing and service lines. Install 4" of rock mulch over ground. Closure of grease interceptors associated with dining facility; in accordance with Clark County Water Reclamation District, rules would be ensured.	2023	Total area: 66,161 ft <sup>2</sup> B1781: 4,612 ft <sup>2</sup> B1782: 6,093 ft <sup>2</sup> B1783: 7,637 ft <sup>2</sup> B1784: 6,916 ft <sup>2</sup> B1785: 6,456 ft <sup>2</sup> B1786: 12,536 ft <sup>2</sup> B1787: 7,330 ft <sup>2</sup> B1788: 3,783 ft <sup>2</sup> B1798: 7,375 ft <sup>2</sup> B1790: 3,423 ft <sup>2</sup>	-66,161 ft <sup>2</sup>	8
RKMF220003 DEMO BLDG 625 OLD HOSPITAL	122,414 ft <sup>2</sup> . This was the former base hospital. Demolish facility to include foundation, north parking lot, and utilities back to the mains. Closure of grease interceptors associated with dining facility; in accordance with Clark County Water Reclamation District, rules would be ensured.	2024	122,414 ft <sup>2</sup>	-122,414 ft <sup>2</sup>	9
<b>Building Construction</b>					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY	Construct 7,200 ft <sup>2</sup> AGE MX facility by B61685. In accordance with AFMAN 32-1067, oil-water separators would not be installed.	2022	7,200 ft <sup>2</sup>	+7,200 ft <sup>2</sup>	10
RKMF190081 CONSTRUCT NEW WALLS AND GATES AT MAIN GATE	Construct new walls and gates at the Main Gate so that the gate can be closed to traffic and pedestrians.	2022	1,700 LF	+1,700 LF	11
RKMF200010 CONSTRUCT AFCEC ISS ADMINISTRATIVE FACILITY	Construct admin facility to include restrooms, networking, telephone, gas, water, and any needed power support for usable office space for an executive facility in support of AFCEC.	2025	3,000 ft <sup>2</sup>	+3,000 ft <sup>2</sup>	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3	Construct 900 ft <sup>2</sup> Information Transfer Building and generator.	2023	900 ft <sup>2</sup>	+900 ft <sup>2</sup>	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2026	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	14
RKMF223001 DINING FACILITY	Construct new dining facility.	2026	18,201 ft <sup>2</sup>	+18,201 ft <sup>2</sup>	15

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-2)
RKMF113004 COMMUNICATIONS SUPPORT CENTER	Construct new facility that consolidates 99 CS functions, as well as provides a redundant base comm hub, and demolishes B595.	2024	34,164 ft <sup>2</sup>	+34,164 ft <sup>2</sup>	16
RKMF200043 CONSTRUCT ARC AP ANG FACILITY	Construct conference room, bathrooms, break room, and storage in structure parallel to Building 877.	2024	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	17
<b>Additions to Buildings</b>					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230	Construct a 2,250 ft <sup>2</sup> addition to north end of B230 in order to provide adequate operational and storage space for 140 P5 Pods and associated equipment. Install 16ft by 16ft roll-up door on west side of addition. Relocate light pole in yard to provide access for roll-up door. Renovate the 1970 men's and women's bathrooms, office areas, operational areas, and entrance to meet current design and security standards. Renovation includes replacing exterior siding and drainage gutters, sealing and coating concrete floors, replacing bay lights and office areas with energy efficient fixtures, painting interior workspaces, replacing piping, changing layout of office spaces for better efficiency, and modifying main front entrance for better security containment. State-authorized water quality sample station would remain in place and access would be unfettered during demolition.	2025	5,520 ft <sup>2</sup> renovation 2,250 ft <sup>2</sup> addition	+2,250 ft <sup>2</sup>	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 ft <sup>2</sup> addition to B118. Addition to include SCIF/SAPF briefing rooms, mission planning and restrooms for GSUs during weapons school classes. Facility requires repair to the roofing systems, restrooms, flooring, and fire detection system in the existing portion of the facility as well.	2023	4,805 ft <sup>2</sup> renovation 3,500 ft <sup>2</sup> addition	+3,500 ft <sup>2</sup>	19
RKMF190063 CONSTRUCT ADDITION 66 RQS B61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2022	B61663 Total area: 16,229 ft <sup>2</sup> 2,500 ft <sup>2</sup> renovation 7,500 ft <sup>2</sup> addition	+2,500 ft <sup>2</sup>	20
RKMF190085 CONSTRUCT ADDITION AFE B1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area: 36,596 ft <sup>2</sup> 2,000 ft <sup>2</sup> addition	+2,000 ft <sup>2</sup>	21

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-2)
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR B604	Construct a 1050 ft <sup>2</sup> waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft <sup>2</sup> renovation 1,050 ft <sup>2</sup> addition	+1,050 ft <sup>2</sup>	22
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2023	B204 area: 7,547 ft <sup>2</sup> 3,000 ft <sup>2</sup> addition 2,500 ft <sup>2</sup> renovation	+2,500 ft <sup>2</sup>	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2. State-authorized water quality sample station would remain in place and access would be unfettered during demolition.	2025	B204/B2966/B2967 Total area: 37,990 ft <sup>2</sup> 10,000 ft <sup>2</sup> addition 15,000 ft <sup>2</sup> renovation	+10,000 ft <sup>2</sup>	24
<b>Infrastructure Construction</b>					
RKMF180025 CONSTRUCT/ REPAIR PARKING LOT ADDITION (926 WG HQ)	Expands B334 parking lot over area where B336 is being demolished. Reconfigures existing lot in front of B334.	2022	54,789 ft <sup>2</sup> existing	+30,000 ft <sup>2</sup>	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS B451	Reconfigure and expand existing parking lot.	2023	55,732 ft <sup>2</sup> existing	+27,499 ft <sup>2</sup>	26
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY	Construct a 12,000 SF controlled storage facility for deployable UTC and training assets. A climate-controlled storage facility is required for 18 each ISU-90s that contain temperature sensitive electronics, shelving for mobility gear, 16 each short-notice tasking-prepped Polaris Ranger vehicles. Storage facility to include an office space for UTC processing.	2024	12,000 ft <sup>2</sup> new	+12,000 ft <sup>2</sup>	27
RKMF170045 CONSTRUCT WARMUP APRON TAXIWAY ALPHA (RH)	Construct new warm-up apron located north of Taxiway ALPHA between the runways in accordance with UFC 3-260-01, DAFMAN 32-1084 and applicable guidance. The primary surface shall be constructed of PCC pavement and have 25' asphalt shoulder pavements.	2022	131,570 ft <sup>2</sup> new	+131,570 ft <sup>2</sup>	28
RKMF140101 CONSTRUCT 99 LRS CARGO DEPLOYMENT YARD	Reconstructs layout of cargo deployment area. Extends flightline boundary by B810. Essentially closes off portions of Depot road and extends the existing boundary up to Wurtsmith Ave also.	2022	43,000 ft <sup>2</sup> new	+43,000 ft <sup>2</sup>	29

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-2)
RKMF180011 CONSTRUCT 66 RQS MOBILITY EQUIPMENT STORAGE YARD	Construct sunshade/overhang to shade deployable UTC and training assets including C2 trailer, two Boston Whaler boats with trailers, 10 each ISU-90 storage containers, and 1 each F-450 truck.	2024	9,600 ft <sup>2</sup> new	+9,600 ft <sup>2</sup>	30
RKMF180054 CONSTRUCT AREA 2 SECURITY FENCE	Install approximately 11,200 LF of 8' type-A fencing (i.e., woven 9-gauge steel-wire, chain-link with 2" square mesh. Steel-wire fabric must have a steel core that measures 9-gauge, not including the coating), with triple strand barbed wire outriggers. Install 6,300 LF of access road at a width of 10 feet (75,600 ft <sup>2</sup> ). Install concrete headwalls with security gates and culverts as necessary to traverse drainage ditches and maintain water flow.	2025	Total length: 11,200 LF (fence) Total area: 75,600 ft <sup>2</sup> (access road)	+17,500 LF	31
RKMF110096 CONSTRUCT EAST SIDE FLIGHTLINE FENCE	Install Type A chain link fencing, 50 mm square mesh, woven 9 Gauge steel wire fabric, 2.1-meter high, surmounted by three strand barbed wire.	2023	Total length: 15,840 LF	+15,840 LF	32

## Note

" = inch; ADAS = Air Defense Aggressor Squadron; AFCEC = Air Force Civil Engineering Center; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; B = building; CDC = Child Development Center; CS = Communications Squadron; CTS = Combat Training Squadron; DAFMAN = Department of the Air Force Manual; DDR = Drug Demand Response Program; FAC = facility; ft<sup>2</sup> = square feet; HQ = headquarters; ISS = Intelligence Support Squadron; JTAC = Joint Terminal, Attack Controller; LF = linear feet; LRS = Logistics Readiness Squadron; PCC = Plain Cement Concrete; RQS = Rescue Squadron; SAPF = Special Access Program Facility; SCIF = Sensitive Compartmented Information Facility; UFC = Unified Facilities Criteria; UTC = Unit Type Code; WG = Wing



**Table 2-3.  
Proposed Installation Development Projects at Nellis Air Force Base – Alternative 2**

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-3)
<b>Demolition</b>					
RKMF130140 DEMO BLDG 10238, BASEBALL FIELD (AREA 2)	Gate 2B, 4 acres. Demo Facility B10238 baseball field, including area lighting, fencing and associated structures surrounding the field. Install 4" of rock mulch over ground.	2023	174,240 ft <sup>2</sup>	-174,240 ft <sup>2</sup>	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways	2022	300 ft <sup>2</sup>	-300 ft <sup>2</sup>	2
<b>Renovation</b>					
RKMF130142 REPAIR/ALTER B10236 (Old Gym)	Repair B10236, old prison camp gym, to include footing and service lines. Upgrade facilities as necessary. Change category code as appropriate.	2023	14,448 ft <sup>2</sup> renovated	None	3
RKMF130136 REPAIR BLDG 10235, LATRINE/SHOWER	Renovate B10235, old prison camp latrine/shower to include foundation and utilities.	2023	1,800 ft <sup>2</sup> renovated	None	4
RKMF200044 REPAIR/RENOVATE AREA 2 DINING FAC B10206	Repair/renovate Building 10206, 30,288 ft <sup>2</sup> dining facility Area II.	2023	30,288 ft <sup>2</sup> renovated	None	5
RKMF190043 ALTER DUNNING CIRCLE FACILITIES	Renovate all eight former housing units located at Dunning Circle on the Main Base to serve miscellaneous administrative functions. Various users have been discussed for any installation available administrative space to include occupants of B625, visiting exercise	2023-2024	Total area: 14,904 ft <sup>2</sup> Renovations: B6441: 2,068 ft <sup>2</sup> B6451: 2,036 ft <sup>2</sup> B6461: 2,068 ft <sup>2</sup> B6471: 2,068 ft <sup>2</sup> B6481: 2,421 ft <sup>2</sup> B6501: 3,173 ft <sup>2</sup> B6541: 470 ft <sup>2</sup> (garage) B6551: 600 ft <sup>2</sup> (garage).	None	6

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-3)
RKMF200014 REPAIR/RENOVATE AREA 3 TEMPORARY LODGING FACILITIES	Repair/Renovate Area 3 Temporary Lodging Facilities to include utilities. Building List includes B2935, B2940, B2945, B2950, B2955, B2960, B2965, B2970, B2975	2025	Total area: 32,919 ft <sup>2</sup> Renovations: B2935: 2,400 ft <sup>2</sup> B2940: 2,800 ft <sup>2</sup> B2945: 5,773 ft <sup>2</sup> B2950: 2,400 ft <sup>2</sup> B2955: 5,773 ft <sup>2</sup> B2960: 2,800 ft <sup>2</sup> B2965: 2,800 ft <sup>2</sup> B2970: 5,773 ft <sup>2</sup> B2975: 2,400 ft <sup>2</sup>	None	7
RKMF200021 ALTER LOMIE HEARD ELEMENTARY SCHOOL, MULTI FAC	Renovate all former school facilities to accommodate miscellaneous administrative and operations functions. Various users have been discussed for any installation available administrative and operations space to include occupants of B625, visiting exercise organizations, and the occasional safety investigation board for aircraft crashes.	2023 - 2027	Total area: 66,161 ft <sup>2</sup> Renovations: B1781: 4,612 ft <sup>2</sup> B1782: 6,093 ft <sup>2</sup> B1783: 7,637 ft <sup>2</sup> B1784: 6,916 ft <sup>2</sup> B1785: 6,456 ft <sup>2</sup> B1786: 12,536 ft <sup>2</sup> B1787: 7,330 ft <sup>2</sup> B1788: 3,783 ft <sup>2</sup> B1798: 7,375 ft <sup>2</sup> B1790: 3,423 ft <sup>2</sup>	None	8
RKMF220003 ALTER BLDG 625 OLD HOSPITAL	This project would renovate and repair the existing facility to absorb some of the outstanding Weapons School program requirements.	2024	122,414 ft <sup>2</sup>	None	9
<b>Building Construction</b>					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY (RH)	Construct 7,200 SF AGE MX facility by 61685.	2022	7,200 ft <sup>2</sup>	+7,200 ft <sup>2</sup>	10
RKMF190081 CONSTRUCT NEW WALLS AND GATES AT MAIN GATE	Construct new walls and gates at the Main Gate so that the gate can be closed to traffic and pedestrians.	2022	1,700 LF	+1,700 LF	11
RKMF200010 CONSTRUCT AFCEC ISS ADMINISTRATIVE FACILITY	Construct admin facility to include restrooms, networking, telephone, gas, water, and any needed power support for usable office space for an executive facility in support of AFCEC.	2025	3,000 ft <sup>2</sup>	+3,000 ft <sup>2</sup>	12

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-3)
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3 (RH)	Construct 900 SF Information Transfer Building and generator.	2023	900 ft <sup>2</sup>	+900 ft <sup>2</sup>	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2026	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	14
RKMF223001 ADD/ALTER B790, DINING FACILITY	This project will update the existing DFAC and provide an addition of between 3,500 – 4,000 ft <sup>2</sup> to boost the capabilities of the existing facility.	2027	10,700 ft <sup>2</sup> renovation 4,000 ft <sup>2</sup> construction	+4,000 ft <sup>2</sup> new	15
RKMF113004 COMMUNICATIONS SUPPORT CENTER	Construct new facility that consolidates 99 CS functions, as well as provides a redundant base comm hub, and demolishes B595	2024	34,164 ft <sup>2</sup>	+34,164 ft <sup>2</sup>	16
RKMF200043 ADD/ALTER B877, ANG	This project will update the existing facility and provide 3,500 – 4,000 ft <sup>2</sup> of addition space in accordance with facility requirements	2025	6,990 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	17
<b>Additions to Buildings</b>					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230 (NTTR)	Construct a 2,250SF addition to north end of B230 in order to provide adequate operational and storage space for 140 P5 Pods and associated equipment. Install 16ft by 16ft roll-up door on west side of addition. Relocate light pole in yard to provide access for roll-up door. Renovate the 1970 men's and women's bathrooms, office areas, operational areas, and entrance to meet current design and security standards. Renovation includes replacing exterior siding and drainage gutters, sealing and coating concrete floors, replacing bay lights and office areas with energy efficient fixtures, painting interior work spaces, replacing piping, changing layout of office spaces for better efficiency, and modifying main front entrance for better security containment.	2025	5,520 ft <sup>2</sup> renovation 2,250 ft <sup>2</sup> addition	+2,250 ft <sup>2</sup>	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 SF addition to B118. Addition to include SCIF/SAPF briefing rooms, mission planning and restrooms for GSUs during weapons school classes. Facility requires repair to the roofing systems, restrooms, flooring, and fire detection system in the existing portion of the facility as well.	2023	4,805 ft <sup>2</sup> renovation 3,500 ft <sup>2</sup> addition	+3,500 ft <sup>2</sup>	19

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-3)
RKMF190063 CONSTRUCT ADDITION 66 RQS BLDG 61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2022	B61663 Total area: 16,229 ft <sup>2</sup> 2,500 ft <sup>2</sup> renovation 7,500 ft <sup>2</sup> addition	+2,500 ft <sup>2</sup>	20
RKMF190085 CONSTRUCT ADDITION AFE BLDG 1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area: 36,596 ft <sup>2</sup> 2,000 ft <sup>2</sup> addition	+2,000 ft <sup>2</sup>	21
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR BLDG 604	Construct a 1050 ft <sup>2</sup> waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft <sup>2</sup> renovation 1,050 ft <sup>2</sup> addition	+1,050 ft <sup>2</sup>	22
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2023	B204 Total area: 7,547 ft <sup>2</sup> 3,000 ft <sup>2</sup> addition 2,500 ft <sup>2</sup> renovation	+2,500 ft <sup>2</sup>	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2.	2025	B2966/2967 Total area: 37,990 ft <sup>2</sup> 10,000 ft <sup>2</sup> addition 15,000 ft <sup>2</sup> renovation	+10,000 ft <sup>2</sup>	24
<b>Infrastructure Construction</b>					
RKMF180025 CONSTRUCT/ REPAIR PARKING LOT ADDITION (926 WG HQ)	Expands B334 parking lot over area where B336 is being demolished. Reconfigures existing lot in front of B334.	2022	54,789 ft <sup>2</sup>	+30,000 ft <sup>2</sup>	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS BLDG 451	Reconfigure and expand existing parking lot	2023	55,732 ft <sup>2</sup>	+27,499 ft <sup>2</sup>	26
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY (RH)	Construct a 12,000 ft <sup>2</sup> controlled storage facility for deployable UTC and training assets. A climate-controlled storage facility is required for 18 each ISU-90s that contain temperature sensitive electronics, shelving for mobility gear, 16 each short-notice tasking-prepped Polaris Ranger vehicles. Storage facility to include an office space for UTC processing.	2024	12,000 ft <sup>2</sup> new	+12,000 ft <sup>2</sup>	27

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure A-3)
RKMF170045 CONSTRUCT WARMUP APRON TAXIWAY ALPHA (RH)	Construct new warm-up apron located north of Taxiway ALPHA between the runways in accordance with UFC 3-260-01, DAFMAN 32-1084 and applicable guidance. The primary surface shall be constructed of PCC pavement and have 25' asphalt shoulder pavements.	2022	131,570 ft <sup>2</sup> new	+131,570 ft <sup>2</sup>	28
RKMF140101 CONSTRUCT 99 LRS CARGO DEPLOYMENT YARD	Reconstructs layout of cargo deployment area. Extends flightline boundary by B810. Essentially closes off portions of Depot road and extends the existing boundary up to Wurtsmith Ave also.	2022	43,000 ft <sup>2</sup> new	+43,000 ft <sup>2</sup>	29
RKMF180011 CONSTRUCT 66 RQS MOBILITY EQUIPMENT STORAGE YARD	Construct sunshade/overhang to shade deployable UTC and training assets including C2 trailer, two Boston Whaler boats with trailers, 10 each ISU-90 storage containers, and 1 each F-450 truck.	2024	9,600 ft <sup>2</sup> new	+9,600 ft <sup>2</sup>	30
RKMF180054 CONSTRUCT AREA 2 SECURITY FENCE	Install approximately 11,200 LF of 8' type-A fencing (i.e., woven 9-gauge steel-wire, chain-link with 2" square mesh. Steel-wire fabric must have a steel core that measures 9-gauge, not including the coating), with triple strand barbed wire outriggers. Install 6,300 LF of access road. Install concrete headwalls with security gates and culverts as necessary to traverse drainage ditches and maintain water flow.	2025	Total length:- 11,200 LF (fence); Total length: 6,300 LF (access road)	+17,500 LF	31
RKMF110096 CONSTRUCT EAST SIDE FLIGHTLINE FENCE	Install Type A chain link fencing, 50 mm square mesh, woven 9 Gauge steel wire fabric, 2.1-meter high, surmounted by three strand barbed wire.	2023	Total length: 15,840 LF	+15,840 LF	32

Note:

" = inch; ADAS = Air Defense Aggressor Squadron; AFCEC = Air Force Civil Engineering Center; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; B = building; CDC = Child development center; CS = Communications Squadron; CTS = Combat Training Squadron; DAFMAN = Department of the Air Force Manual; DDR = Drug Demand Response Program; DFAC = dining facility; FAC = facility; ft<sup>2</sup> = square feet; HQ = headquarters; ISS = Intelligence Support Squadron; JTAC = Joint Terminal, Attack Controller; LF = linear feet; LRS = Logistics Readiness Squadron; PCC = Plain Cement Concreate; RQS = Rescue Squadron; SAPF = Special Access Program Facility; SCIF = Sensitive Compartmented Information Facility; UFC = Unified Facilities Criteria; UTC = Unit Type Code; WG = Wing

## 2.2 SELECTION STANDARDS FOR ALTERNATIVE SCREENING

In accordance with 32 CFR § 989.8(c), selection standards were developed to establish a means for determining the reasonableness of an alternative and whether an alternative should be carried forward for further analysis in the EA. Consistent with 32 CFR § 989.8(c), the following selection standards meet the purpose of and need for the Proposed Action and were used to identify reasonable alternatives for analysis in the EA. The supporting alternatives must:

1. Remedy facilities and infrastructure deficiencies in order to adequately support current and future strategic missions;
2. Be consistent with land use requirements, force protection, and planning concepts as defined in the 2018 Installation Development Plan and other Air Force guidance;
3. Minimize operational inefficiencies and promote sustainable development; and
4. Provide and promote quality of life environment on Nellis AFB.

Based on these selection standards, no other reasonable alternatives were identified.

## 2.3 ALTERNATIVES

The NEPA and CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that could also be utilized to meet the purpose of and need for the Proposed Action. Alternatives were considered for each of the proposed projects. The Air Force uses several guidelines and instructions in determining the best approach for construction, renovation, and demolition. AFI 32-1023, *Designing and Constructing Military Construction Projects*, implements Air Force Policy Directive 32-10 and Military Standard 3007F, *Standard Practice for Unified Facilities Criteria and Unified Facilities Guide Specifications*. AFI 32-1023 provides general design criteria and standards and information on design and construction management. This document provides guidance governing Air Force military construction projects. DAFMAN 32-1084 supplements AFI 32-1024, *Standard Facility Requirements*, and provides guidance for determining space allocations for Air Force facilities and may be used to program new facilities or evaluate existing spaces.

The NEPA process is intended to support flexible, informed, decision-making; the analysis provided by this EA and feedback from stakeholders will inform decisions made about whether, when, and how to execute the Proposed Action. Among the alternatives evaluated for each project is a No Action Alternative, which evaluates the potential consequences of not undertaking the Proposed Action and will serve to establish a comparative baseline for analysis.

The scope, location, and objectives of each project are described here, grouped by project type (i.e., construction, renovation, demolition). This section also presents reasonable and practicable alternatives for projects where multiple, viable courses of action exist. Each alternative is assessed relative to the selection standards (see **Section 2.2**).

### 2.3.1 Alternative 1

Under Alternative 1, there would be nine demolition projects, eight building construction projects, seven additions to buildings projects, and eight infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 1, all proposed projects would meet the selection standards listed in **Section 2.2** and would remedy facility deficiencies, would be consistent with land use requirements, would increase operational efficiencies and be sustainable development, and would improve the quality of life.

### **2.3.1.1 Demolition Projects**

Nine demolition projects are proposed under Alternative 1. The demolition projects would include the removal of 32 buildings totaling approximately 283,217 square feet (ft<sup>2</sup>) and one baseball field totaling 174,240 ft<sup>2</sup>. The buildings to be removed include obsolete or substandard facilities. The descriptions of these proposed projects are listed in **Table 2-2** above and meet the selection standards listed in **Section 2.2**.

### **2.3.1.2 Renovation Projects**

There are no projects proposed under Alternative 1 that would consist solely of renovations or repairs to existing buildings. Renovation-only projects are proposed under Alternative 2.

### **2.3.1.3 Building Construction Projects**

Eight building construction projects are proposed under Alternative 1. While some of the projects listed also would include renovation actions, construction is the larger part of the action. Construction projects would include approximately 70,465 ft<sup>2</sup> of new buildings and facilities and 1,700 linear feet (LF) of walls and gates installed as part of the proposed projects. The descriptions of these proposed projects are listed in **Table 2-2** above and meet the selection standards listed in **Section 2.2**.

### **2.3.1.4 Additions to Buildings**

Seven projects consisting primarily of additions to existing buildings and renovation of existing facilities are proposed under Alternative 1. Projects associated with additions to and renovations of existing buildings would include 29,300 ft<sup>2</sup> of new construction in the form of additions to existing buildings and 32,014 ft<sup>2</sup> of renovation activities. The descriptions of these proposed projects are listed in **Table 2-2** above and meet the selection standards listed in **Section 2.2**.

### **2.3.1.5 Infrastructure Construction Projects**

Eight infrastructure construction projects are proposed under Alternative 1. These projects would include construction of new infrastructure and additions to existing infrastructure on Nellis AFB, including 306,691 ft<sup>2</sup> of new construction, 27,040 LF of new fencing, and 75,600 ft<sup>2</sup> of new access road. The descriptions of the proposed infrastructure actions are listed in **Table 2-2** above and meet the selection standards listed in **Section 2.2**.

## **2.3.2 Alternative 2**

Under Alternative 2, there would be two demolition projects, seven renovation-only projects, eight building construction projects, seven additions to buildings projects, and eight infrastructure construction projects. Under Alternative 2, all of the proposed projects would meet the selection standards listed in **Section 2.2** and would remedy facility deficiencies; would be consistent with land use requirements, force protection and planning concept; would minimize operational inefficiencies and be sustainable development; and would provide and promote quality of life.

### **2.3.2.1 Demolition Projects**

Two demolition projects are proposed under Alternative 2. The demolition projects would include the removal of one building totaling approximately 300 ft<sup>2</sup> and one baseball field totaling 174,240 ft<sup>2</sup>. The descriptions of the proposed demolition actions are listed in **Table 2-3** above and satisfy the selection standards described in **Section 2.2**.

### 2.3.2.2 Renovation Projects

Seven renovation projects are proposed under Alternative 2. Each of these projects would consist of renovating buildings slated for demolition under Alternative 1. The renovation projects would involve renovation of 31 different buildings. Some construction and repair activities could also be associated with the proposed projects; however, the majority of the actions would consist of renovations to existing buildings. The descriptions of the proposed demolition actions are listed in **Table 2-3** above and satisfy the selection standards described in **Section 2.2**.

### 2.3.2.3 Building Construction Projects

Eight building construction projects are proposed under Alternative 2. While some of the projects listed also would include renovation actions, construction is the larger part of the action. Construction projects would include approximately 55,754 ft<sup>2</sup> of new buildings and facilities and 1,700 LF of walls and gates installed as part of the proposed projects, as well as 10,700 ft<sup>2</sup> of renovation activities. The descriptions of these proposed projects are listed in **Table 2-3** above and meet the selection standards listed in **Section 2.2**.

### 2.3.2.4 Additions to Buildings

The seven projects consisting primarily of additions to and renovation of existing buildings proposed under Alternative 2 would be the same as those proposed under Alternative 1. No project-specific alternatives were identified for these actions. Projects associated with additions to and renovations of existing buildings would include 32,014 ft<sup>2</sup> of renovation activities and 29,300 ft<sup>2</sup> of new construction in the form of additions to existing buildings. The descriptions of these proposed projects are listed in **Table 2-3** above and meet the selection standards listed in **Section 2.2**.

### 2.3.2.5 Infrastructure Construction Projects

The eight infrastructure construction projects proposed under Alternative 2 would be the same as those proposed under Alternative 1. No project-specific alternatives were identified for these actions. These projects would include construction of new infrastructure and additions to existing infrastructure on Nellis AFB, including 306,691 ft<sup>2</sup> of new construction, 27,040 LF of new fencing, and 75,600 ft<sup>2</sup> of new access road. The descriptions of the proposed infrastructure actions are listed in **Table 2-3** above and meet the selection standards listed in **Section 2.2**. **Table 2-4** provides a comparison of the alternatives considered.

**Table 2-4.  
Comparison of Alternatives**

Alternative Actions	Selection Standard				Meets Purpose and Need
	1. Remedy Deficiencies	2. Land Use	3. Operational Inefficiency and Sustainable Development	4. Quality of Life	
Alternative 1					
Construction	Yes	Yes	Yes	Yes	Yes
Renovation and Repair	Yes	Yes	Yes	Yes	Yes
Infrastructure	Yes	Yes	Yes	Yes	Yes
Demolition	Yes	Yes	Yes	Yes	Yes
Alternative 2					
Construction	Yes	Yes	Yes	Yes	Yes
Renovation and Repair	Yes	Yes	Yes	Yes	Yes
Infrastructure	Yes	Yes	Yes	Yes	Yes
Demolition	Yes	Yes	Yes	Yes	Yes



### 2.3.3 No Action Alternative

CEQ regulations require evaluation of the No Action Alternative under NEPA. The No Action Alternative serves as a baseline for evaluating the impacts of the Proposed Action and Alternatives.

Under the No Action Alternative, the proposed development projects for Nellis AFB would not occur. Activities that occur in existing facilities would continue to operate in substandard, congested, and geographically separated facilities; security requirements necessary for compliance with guidelines would not be met; aging facilities and infrastructure would require extensive and costly upkeep; and inefficient workarounds to meet mission requirements would continue. Failure to complete the needed installation development would degrade the unit's mission.

## 2.4 SUMMARY OF ENVIRONMENTAL CONSEQUENCES

The potential impacts associated with Proposed Action, Alternatives, and No Action Alternative are summarized in **Table 2-5**. The summary is based on information discussed in detail in **Chapter 4** (Environmental Impacts) of this EA and includes a concise definition of the issues addressed and the potential environmental impacts associated with each alternative.

**Table 2-5.**  
**Summary of Environmental Consequences**

Resource Area	Alternative 1	Alternative 2	No Action Alternative
Noise	No significant impacts on noise-sensitive receptors. There would be no operational increases in noise resulting from implementation of Alternative 1.	No significant impacts on noise-sensitive receptors. There would be no operational increases in noise resulting from implementation of Alternative 2.	No significant impacts on noise-sensitive receptors would be anticipated.
Safety	No significant impacts to ground, explosive, or flight safety.	No significant impacts to ground, explosive, or flight safety.	No significant impacts to safety.
Air Quality	No significant impacts to regional air quality.	No significant impacts to regional air quality.	No impacts would occur to regional air quality under the No Action Alternative.
Biological Resources (flora, fauna, threatened and endangered species)	No significant impacts to biological resources.	No significant impacts to biological resources.	No significant impacts to biological resources.
Water Resources	No significant impacts to water resources. Net impervious surfaces would increase by 24,599 ft <sup>2</sup> .	No significant impacts to water resources. Net impervious surfaces would increase by 265,805 ft <sup>2</sup> .	Water resources would not change from current condition, and no impacts to water resources would occur.
Geological Resources	No significant impacts to geological resources. Net impervious surfaces would increase by 24,599 ft <sup>2</sup> .	No significant impacts to geological resources. Net impervious surfaces would increase by 265,805 ft <sup>2</sup> .	Under the No Action Alternative, no proposed demolition renovation, or construction activities would occur. Soils would not change from current condition, and no impacts to soils would be anticipated.
Land Use	No changes to existing land use.	No changes to existing land use.	No changes to existing land use.
Socioeconomics	No impacts to population, economic environment, employment, housing, or educational resources.	No impacts to population, economic environment, employment, housing, or educational resources.	There would be no change to socioeconomic conditions.

<b>Resource Area</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>No Action Alternative</b>
Environmental Justice and Protection of Children	No disproportionate impact to minority or low-income populations. No disproportionate impacts to children or elderly.	No disproportionate impact to minority or low-income populations. No disproportionate impacts to children or elderly.	There would be no change to minority, low-income, or youth populations.
Cultural Resources (archaeological, architectural, traditional)	No significant impact to historic buildings or archaeological deposits. No known traditional cultural resources or sacred sites are present	No significant impact to historic buildings or archaeological deposits. No known traditional cultural resources or sacred sites are present	Cultural resources would not change from current condition, and no impacts to cultural resources would be anticipated to occur.
Hazardous Materials and Wastes, Toxic Substances, and Contaminated Sites	No impacts to hazardous waste management Long-term, beneficial impact to asbestos-containing materials (ACM) and lead-based paint (LBP) due to removal of asbestos and LBP during demolitions and renovations. Long-term, minor beneficial impact to managing and disposal of polychlorinated biphenyls. No impacts from radon Construction occurs above Environmental Restoration Program (ERP) sites but no impact.	No impacts to hazardous waste management Long-term, beneficial impact to ACM and LBP due to removal of asbestos and LBP during demolitions and renovations. Long-term, minor beneficial impact to managing and disposal of polychlorinated biphenyls. No impacts from radon Construction occurs above ERP sites but no impact.	No change to hazardous materials and wastes, contaminated sites, and toxic substances would occur.
Infrastructure, Transportation, and Utilities	No impacts to local traffic or utilities.	No impacts to local traffic or utilities.	No impacts to local traffic or utilities would be expected to occur.

Note:

ACM = asbestos-containing material; ERP = Environmental Restoration Program; ft<sup>2</sup> = square feet; LBP = lead-based paint

## 3 BACKGROUND ENVIRONMENT

### 3.1 NOISE

#### 3.1.1 Definition of Resource

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air or water, and are sensed by the human ear. Sound becomes noise when it is unwelcomed and interferes with normal activities, such as sleep or conversation. Noise is generally described as unwanted sound. Unwanted sound can be based on objective effects (such as hearing loss or damage to structures) or subjective judgments (community annoyance). The response of different individuals to similar noise events is diverse and influenced by the type of noise, the perceived importance of the noise, its appropriateness in the setting, the time of day, the type of activity during which the noise occurs, and the sensitivity of the individual. Noise also may affect wildlife through disruption of nesting, foraging, migration, and other life-cycle activities.

Sound is expressed in logarithmic units of decibels (dB). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB; sound levels above 120 dB begin to be felt inside the human ear as discomfort. Sound levels between 130 to 140 dB are felt as pain (Berglund and Lindvall, 1995). The minimum change in the sound level of individual events that an average human ear can detect is about 3 dB.

All sounds have a spectral content, which means their magnitude or level changes with frequency, where frequency is measured in cycles per second, or hertz. To mimic the human ear's nonlinear sensitivity and perception of different frequencies of sound, the spectral content is weighted. For example, environmental noise measurements usually employ an "A-weighted" scale that filters out very low and very high frequencies to replicate human sensitivity. It is common to add the "A" to the measurement unit to identify that the measurement was made with this filtering process, for instance A-weighted decibels (dBA). In this EA, the dB unit refers to A-weighted sound levels unless otherwise noted.

A-weighted sound levels from common sources are given on **Figure A-4** (refer to **Appendix A**). Some sources, like the air conditioner and vacuum cleaner, are continuous sounds whose levels are constant for some time. Some sources, like the automobile and heavy truck, are the maximum sound during an intermittent event like a vehicle pass-by. Some sources like "urban daytime" and "urban nighttime" are averages over extended periods. A variety of noise metrics have been developed to describe noise over different time periods.

Very loud or impulsive sounds, such as explosions or sonic booms, can sometimes be felt and can cause secondary effects, such as shaking of a structure or rattling of windows. These types of sounds can add to annoyance and are best measured by C-weighted sound levels, denoted dBC. C-weighting is nearly flat throughout the audible frequency range and includes low frequencies that may not be heard but cause shaking or rattling. C-weighting approximates the human ear's sensitivity to higher-intensity sounds.

The ROI for noise is Nellis AFB.

#### 3.1.2 Existing Condition

As is normal for military installations with a flying mission, the primary driver of noise at Nellis AFB is aircraft operations. Standard aircraft operations include departures, arrivals, closed patterns, and static run-ups.

In addition to aviation noise, some additional noise results from the day-to-day activities from operations, maintenance, and the industrial functions associated with the operations of the airfield. These noise sources include the operations of ground-support equipment and other transportation noise from vehicular traffic. Noise from aircraft operations remains the dominant noise source.

Base military aircraft such as the A-10, F-15, F-16, F-22, and F-35 airframes make up the majority of flight operations at Nellis AFB. There are 59,154 existing annual aircraft operations at Nellis AFB (Nellis AFB, 2021a). An operation is defined as a single takeoff or landing. Closed patterns consist of two operations, one departure and one arrival (e.g., two closed pattern circuits consist of four total operations).

Typical ambient sound levels on the Base have been modeled previously for a noise effects assessment as part of the *Draft EA for Addition of F-35 Joint Strike Fighters, Addition of F-22A Raptors and Contract Adversary Air* (Nellis AFB, 2021a). Modeling results for this assessment indicate existing Day-Night Sound Levels (DNLs) range from 50 dBA DNL to 85 dBA across Nellis AFB. Ambient noise levels from aircraft operations at the proposed project locations are in the range of 60 to 75 dBA.

## 3.2 SAFETY

### 3.2.1 Definition of the Resource

This section discusses safety concerns associated with ground, explosive, and flight activities. Ground safety considers issues associated with ground operations and maintenance activities that support unit operations including arresting gear capability, jet blast/maintenance testing, and safety danger. Aircraft maintenance testing occurs in designated safety zones. Ground safety also considers the safety of personnel and facilities on the ground that may be placed at risk from flight operations in the vicinity of the airfield and in the airspace. Clear Zones (CZs) and Accident Potential Zones (APZs) around the airfield restrict the public's exposure to areas where there is a higher accident potential. Although ground and flight safety are addressed separately, in the immediate vicinity of the runway, risks associated with safety-of-flight issues are interrelated with ground safety concerns.

Explosives safety relates to the management and safe use of ordnance and munitions. Flight safety considers aircraft flight risks such as midair collision, bird/wildlife-aircraft strike hazard (BASH), and in-flight emergency. The Air Force has safety procedures and aircraft-specific emergency procedures produced by the original equipment manufacturer of the aircraft. Basic airmanship procedures also exist for handling any deviations to air traffic control procedures due to an in-flight emergency; these procedures are defined in Volume 3 of AFI 11-202, *General Flight Rules*, and established aircraft flight manuals. The Flight Crew Information File is a safety resource for aircrew day-to-day operations and contains air and ground operation rules and procedures.

The ROI includes Nellis AFB and areas immediately adjacent to the Base.

### 3.2.2 Existing Conditions

The safety of the public with respect to aircraft operations at Nellis AFB is a primary concern for the Air Force. The areas surrounding Nellis AFB have established AICUZ guidelines to define those areas with the highest potential for aircraft accidents and aircraft noise impacts, and to establish flight rules and flight patterns that will have the least impacts on the civilian population of Las Vegas and North Las Vegas with regard to safety and noise effects. With regard to potential aircraft accidents, CZs and APZs have been established to identify the areas with the greatest risk for aircraft accidents and to guide off-Base development away from these higher-risk areas.

As shown in **Figure A-5** (refer to **Appendix A**), CZs extend approximately 3,000 feet (ft) from the end of each runway and are completely contained within Nellis AFB. APZ I is an extension of the CZ; it is about 4,000 ft wide and 5,000 ft long (i.e., extends 8,000 ft from the end of the runway). APZ II retains the width of 4,000 ft but extends another 7,000 ft from the end of APZ I. The greatest potential for aircraft accidents occur within the CZ; risks are reduced as distances from the runway increase. Thus, aircraft accidents are lower in APZ II. While aircraft accident potential within APZ I and APZ II, which are mostly located off Base, does not warrant land acquisition by the Air Force, land use planning and controls are strongly encouraged in these areas for the protection of the public (Nellis AFB, 2017).

Defined distances are maintained between munitions storage areas and a variety of other types of facilities. These distances, called Quantity-Distance (Q-D) arcs, are determined by the type and quantity of explosive material to be stored. Each explosive material storage or handling facility has Q-D arcs extending outward from its sides and corners for a prescribed distance. Within these Q-D arcs, development is either restricted or prohibited altogether to ensure personnel safety and to minimize potential for damage to other facilities in the event of an accident.

Nellis AFB also maintains an active BASH plan, as required under AFI 91-212, *BASH Management Program*. This plan is continually updated to address any potential changes in conditions at Nellis AFB. The goal of the BASH plan is to reduce the likelihood of an aircraft colliding with a bird or other wildlife, thereby causing potentially catastrophic damage to the aircraft or potentially the loss of life of the pilot from the damage. BASH avoidance measures include notices to pilots of bird activity within the area, seasonal notifications during bird migrations, and wildlife management within the airfield environment.

Under Title 40 CFR § 989.27, the EIAP for an action must assess direct and indirect impacts of the Proposed Action and alternatives on the safety and health of Air Force employees and others at a work site. Air Force Policy Directive (AFPD) 91-2, *Safety Programs*, is implemented by AFI 91-202, *The U.S. Air Force Mishap Prevention Program*, which manages risks to protect Air Force personnel from occupational deaths, injuries, or illnesses and minimize loss of Air Force resources. These standards, in addition to adherence to the Air Force's Mishap Prevention Program, serve to ensure all Air Force workplaces meet Federal safety and health requirements, and applies to all Air Force activities.

All construction contractors at Nellis AFB must follow ground safety regulations and worker's compensation programs to avoid posing any risks to workers or personnel on- or off-Base. Construction contractors are responsible for reviewing potentially hazardous workplace operations, monitoring exposure to workplace chemicals (e.g., asbestos, lead, hazardous materials), physical hazards (e.g., noise propagation, slips, trips, falls), and biological agents (e.g., infectious waste, wildlife, poisonous plants). Construction contractors are required to recommend and evaluate controls (e.g., preventative, administrative, engineering) to ensure personnel are properly protected and to implement a medical surveillance program to perform occupational health physicals for those workers subject to any accidental chemical exposures.

Day-to-day operation and maintenance activities conducted at Nellis AFB are performed in accordance with applicable Air Force safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational and Environmental Safety, Fire Protection, and Health Program requirements. These are intended to reduce occupational risks to government personnel and contractors, and to protect other individuals that reside on or visit or are near the Base.

### **3.3 AIR QUALITY**

#### **3.3.1 Definition of the Resource**

Under the authority of the Clean Air Act of 1963 (42 U.S.C. § 7401) (CAA) and subsequent amendments, the U.S. Environmental Protection Agency (USEPA) has divided the country into geographical regions known as air quality control regions to evaluate compliance with the National Ambient Air Quality Standards (NAAQS). Nellis AFB is located in Clark County, Nevada, which is in the Las Vegas Intrastate Air Quality Control Region (40 CFR § 81.80) and serves as the ROI.

#### **3.3.2 Criteria Pollutants**

In accordance with CAA requirements, the air quality in a given region or area is measured by the concentration of various pollutants in the atmosphere. Measurements of these "criteria pollutants" in ambient air are expressed in units of parts per million (ppm) or in units of micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). Regional air quality is a result of the types and quantities of atmospheric pollutants and pollutant sources in an area as well as surface topography and prevailing meteorological conditions.

To protect public health and welfare, the USEPA has developed numerical concentration-based standards (i.e., NAAQS) for pollutants that have been determined to impact human health and the environment and established both primary and secondary NAAQS under the provisions of the CAA (**Table 3-1**). NAAQS are currently established for the criteria air pollutants ozone (O<sub>3</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), respirable particulate matter (including particles equal to or less than 10 microns in diameter [PM<sub>10</sub>] and particles equal to or less than 2.5 microns in diameter [PM<sub>2.5</sub>]), and lead. The primary NAAQS represent maximum levels of background air pollution that are considered safe, with an adequate margin of safety to protect public health. Secondary NAAQS represent the maximum pollutant concentration necessary to protect vegetation, crops, and other public resources in addition to maintaining visibility standards. Volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>) are precursors to the formation of O<sub>3</sub>.

**Table 3-1.**  
**National Ambient Air Quality Standards**

Pollutant	Primary/ Secondary <sup>a,b</sup>	Averaging Time	Level <sup>c</sup>	Form
Carbon monoxide	primary	8 hours	9 ppm	Not to be exceeded more than once per year
		1 hour	35 ppm	
Lead	primary and secondary	Rolling 3-month average	0.15 µg/m <sup>3</sup>	Not to be exceeded
Nitrogen dioxide	primary	1 hour	100 ppb	98 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years
	primary and secondary	1 year	0.053 ppm	Annual Mean
Ozone	primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle pollution (PM <sub>2.5</sub> )	primary	1 year	12 µg/m <sup>3</sup>	annual mean, averaged over 3 years
	secondary	1 year	15 µg/m <sup>3</sup>	annual mean, averaged over 3 years
	primary and secondary	24 hours	35 µg/m <sup>3</sup>	98 <sup>th</sup> percentile, averaged over 3 years
Particle pollution (PM <sub>10</sub> )	primary and secondary	24 hours	150 µg/m <sup>3</sup>	Not to be exceeded more than once per year on average over 3 years
Sulfur dioxide	primary	1 hour	75 ppb	99 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years
	secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

Source: USEPA, 2016a

Notes:

- a. Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the USEPA.
- b. Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- c. Concentrations are expressed first in units in which they were promulgated.  
µg/m<sup>3</sup> = micrograms per cubic meter; PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns in diameter; PM<sub>10</sub> = particulate matter less than or equal to 10 microns in diameter; ppb = parts per billion; ppm = parts per million

Clark County, which is where Nellis AFB is located, maintains the following designations for the NAAQS (USEPA, 2016b):

- Unclassifiable/attainment for lead, NO<sub>2</sub>, SO<sub>2</sub>, and PM<sub>2.5</sub>
- Maintenance/attainment for CO and PM<sub>10</sub>
- Marginal nonattainment for the 2015 O<sub>3</sub> NAAQS standard

The CAA requires that USEPA prepare general conformity regulations that are applicable in nonattainment areas, or in designated maintenance areas (attainment areas that were reclassified from a previous nonattainment status and are required to prepare a maintenance plan for air quality). These regulations ensure that federal actions do not impede local efforts to achieve or maintain attainment with the NAAQS. The General Conformity Rule and the promulgated regulations found in 40 CFR Part 93, *Determining Conformity of Federal Actions to State or Federal Implementation Plans*, exempt certain federal actions from conformity determinations (e.g., contaminated site cleanup and natural disaster response activities). Other federal actions are assumed to conform if total indirect and direct project emissions are below *de minimis* levels presented in 40 CFR § 93.153. These threshold levels (in tons of pollutant per year) depend upon the nonattainment status that USEPA has assigned to a region. Once the net change in nonattainment pollutants is calculated, the results are compared to the *de minimis* thresholds to determine if General Conformity applies to the action.

Title V of the CAA Amendments of 1990 requires state and local agencies to implement permitting programs for major stationary sources. A major stationary source is defined under Title V as a facility (e.g., plant, base, activity) that has the potential to emit more than 100 tons annually of any one criteria air pollutant, 10 tons per year (tpy) of a hazardous air pollutant, or 25 tpy of any combination of hazardous air pollutants; however, lower pollutant-specific “major source” permitting thresholds apply in nonattainment areas. The purpose of the permitting rule is to establish regulatory control over large, industrial-type activities and monitor their impact on air quality.

### 3.3.2.1 Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere. These emissions are generated by both natural processes and human activities. The accumulation of GHGs in the atmosphere helps regulate the earth's temperature and contribute to global climate change. Primary GHGs include water vapor, methane, NO<sub>x</sub>, hydrofluorocarbons, and chlorofluorocarbons. Each GHG has an estimated global warming potential (GWP), which is a function of its atmospheric lifetime and its ability to absorb and radiate infrared energy emitted from the earth's surface. The GWP of a particular gas provides a relative basis for calculating its carbon dioxide equivalent (CO<sub>2</sub>e) or the amount of CO<sub>2</sub>e to the emissions of that gas. Carbon dioxide has a GWP of 1 and is, therefore, the standard by which all other GHGs are measured. The potential effects of proposed GHG emissions are by nature global and result in cumulative impacts because most individual anthropogenic sources of GHG emissions are not large enough to have a noticeable effect on climate change. Therefore, the impact of proposed GHG emissions to climate change is discussed in the context of cumulative impacts in **Section 5.3.4**.

### 3.3.3 Existing Conditions

#### 3.3.3.1 Regional Climate

Nevada lies on the eastern side of the Sierra Nevada mountain range, which blocks moisture from the Pacific Ocean. Nevada is the driest state in the United States. Locally, average annual precipitation varies from 4 inches to more than 50 inches on high mountain peaks of the Sierra Nevada Mountains.

Temperatures in Nevada have increased about 2 degrees Fahrenheit (°F) since the beginning of the 20th century. From 2000 to 2014, the annual number of days of extreme heat (above 95°F), averaged over the state, has been above average, with the highest 5-year averages occurring between 2000 and 2004 and 2005 and 2009, partly because of very high values in 2002, 2003, and 2007. The state is the most urbanized in the nation, with 94 percent of the population living in high-density areas. The urban heat island effect has likely exacerbated these trends in Las Vegas, where explosive growth has taken place (National Oceanic and Atmospheric Administration [NOAA], 2017).

### 3.3.3.2 Air Emission Sources at Nellis AFB

Nellis AFB currently maintains a Title V air quality permit for stationary source emissions from Base operations. These stationary sources include fuel storage tanks, loading racks, dispensing equipment, boilers, aggregate and concrete plants, emergency and nonemergency power generators, a hush house for engine testing, paint spray booths, media blasting equipment, degreasers, cooling towers, woodworking operations, fugitive dust, and miscellaneous chemical usage.

Mobile source emissions are generated by aircraft, vehicles, equipment, and other sources that move or have the potential to move from place to place. Vehicle emissions include both government-owned vehicles and privately owned vehicles. Equipment emissions come from forklifts, backhoes, tractors, and other onsite construction equipment. Aerospace Ground Equipment (AGE) used to service aircraft include generators, light carts, compressors, bomb lifts, hydraulic test stands, and other portable equipment required for aircraft operations. The most recent mobile and stationary source emissions inventories for Nellis AFB are presented in **Table 3-2**.

**Table 3-2.**  
**Nellis Air Force Base Mobile and Stationary Source Emission Summary**

Source Category	VOC	CO	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Stationary Source	18.94	13.68	25.26	0.57	22.51	4.7
Aerospace Ground Equipment	5.31	79.79	36.52	2.46	2.18	2.10
Aircraft Operations	25.63	115.37	103.40	9.03	18.77	16.34
Non-road Engines	21.68	331.19	22.44	0.22	3.03	2.88
On-road Vehicles	4.98	46.09	23.01	0.06	0.80	0.73
<b>Total</b>	<b>76.54</b>	<b>586.12</b>	<b>210.63</b>	<b>12.34</b>	<b>47.29</b>	<b>26.75</b>

Sources: Nellis AFB 2018b, 2020; USEPA 2020a

Notes:

CO = carbon monoxide; NOx = nitrogen oxides; PM<sub>10</sub> = particulate matter less than or equal to 10 microns in diameter; PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns in diameter; SO<sub>2</sub> = sulfur dioxide; VOC = volatile organic compound

## 3.4 BIOLOGICAL RESOURCES

### 3.4.1 Definition of the Resource

Biological resources include native or invasive plants and animals; sensitive and protected floral and faunal species; and the habitats, such as wetlands, forests, and grasslands, in which they exist. Habitat can be defined as the resources and conditions in an area that support a defined suite of organisms. The following is a description of the primary federal statutes that form the regulatory framework for the evaluation of biological resources.

The ROI for biological resources on the Installation includes the land surrounding the facilities proposed for use by Nellis AFB (see **Figure A-1, Appendix A**).

#### 3.4.1.1 Endangered Species Act

The ESA established protection over and conservation of threatened and endangered species and the ecosystems upon which they depend. Sensitive and protected biological resources include plant and animal species listed as threatened, endangered, or special status by USFWS. Under the ESA, an “endangered species” is defined as any species in danger of extinction throughout all, or a large portion, of its range. A “threatened species” is defined as any species likely to become an endangered species in the foreseeable future. USFWS maintains a list of species considered to be candidates for possible listing under the ESA. The ESA also allows the designation of geographic areas as critical habitat for threatened or endangered species. Although candidate species receive no statutory protection under the ESA, USFWS has attempted to advise government agencies, industry, and the public that these species are at risk and may warrant protection under the ESA.



### 3.4.1.2 Migratory Bird Treaty Act

The *Migratory Bird Treaty Act of 1918* (16 U.S.C. § 703) (MBTA) makes it unlawful for anyone to take migratory birds or their parts, nests, or eggs unless permitted to do so by regulations. Per the MBTA, “take” is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” (50 CFR § 10.12). Birds protected under the MBTA include nearly all species in the U.S. with the exception of nonnative/human-introduced species and some game birds.

EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, requires all federal agencies undertaking activities that may negatively impact migratory birds to follow a prescribed set of actions to further implement MBTA. EO 13186 directs federal agencies to develop a Memorandum of Understanding with USFWS that promotes the conservation of migratory birds.

The *National Defense Authorization Act for Fiscal Year 2003* (Public Law 107-314, 116 Stat. 2458) provided the Secretary of the Interior the authority to prescribe regulations to exempt the armed forces from the incidental take of migratory birds during authorized military readiness activities. Congress defined military readiness activities as all training and operations of the U.S. armed forces that relate to combat and the adequate and realistic testing of military equipment, vehicles, weapons, and sensors for proper operation and suitability for combat use. Further, in October of 2012, the Authorization of Take Incidental to Military Readiness Activities was published in the *Federal Register* (50 CFR § 21.15), authorizing incidental take during military readiness activities unless such activities may result in significant adverse effects on a population of a migratory bird species.

In December 2017, the U.S. Department of the Interior issued M-Opinion 37050, which concluded that the take of migratory birds from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not the take of a migratory birds, eggs, or nests. On August 11, 2020, the U.S. District Court, Southern District of New York, vacated M-37050. Thus, incidental take of migratory birds is again prohibited. The interpretation of the MBTA remains in flux, and additional court proceedings are expected.

### 3.4.1.3 Bald and Golden Eagle Protection Act

The *Bald and Golden Eagle Protection Act of 1940* (16 U.S.C. §§ 668–668c) (BGEPA) prohibits actions to “take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle [or any golden eagle], alive or dead, or any part, nest, or egg thereof.” Further, the BGEPA defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb,” and “disturb” is defined as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, injury to an eagle, a decrease in productivity by substantially interfering with the eagle’s normal breeding, feeding or sheltering behavior, or nest abandonment by substantially interfering with the eagle’s normal breeding, feeding, or sheltering behavior.” The BGEPA also prohibits activities around an active or inactive nest site that could result in disturbance to returning eagles.

### 3.4.1.4 Wetlands

The *Clean Water Act of 1972* (33 U.S.C. § 1251 et seq.) (CWA) regulates discharges of pollutants in surface waters of the U.S. Section 404 of the CWA established a program to regulate the discharge of dredged and fill material into waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) defines wetlands as “those areas that are inundated or saturated with ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions” (Environmental Laboratory, 1987). Wetlands generally include swamps, marshes, bogs, and similar areas (33 CFR Part 328).

### 3.4.2 Existing Conditions

The information presented in this section was primarily gathered from the Nellis AFB *Integrated Natural Resources Management Plan* (Nellis AFB, 2019a). Data were also gathered from USFWS and USEPA.

#### 3.4.2.1 Regional Biological Setting

##### Ecoregion Description

Ecoregions are used to describe areas of similar type, quality, and quantity of environmental resources (USEPA, 2019). Ecoregions are assigned hierarchical levels to delineate regions spatially based on different levels of planning and reporting needs. Nellis AFB is located entirely within the Level III Mojave Basin and Range Ecoregion. This EA uses Level III Ecoregions to describe the ecosystems within the ROI. Level III ecoregion descriptions were selected because they provide a regional perspective and are more specifically oriented for environmental monitoring, assessment and reporting, and decision-making than Level II.

##### Vegetation and Wildlife

The vegetation community at Nellis AFB can be described as Mojave Desert scrub (Nellis AFB, 2019a). This vegetation community occurs below 3,937 feet in elevation and is characterized by thermophilic plant species. Traditionally, non-native drought-tolerant deciduous trees and shrubs, evergreen trees and shrubs, perennials, ground covers, vines, and grasses have also been planted throughout the Base, however, over the past several years the focus has been on planting native vegetation. Introduced native and non-native vegetation are contained mostly within and adjacent to developed areas at the Base (Nellis AFB, 2019a). The vegetative communities on Nellis AFB outside of the developed areas consists of mostly of creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) communities (Nellis AFB, 2019a).

Bird species with the potential to occur at Nellis AFB include species typically associated with Mojave Desert scrub ecosystems. Species present in bajada communities (i.e., hillside alluvial fans formed by mountain runoff) within Nellis AFB include common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius ludovicianus*), mourning dove (*Zenaidura macroura*), sage sparrow (*Amphispiza belli*), black-throated sparrow (*Amphispiza bilineata*), burrowing owl (*Athene cunicularia*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), greater roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), and Gambel's quail (*Callipepla gambelii*). In areas where Joshua trees, riparian vegetation, and cacti are present, bird species diversity increases, to include cactus wren (*Campylorhynchus brunneicapillus*), Scott's oriole (*Icterus spurius*), phainopepla (*Phainopepla nitens*), ashthroated flycatcher (*Myiarchus cinerascens*), and blacktailed gnatcatcher (*Polioptila melanura*) (Nellis AFB, 2019a).

Common reptiles known to occur at Nellis AFB include side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), zebra-tailed lizard (*Callisaurus draconoides*), yellow-backed spiny lizard (*Sceloporus uniformis*), desert night lizard (*Xantusia vigilis*), desert horned lizard (*Phrynosoma platyrhinos*), coachwhip (*Coluber flagellum*), western patch-nosed snake (*Salvadora hexalepis*), gopher snake (*Pituophis catenifer*), western shovel-nosed snake (*Chionactis occipitalis*), and Mojave rattlesnake (*Crotalus scutulatus*) (Nellis AFB, 2019a). Amphibians are scarce within the Installation. The most common species include Woodhouse's toad (*Anaxyrus woodhousii*), commonly found near man-made perennial water sources (e.g., golf course ponds), and red-spotted toad (*Anaxyrus punctatus*), which inhabits desert streams and canyons (Stebbins, 2003).

The only fish species known to occur on Nellis AFB are nonnative koi (*Cyprinus* spp.) and carp (*Cyprinus carpio*), which were introduced to ponds on the Sunrise Vista Golf Course (Nellis AFB, 2019a). Numerous arthropods occur in the Mojave Desert, and arthropods can be abundant and diverse in urban landscapes such as Nellis AFB (McIntyre et al., 2001). Arthropods within the Mojave Desert are represented by insects including the orders Coleoptera (beetles), Lepidoptera (butterflies and moths), Diptera (flies), Orthoptera (grasshoppers and crickets), Hymenoptera (bees, wasps, and ants), Arachnids (mites, spiders, and

tarantulas), Opiliones (harvestmen), Pseudoscorpions (pseudoscorpions), Scorpiones (true scorpions), Ricnulei (hooded tickspiders), and Thelyphonida (vinegarroons and tailed whip scorpions).

### 3.4.2.2 Threatened and Endangered Species and/or Species of Concern

A list of threatened and endangered species and/or species of concern that could potentially be found in the region was obtained from the USFWS Information for Planning and Consultation service and Nevada Natural Heritage Program and is provided in **Table 3-3**. Of these species, only the desert tortoise has been documented to occur in the ROI (Nellis AFB, 2019a). Previous surveys for the desert tortoise on Nellis AFB have identified desert tortoises in Area II, the eastern part of Area I, and on the Small Arms Range (Nellis AFB, 2019a). The proposed facilities would be located on previously disturbed land on Nellis AFB grounds in the western part of Area I and III. Therefore, no proposed construction activities would occur where desert tortoises have previously been found.

**Table 3-3.**  
**Federally and State-Listed Species with the Potential to Occur Regionally**

Species	Federal Status <sup>a</sup>	State Status <sup>b</sup>
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered	S1B
Yuma Clapper Rail ( <i>Rallus logirostris yumanensis</i> )	Endangered	S1B
Desert Tortoise ( <i>Gopherus agassizii</i> )	Threatened	
Pahrump Poolfish ( <i>Empetrichthys latos</i> )	Endangered	S1
Razorback Sucker ( <i>Xyrauchen texanus</i> )	Endangered	S1

Notes:

a. Source: U.S. Fish and Wildlife Service IPaC (USFWS, 2021).

b. Source: Nevada Natural Heritage Program, 2019.

S1 = Critically Imperiled; S1B = critically imperiled, breeds in the area

Currently, there is no designated critical habitat for any federally protected species on Nellis AFB (USFWS, 2021). According to data retrieved from the NOAA National Marine Fisheries Service (NMFS) West Coast Region, no species, critical habitats, or essential fish habitat managed by NOAA are known to occur at Nellis AFB (NOAA, 2019).

### 3.4.2.3 Invasive Species and Noxious Weeds

EO 13112, *Invasive Species*, defines invasive species as “an alien species whose introduction does or is likely to cause economic or environmental harm to human health.” Invasive species are highly adaptable and oftentimes displace native species. The characteristics that enable them to do so include high reproduction rates, resistance to disturbances, lack of natural predators, efficient dispersal mechanisms, and the ability to out-compete native species.

No federally listed noxious weeds have been documented on Nellis AFB (Nellis AFB, 2019a), but three state-listed weeds are known to occur: salt cedar (*Tamarix* spp.), African mustard (*Brassica tournefortii*), and yellow starthistle (*Centaurea solstitialis*). Other invasive species on Nellis AFB include cheatgrass (*Bromus tectorum*), red brome (*Bromus rubens*), salt lover (*Halogeton glomeratus*), and Russian thistle (*Salsola tragus*).

## 3.5 WATER RESOURCES

### 3.5.1 Definition of the Resource

Water resources are vulnerable to contamination and quality degradation. For this reason, the *Federal Water Pollution Control Act*, as amended by the CWA, was enacted to protect these valuable, irreplaceable

resources. The *Water Pollution Prevention and Control Act* (33 U.S.C. § 26), also known as the CWA Amendments, set the national policy objective to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The CWA provides the authority to establish water quality standards, control discharges into surface and subsurface waters (including groundwater), develop waste treatment management plans and practices, and issue permits for discharges. A National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the CWA is required for discharges into navigable waters. USEPA oversees the issuance of NPDES permits at federal facilities as well as water quality regulations (CWA Section 401) for both surface and groundwater. The CWA also regulates the discharge of pollutants seaward for three miles.

### 3.5.1.1 Surface Water

USEPA defines surface waters as waters of the U.S., which are primarily lakes, rivers, estuaries, coastal waters, and wetlands. Jurisdictional waters, including surface water resources, as defined in 33 CFR § 328.3, are regulated under Sections 401 and 404 of the CWA and Section 10 of the *Rivers and Harbors Act*. Man-made features not directly associated with a natural drainage, such as upland stock ponds and irrigation canals, are generally not considered jurisdictional waters. Federal protection of wetlands is also promulgated under EO 11990, *Protection of Wetlands*, the purpose of which is to reduce adverse impacts associated with the destruction or modification of wetlands. This EO directs federal agencies to provide leadership in minimizing the destruction, loss, or degradation of wetlands.

### 3.5.1.2 Floodplains

Floodplains are areas of low-level ground along rivers, stream channels, or coastal waters that provide a broad area to inundate and temporarily store floodwaters. In their natural vegetated state, floodplains slow the rate at which the incoming overland flow reaches the main water body. Floodplains are subject to periodic or infrequent inundation due to rain or melting snow. Risk of flooding typically hinges on local topography, the frequency of precipitation events, and the size of the watershed above the floodplain.

The Federal Emergency Management Agency (FEMA) evaluates and maps flood potential, which defines the 100-year (regulatory) floodplain. The 100-year floodplain is the area that has a one-percent chance of inundation by a flood event in a given year. Federal, state, and local regulations often limit floodplain development to passive uses, such as recreational and preservation activities, to reduce the risks to human health and safety.

EO 11988, *Floodplain Management*, provides guidelines that agencies should carry out as part of their decision-making process on projects that have potential impacts to or within the floodplain. This EO requires that federal agencies avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. EO 13690, *Establishing a Flood Risk Management Standard and Process for Further Soliciting and Considering Stakeholder Input*, signed in January 2015, established a Federal Flood Risk Management Standard and a process for further soliciting and considering stakeholder input; however, this EO was revoked in 2017 by Section 6 of EO 13807, *Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure*. EO 13807 did not revoke or otherwise alter EO 11988.

## 3.5.2 Existing Conditions

### 3.5.2.1 Surface Water and Stormwater

USEPA defines surface waters as waters of the U.S. and are primarily lakes, rivers, estuaries, coastal waters, and wetlands. Jurisdictional waters, including surface water resources, as defined in 33 CFR § 328.3, are regulated under Sections 401 and 404 of the CWA and Section 10 of the *Rivers and Harbors Act*. Man-made features not directly associated with a natural drainage, such as upland stock ponds and irrigation canals, are generally not considered jurisdictional waters.

Nellis AFB is located in the northeast portion of the Las Vegas Valley, an intermountain basin of approximately 1,600 square miles within the Basin and Range Province of the U.S., which extends southeasterly through the Las Vegas Wash into Lake Mead (Nellis AFB, 2019a). No natural perennial streams, rivers, springs, or lakes occur on Nellis AFB due to low precipitation, high evaporation rates, and low humidity. Several unnamed ephemeral streams and washes occur on Nellis AFB, including known washes that traverse the project activity areas (see **Figure A-6**, refer to **Appendix A**).

Most of the ephemeral streams, which typically only contain water during storm events, found on Nellis AFB are connected to navigable waters of the U.S. (i.e., Las Vegas Wash, Lake Mead, and Colorado River) and may be considered jurisdictional by USACE (Nellis AFB, 2019a; USFWS, 2019). According to the 2015 Clean Water Rule, “Definition of Waters of the United States,” ephemeral streams and washes occurring within the project activity areas on Nellis AFB would be considered jurisdictional if an ordinary high water mark is present and the ephemeral stream or the wash can be shown to have a significant nexus with traditional navigable waters (80 *Federal Register* 37054; June 29, 2015). However, the 2015 Clean Water Rule was repealed by final rule on December 23, 2019, and the rule reverted to the 1986/1988 regulatory definition for waters of the U.S., resulting in the ephemeral streams on Nellis AFB likely not qualifying as waters of the U.S. These rules may continue to remain in flux if there are legal challenges to the repeal.

In accordance with NPDES regulations, Nellis AFB is required to obtain coverage under a stormwater permit and has been issued coverage under the Nevada Industrial Stormwater General Permit based on the types of industrial activities conducted. According to the Nellis Stormwater Pollution Prevention Plan, construction activities comprising one or more acres are excluded from the Nevada Industrial Stormwater General Permit and must obtain their own state-issued general permit for stormwater discharges.

Municipal wastewater from Nellis AFB is treated by the Clark County Water Reclamation District and discharges into the Las Vegas Wash (Nellis AFB, 2019a).

Surface water impoundments on Nellis AFB consist entirely of artificially constructed ponds within the Sunrise Vista Golf Course located in the southwestern corner of the Installation. Stormwater drainage channels have been excavated within and adjacent to the airfield, as well as within the residential areas to the west of the airfield. Water within the golf course ponds consists of reclaimed water from the City of North Las Vegas. That water is used to maintain the golf course and is regulated by permit.

### 3.5.2.2 Groundwater

Groundwater is defined by the area below ground in which water is stored. In the Las Vegas Valley, groundwater is protected from contaminants by a thick layer of clay and fine-grained sediments. More than 6,000 wells in the Las Vegas Valley provide year-round groundwater to residents and other users who are not on municipal supply (Las Vegas Valley Water District [LVVWD], 2021). While the main drinking water source for Nellis AFB is Lake Mead, wells on and near the Base supplement the drinking water supply (Nellis AFB, 2011). Due to Nevada’s climate and scarcity of water in the Las Vegas Valley, Nellis AFB has implemented strict groundwater conservation measures to ensure the use of this resource is mitigated and monitored.

### 3.5.2.3 Floodplains

Nellis AFB lies within the Upper Colorado River Basin Hydrological Region of Nevada. The portion of the watershed in which Nellis AFB is located is characterized by few perennial streams and numerous ephemeral washes that are drained by the Las Vegas Wash, and is connected to the Colorado River by Lake Mead (Nellis AFB, 2019a). The project areas are not located within a 100-year floodplain (see **Figure A-6**, refer to **Appendix A**).

Local rainstorms can be severe enough to cause flash flooding, generating an increase in flood risk due to impermeable surfaces. Developed nonporous surfaces increase flood risk by increasing the volume and flow rate of stormwater in localized areas. Stormwater flows through ephemeral streams resulting in washes

that often create small localized floodplains known as alluvial fans around the Base. In these areas, soil tends to be more friable, and erosion due to water movement is usually higher than in the surrounding areas. Alluvial fans are potentially jurisdictional surface water features and are located throughout Nellis AFB.

### **3.5.2.4 Wetlands**

Wetlands are an important natural system and habitat because of the diverse biologic and hydrologic functions they perform. These functions include water quality improvement, groundwater recharge and discharge, pollution reduction, nutrient cycling, wildlife habitat detention, and erosion protection. Wetlands are protected as a subset of the “Waters of the United States” under Section 404 of the CWA. The term “Waters of the United States” has a broad meaning under the CWA and in addition to navigable waters, incorporates deep-water aquatic habitats and wetlands. Section 404(b)(1) of the CWA directs the USEPA to develop guidelines for the placement of dredged or fill material (33 U.S.C. § 1341[b]). These USEPA guidelines are known as the “404(b)(1) Guidelines” and are located at 40 CFR Part 230. The stated purpose of the 404(b)(1) Guidelines is to “restore and maintain the chemical, physical, and biological integrity of waters of the U.S. through the control of discharges of dredged or fill material” 40 CFR § 230.1(a).

Although there are man-made ponds located on Nellis AFB’s Sunrise Vista Golf Course, these ponds are not subject to wetlands protection under the CWA because they were anthropogenically constructed, are artificially filled with treated groundwater, are isolated, and do not connect to other water bodies (USACE, 2020). The remainder of the Installation is arid scrub or developed land that contains no jurisdictional wetlands (Nellis AFB, 2019a). No wetlands occur in areas designated for construction, renovations, and demolition activities.

Because there are no wetlands or waters of the U.S. within or in the vicinity of the proposed project areas under Alternatives 1 and 2, this EA does not discuss this resource further.

## **3.6 GEOLOGICAL RESOURCES**

### **3.6.1 Definition of the Resource**

Geological resources consist of surface and subsurface materials and their properties. Soils are the unconsolidated materials overlying bedrock or other parent material. Soils typically are described in terms of their complex type, slope, and physical characteristics. Differences among soil types in terms of their structure, elasticity, strength, shrink-swell potential, and erosion potential affect their abilities to support certain applications or uses. In appropriate cases, soil properties must be examined for their compatibility with particular activities or types of land use.

The ROI for soil resources is Nellis AFB and its environs, as depicted in **Figure A-1** (refer to **Appendix A**).

### **3.6.2 Existing Conditions**

#### **3.6.2.1 Regional Geology**

Nellis AFB is located within the physiographic area known as the Basin and Range Province in the southwestern portion of the United States. Nellis AFB is adjacent to the Lake Mead Recreational Area, which acts as a natural divide between the northern and southern portions of the Basin and Range Province (National Park Service, 2021). The mountain ranges surrounding Nellis AFB primarily consist of limestone with portions of sandstone, shale, dolomite, gypsum, and interbedded quartzite (Nellis AFB, 2017b).

#### **3.6.2.2 Topography**

Topography is characterized by the natural and physical representation of an area. Nellis AFB is situated in a topographic depression, lying northeasterly to the city of Las Vegas, Nevada. The Base and adjacent

areas are part of two major desert regions of the U.S.—the Mojave Desert and the Great Basin Desert. As part of the Las Vegas Valley, Nellis AFB is bordered by several mountainous regions, including the Sheep Range five miles to the northwest and Las Vegas Mountain Range to the north; prominent mountain peaks including Sunrise Mountain, Frenchman's Peak, and Mount Charleston (Nellis AFB, 2018a).

### 3.6.2.3 Soils

Nellis AFB sits atop alluvial fans and deposits with soils consisting of silty sands. These soils originated in the Las Vegas Mountain Range to the north and the peaks of Sunrise Mountain and Frenchman's Peak to the east-southeast (Nellis AFB, 2018). In the foothills of Sunrise Mountain and Frenchman's Peak, silty sands give way to carbonate rocks.

In general, soils on Nellis AFB can be categorized into one of three soil associations: Glencarb, Weiser-Dalian, and Cave-Las Vegas-Goodsprings associations. Glencarb and Weiser-Dalian association soils are characterized by their formation from alluvial fans. These soils are often very deep with water erosion only a problem when drainage is not properly supplied or following strong storm events. Weiser-Dalian association soils are susceptible to wind erosion, conducive to the dry, drought environment of Nevada. In contrast to the abovementioned soils, Cave-Las Vegas-Goodsprings association soils are often very shallow alluvial remnants (Nellis AFB, 2017b).

Nellis AFB lies in the Las Vegas Valley, which is predominantly made up of sedimentary formations and alluvial deposits. Eighteen native soil types and three artificial land cover types are mapped on Nellis AFB (see **Figure A-7**, refer to **Appendix A**). Most of the construction, renovation, and demolition activities under the Proposed Action would occur in previously disturbed urban land with no native soil types mapped.

### 3.6.2.4 Prime Farmland

As the primary use of the land on Nellis AFB is, has been, and will continue to be an Air Force Installation, the consideration of prime farmlands is not necessary. Even so, the primary soils found on Base are not designated as prime farmland and therefore no adverse effects to prime farmland would be expected. Prime farmland is not further analyzed in this EA.

## 3.7 LAND USE

### 3.7.1 Definition of the Resource

The term "land use" refers to real property classifications that indicate either natural conditions or the types of human activity occurring on a parcel. In many cases, land use descriptions are codified in local zoning laws; however, no nationally recognized convention or uniform terminology has been adopted for describing land use categories. As a result, the meanings of various land use descriptions, labels, and definitions vary among jurisdictions. The Installation Development Plan is Nellis AFB's planning tool to guide future development on the Base to be aligned with current and programmed mission requirements and was prepared in response to AFI 32-7062, *Comprehensive Planning*. Goals and objectives of land use planning are to maintain mission readiness; achieve and maintain compliance with operational, safety, environmental, energy, and security regulations and requirements; maximize functional capabilities through the utilization and adaption of existing areas; incorporate Leadership in Energy and Environmental Design guidelines; achieve environmental compliance through reduction of the installation environmental footprint; and foster awareness of the installation by community stakeholders (Nellis AFB, 2018).

To address land use with respect to noise, an AICUZ report was developed in 2017 for Nellis AFB. Aviation easements guide land use around the Base to applications that are compatible with an operational AFB and the AICUZ Program. An AICUZ report typically includes land use guidelines that help guide development in the neighboring jurisdictions. **Section 3.2** provides a detailed description of the existing noise environment, and **Section 3.3** provides a description of the Nellis AFB safety zones.

The location(s) and extent of the Proposed Action need to be evaluated for their potential effects on the proposed sites and land uses adjacent to project areas on Nellis AFB. The foremost factor affecting a proposed action in terms of land use is its compliance with any applicable land use or zoning regulations. Other relevant factors include existing land use at the project site, the types of land use on adjacent properties and their proximity to a proposed action, the duration of a proposed activity, and its “permanence.”

The ROI for land use is Nellis AFB and its environs, as depicted in **Figure A-1** (refer to **Appendix A**).

### 3.7.2 Existing Conditions

Nellis AFB is located northeast of the city of North Las Vegas in Clark County, Nevada. It occupies approximately 16,246 acres of land and is divided into three areas: Area I (the Main Base), Area II, and Area III. The majority of the Proposed Action would occur within Area I, which is located east of Las Vegas Boulevard and contains 30 percent of the total Base land area. Area I contains the greatest variety of land use activities, including runways, industrial facilities, housing areas, and most of the Base’s administrative, training, and support facilities. Inside Area I, there are more than 1,439 buildings that include family housing units (enlisted and officers), dormitories, and billeting facilities. Industrial and open space accounts for about 39 and 36 percent of all Nellis AFB land, respectively. Most of the area designated as industrial is mandatory open space to provide safety zones around munitions storage or similar facilities.

Area II is located northeast of the Main Base and accounts for 60 percent of the total Base land area. The majority of Area II is undeveloped acreage. The 820th Red Horse, 57 MUNS, and 58 RQS are the primary occupants of the developed acreage. Building 10301 of the Proposed Action is located in Area II.

Area III, west of Las Vegas Boulevard, makes up 10 percent of the total Base land area. The majority of Base family housing units and recreational facilities is located in Area III. Area III also houses the Mike O’Callaghan Medical Center Campus, which occupies the hospital facilities vacated by the Veterans Administration. A large solar photovoltaic array covers much of the remaining undeveloped land in Area III.

The proposed facilities would be located on previously disturbed land on Nellis AFB grounds in Area I and III. Construction, renovation, and demolition activities would occur on previously disturbed land, with land use designations of Airfield Ops, Industrial, Housing/Community, and Open Space. (Nellis AFB, 2017b). The existing land uses are shown in **Figure A-8** (refer to **Appendix A**).

## 3.8 SOCIOECONOMICS

### 3.8.1 Definition of the Resource

Socioeconomics is the relationship between economics and social elements, such as population levels and economic activity. There are several factors that can be used as indicators of economic conditions for a geographic area, such as demographics, median household income, unemployment rates, percentage of families living below the poverty level, employment, and housing data. Data on employment identify gross numbers of employees, employment by industry or trade, and unemployment trends. Data on industrial, commercial, and other sectors of the economy provide baseline information about the economic health of a region. Socioeconomic data are typically presented at county, state, and national levels to characterize baseline socioeconomic conditions in the context of regional, state, and national trends. The ROI for socioeconomics includes Nellis AFB and the surrounding environs (i.e., Las Vegas and Clark County).

### 3.8.2 Existing Conditions

#### 3.8.2.1 Population

Clark County has grown dramatically since 2000 (**Table 3-4**), experiencing growth rates that have far outpaced the average population growth rates for the U.S. Clark County experienced population growth of



approximately 58.6 percent from 2000 to 2019, compared to about 48.7 percent for Nevada and about 15.4 percent for the U.S. over the same period. In 2019 (the most recently published population data), Clark County had a population of more than 2.1 million (U.S. Census Bureau [USCB], 2021a). Of the total population of Nevada, approximately 73.4 percent reside in Clark County.

**Table 3-4.**  
**Population in the Nellis AFB Region of Influence as Compared to Nevada and the United States (2000–2019)**

Geographic Area	2000	2010	Average Annual Growth Rate 2000–2010 (Percent)	2019	Average Annual Growth Rate 2010–2019 (Percent)	Total Growth 2000–2019 (Percent)
City of Las Vegas	478,434	583,756	2.2	634,773	1	32.7%
Clark County	1,375,765	1,951,269	4.2	2,182,004	1.3	58.6%
Nevada	1,998,257	2,700,551	3.5	2,972,382	1.1	48.7%
United States	281,421,906	308,745,538	1.0	324,697,795	0.6	15.4%

Sources: USCB 2021a, 2021b, 2021c

More than 63,000 active-duty military, dependents, reserve/Air National Guard, civilian and contract employees, and retirees are associated with Nellis AFB (**Table 3.5**) (Nellis AFB, 2020). As of 2017 (the most recently published full Nellis AFB Economic Impact Analysis), approximately 17 percent of active duty military and their dependents live on Base; the remaining 83 percent live in the region (Nellis AFB, 2017b).

**Table 3-5.**  
**Personnel at Nellis AFB, Creech AFB, and the NTTR 2017**

Personnel	Living On Base	Living Off Base	Total
Active Duty Military	2,054	7,773	9,827
Military Dependents	4,108	23,253	27,361
Reserve/Air National Guard		1,449	1,449
Civilian and Contract Employees		3,556	3,556
<b>Total</b>	<b>6,162</b>	<b>36,031</b>	<b>42,193</b>

Sources: Nellis AFB, 2017b, 2019a

Note:

AFB = Air Force Base; NTTR = Nevada test and Training Range

### 3.8.2.2 Employment

In 2020, the annual total labor force in Clark County was 1,123,582 people and the average unemployment rate was 14.7 percent (165,513 unemployed people). The Clark County unemployment rate was slightly greater than the average unemployment rate for Nevada (12.8 percent) and was nearly double the national average unemployment rate of 8.1 percent (U.S. Bureau of Labor Statistics [BLS], 2020a, 2020b). U.S. Bureau of Economic Analysis (BEA) data and information on the region's largest employers show that employment in the area is dominated by the Accommodation and Food Services sectors, which reflects the importance of the hotel/casino industry in the region. The Accommodation and Food Services sectors accounts for 20 percent of employment in Clark County and 17 percent of employment in the state of Nevada, compared to 7 percent for the nation (BEA, 2019). The Accommodation and Food Services sectors in Clark County were hit particularly hard by the COVID-19 pandemic, resulting in higher than normal unemployment rates for the County compared to other parts of the State.

Despite the Accommodation and Food Services sectors accounting for such a large portion of the workforce, the single largest employer in Clark County is the Clark County School District (CCSD), which reportedly has more than 33,000 employees (Nevada Department of Employment, Training & Rehabilitation Research & Analysis Bureau [Nevada DETR], 2019). By comparison, the top employer for the

Accommodation and Food Services sectors in Clark County (Wynn Las Vegas) employs just over 8,000 employees (Nevada DETR, 2019).

### 3.8.2.3 Housing

USCB estimates show that housing vacancy rates in Clark County for both homeowner and rental housing in 2019 were slightly above the national average (**Table 3-6**). There are more than 116,000 vacant units in Clark County, of which almost 24 percent are located within the city of Las Vegas (USCB, 2021d). The percentage of homes that are owner-occupied in Clark County (53.1), the city of Las Vegas (52.5), and Nevada (55.8) is well below the national average of 63.8 percent. Almost 14 percent of the housing units in Clark County are vacant, well above the national average of 12.2 percent (USCB, 2021d).

**Table 3-6.  
Housing**

Parameter	City of Las Vegas	Clark County	Nevada	U.S.
Total Units	259,464	899,870	1,250,893	137,428,986
Owner-occupied	122,235	421,252	618,605	77,274,381
Renter-occupied	109,680	362,272	479,997	43,481,667
Vacant Units	27,549	116,346	16,672,938	16,672,938
Homeowner Vacancy Rate <sup>a</sup>	1.9%	2.2%	2.0%	1.6%
Rental Vacancy Rate <sup>b</sup>	6.7%	8.9%	7.9%	6.0%
Median Value <sup>c</sup>	258,600	262,700	267,900	217,500

Source: USCB 2021d

Notes:

- a. Homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale".
- b. Rental vacancy rate is the proportion of the rental inventory that is vacant "for rent".
- c. Median value of owner-occupied units.

### 3.8.2.4 Schools

CCSD contains 226 elementary schools, 59 middle schools, 49 high schools, 19 alternative schools, and 7 special schools. The District serves approximately 320,000 students in the most recent fully recorded school year (2018–2019) (CCSD, 2020). Most children associated with Nellis AFB attend public CCSD schools; children living on Base can attend Coral Academy of Science (CAS) (a magnet school that serves Kindergarten through eighth grade), Lowman/Manch Elementary, Carroll M. Johnston Middle School, and Mojave High School (Nellis AFB, 2019b). There are also more than 100 private schools and 20 public charter schools nearby as alternatives to the on-Base schools (Nellis AFB, 2019b; CAS, 2019). Institutions of higher education in the region include the University of Nevada – Las Vegas, Nevada State College, the College of Southern Nevada, and the Desert Research Institute.

## 3.9 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN

### 3.9.1 Definition of the Resource

EOs direct federal agencies to address disproportionate environmental and human health effects in minority and low-income populations and to identify and assess environmental health and safety risks to children.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, pertains to environmental justice issues and relates to various socioeconomic groups and disproportionate impacts that could be imposed on them. This EO requires that federal agencies' actions substantially affecting human health or the environment do not exclude persons, deny persons' benefits, or subject persons to discrimination because of their race, color, or national origin. EO 12898 was enacted to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin,

or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Consideration of environmental justice concerns includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, states that each federal agency “(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.”

For the purposes of this analysis, minority populations are defined as Alaska Natives and American Indians, Asians, Blacks or African-Americans, Native Hawaiians, and Pacific Islanders or persons of Hispanic origin (of any race); low-income populations include persons living below the poverty threshold as determined by the USCB; and youth populations are children under the age of 18 years.

Minority, low-income, and youth populations that could be disproportionately impacted by the project are addressed for the county and cities in the ROI (Nellis AFB airfield and environs) and are compared with those populations in Nevada and the U.S.

### 3.9.2 Existing Conditions

An evaluation of minority and low-income populations in Clark County and in the city of Las Vegas forms a baseline for the evaluation of the potential for disproportionate impacts on these populations from the Proposed Action. In 2019, the state of Nevada, Clark County, and the city of Las Vegas had a higher percentage of minorities in the population compared to the U.S. (USCB, 2021a). The same trend occurred for the percentage of the population that is Hispanic or Latino; however, the state of Nevada, Clark County, and the city of Las Vegas had a comparable percentage of American Indian or Alaska Native population (1.3 percent, 0.9 percent, and 0.9 percent, respectively) and Black or African American (9.1 percent, 11.7 percent, and 12.2 percent, respectively) compared to the entire U.S. (0.8 percent American Indian or Alaskan Native and 12.7 percent Black or African American). Over the same period, the city of Las Vegas had a higher rate of poverty than Clark County, the state of Nevada, and the U.S. (**Table 3-7**), while the rate of poverty in Clark County and the state of Nevada was similar to the U.S. The percentage of children in the city of Las Vegas was marginally higher, but similar to the percentage of children in Clark County, and both were higher than the state of Nevada and the U.S. as a whole, the rates of which differed by 0.1 percent (**Table 3-7**) (USCB, 2021e).

**Table 3-7.  
Total Population and Populations of Concern**

Geographical Unit	Total Population	Percent Minority	Percent Hispanic or Latino <sup>a</sup>	Percent below Poverty	Percent Youth <sup>b</sup>	Percent Elderly
City of Las Vegas	634,773	38.8	32.6	15.3	23.3	14.7
Clark County	2,182,004	40.5	30.7	13.7	23	14.3
Nevada	2,972,382	35.2	28.3	13.1	22.4	16.2
United States	324,697,795	29.1	17.7	13.4	22.3	15.2

Sources: USCB 2021a, 2021e.

Note:

a. Hispanic and Latino denote a place of origin.

b. Percent youth are all persons under the age of 18.

### 3.10 CULTURAL RESOURCES (ARCHAEOLOGICAL, ARCHITECTURAL, TRADITIONAL)

#### 3.10.1 Definition of Resource

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture or community for scientific, traditional, religious, or other purposes. These resources are protected and identified under several federal laws and EOs.

Cultural resources include the following subcategories:

- Archaeological (i.e., prehistoric or historic sites where human activity has left physical evidence of that activity, but no structures remain standing);
- Architectural (i.e., buildings, structures, groups of structures, or designed landscapes that are of historic or aesthetic significance); and
- Traditional Cultural Properties (TCPs) (resources of traditional, religious, or cultural significance to Native American tribes).

Significant cultural resources are those that have been listed on the National Register of Historic Places (NRHP) or determined to be eligible for listing. To be eligible for the NRHP, properties must be 50 years old and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They must possess sufficient integrity of location, design, setting, materials, workmanship, feeling, and association to convey their historical significance, and meet at least one of four criteria for evaluation:

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A);
- Associated with the lives of persons significant in our past (Criterion B);
- Embody distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); and/or
- Have yielded or be likely to yield information important in prehistory or history (Criterion D).

Properties that are less than 50 years old can be considered eligible for the NRHP under Criteria Consideration G if they possess exceptional historical importance. Those properties must also retain historic integrity and meet at least one of the four NRHP criteria (Criteria A, B, C, or D). The term “historic property” refers to National Historic Landmarks, NRHP-listed, and NRHP-eligible cultural resources.

Federal laws protecting cultural resources include the *Archaeological and Historic Preservation Act of 1960*, as amended (16 U.S.C. § 469), the *American Indian Religious Freedom Act of 1978* (42 U.S.C. § 1996), the *Archaeological Resources Protection Act of 1979*, as amended (16 U.S.C. §§ 470aa–470mm), the *Native American Graves Protection and Repatriation Act of 1990* (25 U.S.C. § 3001, et seq.), the NHPA, as amended through 2016, and associated regulations (36 CFR Part 800). The NHPA requires federal agencies to consider effects of federal undertakings on historic properties prior to making a decision or taking an action and integrate historic preservation values into their decision-making process. Federal agencies fulfill this requirement by completing the NHPA Section 106 consultation process, as set forth in 36 CFR Part 800. NHPA Section 106 also requires agencies to consult with federally recognized American Indian tribes with a vested interest in the undertaking. NHPA Section 106 requires all federal agencies to seek to avoid, minimize, or mitigate adverse effects to historic properties (36 CFR § 800.1[a]).

For cultural resources analysis, the ROI is defined by the Area of Potential Effect (APE). The APE is defined as the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist,” (36 CFR § 800.16[d]) and thereby

diminish their historic integrity. The direct and indirect APE for this study includes 50 meters and 800 meters around each project location, respectively.

### **3.10.2 Existing Conditions**

#### **3.10.2.1 Cultural Context**

A comprehensive discussion of the prehistoric and historic record for Nellis AFB is well beyond the scope of this EA. The following discussion is intended to be general in nature and does not discuss or debate the divergent opinions and interpretations of other specialists. The major trends in regional cultural history derived from the 2017 *Integrated Cultural Resources Management Plan* (ICRMP) for Nellis AFB are outlined briefly below; a more detailed discussion can be found in the 2017 ICRMP (Air Force, 2017).

The cultural significance of this region can be briefly summarized by the following eras:

##### **Lake Mojave Period (10,000–7000 Before Present [BP<sup>2</sup>])**

Evidence of human existence in southern Nevada begins with archaeological data suggesting populations lived in small, mobile groups that moved along the landscape on a seasonal basis.

##### **Pinto Period (7000–4000 BP)**

Due to a shift in the climate generating warmer, drier conditions in Nevada (as seen in modern day), oval house pits began to form, suggesting longer-duration habitation. However, evidence still suggests that populations remained mostly nomadic at this time. Evidence suggests an importance on hunting game, tortoises, and lizards (Warren and Crabtree, 1986) as well as plant foraging (Warren, 1991).

##### **Gypsum Period (4000–1500 BP)**

Evidence suggests more formal habitation with sites indicating large middens, ceremonial caves, and the use of mortar and pestles and stone tools (Warren and Crabtree, 1986).

##### **Saratoga Springs Period (1500–800 BP)**

Large-scale settlements developed along major watersheds while short-term habitation sites continued throughout the region. A decrease in the size of projectile points suggests the use of the bow and arrow for hunting, while evidence of agriculture and horticulture arise by introduction from neighboring cultural areas (Warren and Crabtree, 1986).

##### **Numic Period (800–150 BP)**

Groups were still semi-nomadic and would congregate and disperse throughout the year depending on the seasonal resource availability. The end of this period is marked by regional Euro-American settlement and the displacement of Native American populations to reservations.

##### **Spanish/Mexican Exploration (400–150 BP) and Euro-American Exploration (175–100 BP)**

Spanish settlements began trade routes from coastal California to Santa Fe, New Mexico, in the mid-1800s. Portions of these routes would become known as the Old Spanish Trail and later become Las Vegas Boulevard North, which lies adjacent to the western boundary of Nellis AFB. Euro-American fur trades in the region brought pioneers and emigrants through Nevada on the way to California. These expeditions followed the lower Colorado River and Old Spanish Trail.

##### **Euro-American Settlement (100–30 BP)**

The Treaty of Guadalupe Hidalgo between the United States and Mexico and the discovery of gold in California in 1848 led to increased Euro-American settlement of the west. A company of Mormons, or Latter-Day Saints, established a mission in the Las Vegas Valley in 1855, where they constructed the Las Vegas

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<sup>2</sup> Before Present (BP) years is a time scale used to specify when events occurred before the origin of practical radiocarbon dating in the 1950s. Because the "present" time changes, standard practice is to use 1 January 1950 as the commencement date (epoch) of the age scale.

fort, approximately 12 miles southeast of what is now Nellis AFB (Jensen, 1926; Myhrer et al., 1990). Discoveries of silver and gold in other portions of Nevada resulted in numerous boom towns and an influx of settlers and inhabitants.

### **Southern Nevada Infrastructure Development (30 BP–Present)**

With the advent of motorized vehicles, Nevada began constructing improved roads to connect the numerous towns and cities throughout the state between 1911 and 1930. Additional reservations were created as part of the *Indian Reorganization Act of 1934* (25 U.S.C. § 465), which affected several of the descendant communities with ties to Nellis AFB and the NTTR. After the Air Force was created as a separate military department, the Las Vegas AFB was created in the late 1940s. The Las Vegas AFB was renamed Nellis AFB in 1950, and Nellis AFB would continue to grow and expand in the last half of the 20th century and to the present day.

### **3.10.2.2 Archaeological Properties**

The ICRMP has identified historic structures in three areas within the Base. Historic structures within Area I are abundant and adjacent to many of the proposed projects. Historic structures identified in Areas II and III are not within close proximity of any of the activities under the Proposed Action.

According to the 2017 ICRMP, 20 archaeological sites are located within the APE for the proposed projects on Nellis AFB (Nellis AFB, 2017b). This includes an examination of the direct APE, within 50 meters of the project, and the indirect APE, a range of approximately 800 meters around the project. One archaeological resource is located within the direct APE of the proposed project locations, while the remaining 19 resources are located within the indirect APE.

### **3.10.2.3 Traditional Cultural Properties**

TCPs may include traditionally used plants and animals, trails, and certain geographic areas. Types of resources that have been specifically identified in recent studies include, but are not limited to, rock art sites; “power” rocks and locations; medicine areas; and landscape features such as specific peaks or ranges, hot springs, meadows, valleys, and caves. No TCPs, sacred areas, or traditional-use areas have been identified on Nellis AFB proper. Nellis AFB continues to consult with Tribal Historic Preservation Officers and tribal leaders.

### **3.10.2.4 Architectural Resources**

Nellis AFB has significant historic ties to the Cold War era (1947–1991) and many of its facilities require review to determine NRHP eligibility. Of the 4,370 structures that Nellis AFB manages, approximately 740 are more than 50 years old, meeting one of the criteria for NRHP eligibility. These structures require an evaluation by an architectural historian to determine eligibility. While these structures meet the age criteria, newer structures may still be eligible for the NRHP due to other criteria such as historic importance. Continued studies are being done to determine all structures eligible or potentially eligible for listing in the NRHP (Air Force, 2017).

No NRHP-eligible buildings were determined to be within the direct APE. Six NHRP-eligible buildings are located within the indirect APE. These buildings are as follows: 201, 220, 222, 224, 292, and 620 (see **Figure A-9** and **Figure A-10** in **Appendix A**).

A total of 41 buildings would either be renovated or demolished in as part of either Alternative 1 or 2 (**Table 3-8**, **Figure A-9**, and **Figure A-10**). Of these 41, structures, 24 buildings are older than 50 years. All buildings listed in **Table 3-8** are not individually NRHP-eligible. However, Nellis AFB is currently in discussion with the Nevada State Historic Preservation Office about a potential historic district that could be relevant to the buildings listed in **Table 3-8**.

**Table 3-8.**  
**Construction Date and Building Number Associated with Renovation and Demolition Projects**

Building Number	Date Constructed	Individual Eligibility Status	Alternative 1	Alternative 2
1781	1950	Not eligible	Yes	Yes
1782	1950	Not eligible	Yes	Yes
1783	1950	Not eligible	Yes	Yes
1784	1950	Not eligible	Yes	Yes
1785	1950	Not eligible	Yes	Yes
1786	1950	Not eligible	Yes	Yes
1787	1950	Not eligible	Yes	Yes
1788	1950	Not eligible	Yes	Yes
1789	1950	Not eligible	Yes	Yes
1790	1950	Not eligible	Yes	Yes
10206	1954	Not eligible	Yes	Yes
10238	1954	Not eligible	Yes	Yes
10235	1955	Not eligible	Yes	Yes
6441	1957	Not eligible	Yes	Yes
6451	1957	Not eligible	Yes	Yes
6461	1957	Not eligible	Yes	Yes
6471	1957	Not eligible	Yes	Yes
6481	1957	Not eligible	Yes	Yes
6501	1957	Not eligible	Yes	Yes
6541	1957	Not eligible	Yes	Yes
6551	1957	Not eligible	Yes	Yes
604	1964	Not eligible	Yes	Yes
625	1965	Not eligible	Yes	Yes
230	1970	Not eligible	Yes	Yes
2060	1971	Not eligible	Yes	Yes
2935	1986	Not eligible	Yes	Yes
2940	1986	Not eligible	Yes	Yes
2945	1986	Not eligible	Yes	Yes
2950	1986	Not eligible	Yes	Yes
2955	1986	Not eligible	Yes	Yes
2960	1986	Not eligible	Yes	Yes
2965	1986	Not eligible	Yes	Yes
2970	1986	Not eligible	Yes	Yes
2975	1986	Not eligible	Yes	Yes
61663	1994	Not eligible	Yes	Yes
10236	1997	Not eligible	Yes	Yes
118	2003	Not eligible	Yes	Yes
204	2010	Not eligible	Yes	Yes
1730	2010	Not eligible	Yes	Yes
2967	2011	Not eligible	Yes	Yes
1790	2016	Not eligible	Yes	Yes

### 3.11 HAZARDOUS MATERIALS AND WASTES, TOXIC SUBSTANCES, AND CONTAMINATED SITES

#### 3.11.1 Definition of the Resource

The *Comprehensive Environmental Response, Compensation, and Liability Act of 1980* (42 U.S.C. § 9601) (CERCLA), as amended by the *Superfund Amendments and Reauthorization Act* (SARA) and the *Toxic Substances Control Act* (15 U.S.C. § 2601, et seq., as implemented by 40 CFR Part 761) (TSCA), defines hazardous materials (HAZMAT) as any substance with physical properties of ignitability, corrosivity, reactivity, or toxicity that might cause an increase in mortality, serious irreversible illness, and incapacitating reversible illness, or that might pose a substantial threat to human health or the environment. The Occupational Safety and Health Administration (OSHA) is responsible for the enforcement and implementation of federal laws and regulations pertaining to worker health and safety under 29 CFR Part

1910. OSHA also includes the regulation of HAZMAT in the workplace and ensures appropriate training in their handling.

The *Solid Waste Disposal Act*, as amended by the *Resource Conservation and Recovery Act of 1976* (42 U.S.C. § 6901) (RCRA), which was further amended by the *Hazardous and Solid Waste Amendments of 1984*, defines hazardous wastes as any solid, liquid, contained gaseous, or semi-solid waste, or any combination of wastes, that pose a substantial present or potential hazard to human health or the environment. In general, both HAZMAT and hazardous wastes include substances that, because of their quantity, concentration, physical, chemical, or infectious characteristics, might present substantial danger to public health and welfare or the environment when released or otherwise improperly managed.

AFPD 32-70, *Environmental Considerations in Air Force Programs and Activities*, establishes the policy that the Air Force is committed to performing the following actions:

- Cleaning up environmental damage resulting from its past activities,
- Meeting all environmental standards applicable to its present operations,
- Planning its future activities to minimize environmental impacts,
- Responsibly managing the irreplaceable natural and cultural resources it holds in public trust, and
- Eliminating pollution from its activities wherever possible.

AFMAN 32-1067, *Water and Fuel Systems*, identifies compliance requirements for underground storage tanks (USTs) and aboveground storage tanks (ASTs), and associated piping, that store petroleum products and hazardous substances. Evaluation of HAZMAT and hazardous wastes focuses on USTs and ASTs as well as the storage, transport, and use of pesticides, fuels, oils, and lubricants. Evaluation might also extend to generation, storage, transportation, and disposal of hazardous wastes when such activity occurs at or near the project site of a proposed action. In addition to being a threat to humans, the improper release of HAZMAT and hazardous wastes can threaten the health and wellbeing of wildlife species, botanical habitats, soil systems, and water resources. In the event of HAZMAT or hazardous waste release, the extent of contamination will vary based on type of soil, topography, weather conditions, and water resources.

AFI 32-7086, *Hazardous Materials Management*, establishes procedures and standards that govern management of HAZMAT throughout the Air Force. It applies to all Air Force personnel who authorize, procure, issue, use, or dispose of HAZMAT, and to those who manage, monitor, or track any of those activities.

Through the Environmental Restoration Program (ERP) initiated in 1980, a subcomponent of the Defense ERP that became law under SARA (formerly the Installation Restoration Program), each DoD installation is required to identify, investigate, and clean up hazardous waste disposal or release sites. Remedial activities for ERP sites follow the Hazardous and Solid Waste Amendments under the RCRA Corrective Action Program. The ERP provides a uniform, thorough methodology to evaluate past disposal sites, control the migration of contaminants, minimize potential hazards to human health and the environment, and clean up contamination through a series of stages until it is decided that no further remedial action is warranted.

Description of ERP activities provides a useful gauge of the condition of soils, water resources, and other resources that might be affected by contaminants. It also aids in identification of properties and their usefulness for given purposes (e.g., activities dependent on groundwater usage might be foreclosed where a groundwater contaminant plume remains to complete remediation).

Toxic substances might pose a risk to human health but are not regulated as contaminants under the hazardous waste statutes. Included in this category are asbestos-containing materials (ACMs), lead-based paint (LBP), radon, and polychlorinated biphenyls (PCBs). The presence of special hazards or controls over them might affect, or be affected by, a proposed action. Information on special hazards describing their locations, quantities, and condition assists in determining the significance of a proposed action.



### 3.11.1.1 Asbestos

AFI 32-1001 *Civil Engineering Operations*, provides the direction for asbestos management at Air Force installations. This instruction incorporates by reference applicable requirements of 29 CFR Part 669, 29 CFR § 1910.1025, 29 CFR § 1926.58, 40 CFR § 61.3.80, CAA Section 112, and other applicable AFIs and DoD Directives. AFI 32-1001 requires bases to develop an Asbestos Management Plan to maintain a permanent record of the status and condition of ACM in installation facilities, as well as to document asbestos management efforts. In addition, the instruction requires installations to develop an asbestos operating plan detailing how the installation accomplishes asbestos-related projects. USEPA regulates asbestos with the authority promulgated under OSHA, 29 U.S.C. § 669. Section 112 of the CAA regulates emissions of asbestos fibers to ambient air. USEPA policy is to leave asbestos in place if disturbance or removal could pose a health threat.

### 3.11.1.2 Lead-Based Paint

Human exposure to lead has been determined an adverse health risk by agencies such as OSHA and USEPA. Sources of exposure to lead are dust, soils, and paint. In 1973, the Consumer Product Safety Commission established a maximum lead content in paint of 0.5 percent by weight in a dry film of newly applied paint. In 1978, under the *Consumer Product Safety Act* (Public Law 101-608, as implemented by 16 CFR Part 1303), the Commission lowered the allowable lead level in paint to 0.06 percent (600 ppm). The Act also restricted the use of LBP in nonindustrial facilities. DoD implemented a ban on LBP use in 1978; therefore, it is possible that facilities constructed prior to or during 1978 may contain LBP.

### 3.11.1.3 Radon

The U.S. Surgeon General defines radon as an invisible, odorless, and tasteless gas, with no immediate health symptoms, that comes from the breakdown of naturally occurring uranium inside the earth. Radon that is present in soil can enter a building through small spaces and openings, accumulating in enclosed areas such as basements. No federal or state standards are in place to regulate residential radon exposure at the present time, but guidelines were developed. AFMAN 48-148, *Ionizing Radiation Protection*, provides direction for radon management at Air Force installations. All installations must have radon assessments for structures supporting housing, child development centers, and DoD Education Activity schools. Although 4.0 picocuries per liter (pCi/L) is considered an “action” limit, any reading over 2 pCi/L qualifies as a “consider action” limit. USEPA and the U.S. Surgeon General have evaluated the radon potential around the country to organize and assist building code officials in deciding whether radon-resistant features are applicable in new construction. Radon zones can range from 1 (high) to 3 (low).

### 3.11.1.4 Polychlorinated Biphenyls

PCBs are a group of chemical mixtures used as insulators in electrical equipment, such as transformers and fluorescent light ballasts. Chemicals classified as PCBs were widely manufactured and used in the U.S. until they were banned in 1979. The disposal of PCBs is regulated under TSCA, which banned the manufacture and distribution of PCBs, with the exception of PCBs used in enclosed systems. Per Air Force policy, all installations should have been free of PCBs as of 21 December 1998. In accordance with 40 CFR Part 761 and Air Force policy, both of which regulate all PCB articles, PCBs are regulated as follows:

- Less than 50 ppm—non-PCB (or PCB-free)
- 50 ppm to 499 ppm—PCB-contaminated
- 500 ppm and greater—PCB equipment

TSCA regulates and the USEPA enforces the removal and disposal of all sources of PCBs containing 50 ppm or more; the regulations are more stringent for PCB equipment than for PCB-contaminated equipment.

The ROI for this resource is Nellis AFB.

### 3.11.2 Existing Conditions

#### 3.11.2.1 Hazardous Materials and Wastes

Activities at Nellis AFB require the use and storage of a variety of hazardous materials that include flammable and combustible liquids, acids, corrosives, caustics, anti-icing chemicals, compressed gases, solvents, paints, paint thinners, and pesticides.

Hazardous and toxic substances used on Nellis AFB are tracked by the Hazardous Materials Pharmacy through the procurement, handling, storage, and dispensing of hazardous substances for construction and operations. Hazardous and toxic substances disposal procedures are identified in the Nellis AFB Hazardous Waste Management Plan (Nellis AFB, 2015a) and all wastes are disposed of in compliance with all federal, state, and local regulations.

USEPA considers Nellis AFB a large-quantity generator. Hazardous waste at Nellis AFB is accumulated at an approved 90-day storage area or at satellite accumulation points. Approximately 100 satellite accumulation points and one 90-day storage area are operated at Nellis AFB (Nellis AFB, 2015a). A variety of activities on Base, including aircraft maintenance and support, civil engineering, and printing operations, have been identified as primary contributors to hazardous waste streams. Basic processes and waste-handling procedures for general aircraft maintenance activities are identified in the Nellis AFB Hazardous Waste Management Plan (Nellis AFB, 2015a).

#### 3.11.2.2 Environmental Restoration Program Sites

There are 26 ERP sites at Nellis AFB. These sites include former landfills, dump areas, the former sewage treatment plant, disposal and pit areas, fuel spills, the fire training area, radioactive waste storage, bulk jet fuel storage tanks, and USTs. Twelve sites required remediation and nine of those are still being remediated. The remaining sites require no further action. A review of the Nellis AFB ERP site summary, as illustrated in **Figure A-11** (refer to **Appendix A**), found five active ERP sites in the vicinity of the Proposed Action (**Table 3-9**).

#### 3.11.2.3 Asbestos and Lead-Based Paint

Many buildings on Base date from the 1940s through the 1980s; ACM have been identified in many of these facilities. Renovation or demolition of on-Base structures is reviewed by Civil Engineering personnel to ensure appropriate measures are taken to reduce potential exposure to, and release of, friable asbestos. Nonfriable asbestos is not considered a hazardous material until it is removed or disturbed. The Nellis AFB *Asbestos Management and Operations Plan* (Nellis AFB, 2021b) and Nellis AFB *Lead-Based Paint Management Plan* (Nellis AFB, 2003) provide guidance on the proper handling and disposal of ACM.

#### 3.11.2.4 Radon

The USEPA radon zone for Clark County, Nevada, is Zone 3 (low potential, predicted indoor average level less than 2 pCi/L); however, radon potential throughout the County can vary (USEPA, 2020b). Each zone designation reflects the average short-term radon measurement that can be expected in a building without the implementation of radon control methods.

#### 3.11.2.5 Polychlorinated Biphenyls

Nellis AFB has met the criteria established by the Air Force as being "PCB-free." However, equipment that contains PCBs may still be present within the installation. Transformers and electrical equipment with PCB concentrations less than 50 ppm may be present on Base (Nellis AFB, 2003).

**Table 3-9.**  
**Environmental Restoration Program Sites in the Vicinity of Alternative 1 and/or Alternative 2**

ERP	Site Description	Associated Project(s) Under Alternative 1 (map location)	Associated Project(s) Under Alternative 2 (map location)
SS-28	Historic fuel spill located near Building 941. Remedial action operations are ongoing for extraction of product in ground water and long-term monitoring to ensure CERCLA compliance.	New AFCEC ISS Admin Building (12) New ARC AP ANG Facility ARC AP ANG Facility (17)	New AFCEC ISS Admin Building (12) New ARC AP ANG Facility Building 877 (17)
SS-45	Fuel hydrocarbon plume in soil and groundwater due to past leaking USTs at the Car Care Center.	Building 604 (22)	Building 604 (22)
SS-46	Located east of the propulsion maintenance building. Contains groundwater plume of dissolved chlorinated hydrocarbons (TCE, PCE, and DCE).	Cargo Deployment Yard (29)	Cargo Deployment Yard (29)
ST-44	Fuel leak from two USTs at the AGE service island. Remedial action operations have continued with the injection of potassium permanganate to further degrade onsite contamination.	New warm-up apron (28)	New warm-up apron (28)
TU/US-C267	Groundwater contamination consisting of a dissolved-phase VOC plume originating from a former JP-4/JP-8 UST and associated piping.	Building 118 (19)	Building 118 (19)

Note:

AFCEC = Air Force Civil Engineering Center; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; CERCLA = *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*; DCE = 1,2-dichloroethane; DERA = Defense Environmental Restoration Account; ERP = Environmental Restoration Program; ISS = Intelligence Support Squadron; TCE = trichloroethylene; PCE = perchloroethylene; MXS = maintenance squadron; UST = underground storage tank; VOC = volatile organic compound

## 3.12 INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES

### 3.12.1 Definition of the Resource

Infrastructure consists of the systems and structures that enable a population in a specified area to function. Infrastructure is wholly manmade, with a high correlation between the type and extent of infrastructure and the degree to which an area is characterized as developed. The availability of infrastructure and its capacity to support more users, including residential and commercial expansion, are generally regarded as essential to the economic growth of an area.

The infrastructure components include utilities, solid waste management, sanitary and storm sewers, and transportation. Utilities include electrical, natural gas, liquid fuel, potable water supply, sanitary sewage/wastewater, and communications systems. Solid waste management primarily relates to the availability of landfills to support a population's residential, commercial, and industrial needs. Sanitary and storm sewers (also considered utilities) includes those systems that collect, move, treat, and discharge liquid waste and stormwater. Transportation is defined as the system of roadways, highways, and transit services in the vicinity of the installation that potentially could be affected by a proposed action.

The ROI for this resource is Nellis AFB.

### 3.12.2 Existing Conditions

#### 3.12.2.1 Transportation

Nellis AFB is located northeast of the city of North Las Vegas, with Las Vegas Boulevard North connecting the Base area to downtown Las Vegas. Las Vegas Boulevard North runs northeast–southwest through Nellis AFB and separates Area I from Area III. East Craig Road intersects Las Vegas Boulevard North at the Nellis AFB Main Base gate; it also is a major artery that funnels traffic from Interstate 15 north of the Base to Las Vegas Boulevard North.

Daily traffic on East Craig Road, Las Vegas Boulevard North, and North Nellis Boulevard is relatively heavy on weekdays, particularly during morning and evening commute times for Base personnel. Average daily traffic counts for these streets are 11,700 vehicles for Las Vegas Boulevard North at the Range Road Gate, 22,800 vehicles for East Craig Road at the Salmon Drive Gate, and 23,100 vehicles for North Nellis Boulevard at the Tyndall Gate (Nevada Department of Transportation, 2019).

Nellis AFB has eight access control points across the installation: Main Gate, Beale South Gate, 215, Landings, Range Road, Speedway/Area II and Large Vehicle Inspection Station, Tyndale, and closed Hollywood Gate. Traffic measured at each Nellis AFB gate in December 2018 to March 2019 is shown in **Table 3-10**. These traffic counts are incoming only.

Nellis AFB has approximately 147 miles of paved roads. Intersections are controlled by stop signs (there are no traffic lights on Base), which can cause minor traffic delays at these intersections. Traffic circles to facilitate vehicle flow have been planned and two have been installed thus far: one at the intersection of Ellsworth Avenue and Fitzgerald Boulevard and the other at Ellsworth and Beale avenues. Unpaved roads are located in Areas II and III, with the majority located along the perimeter of the Base.

**Table 3-10.**  
**Traffic Counts at Nellis AFB Gates – December 2018 to March 2019**

Gate Location	Incoming Vehicles Per Day <sup>a</sup>
Main Gate	6,840
Beale South Gate	4,409
215	2,901
Landings (Area III housing)	1,749
Range Road	1,262
Area II (large vehicle inspection station)	698
Tyndall Avenue Gate	3,008

Source: Nellis AFB, 2019d

Notes:

a. Traffic data are a daily average from December 2018 to March 2019.

#### 3.12.2.2 Electricity and Natural Gas

NV Energy provides the majority of electricity to Nellis AFB through the electrical grid. The remaining energy is provided by a large solar array stationed on Nellis AFB owned by NV Energy, which was completed and became fully operational in 2015. The system encompasses approximately 140 acres and contains approximately 70,000 solar panels. In 2019, the production of the solar array equaled 26.474 gigawatts per hour (Energy Information Administration, 2021).

Southwest Gas Company distributes natural gas to the Base through approximately 200,000 LF (40 miles) of polyethylene pipes. The supply line distributes gas to Areas I, II, and III, while the Base hospital has a separate gas connection. Gas distribution to family housing was privatized in 2004. The Base hosts three 1,000-cubic-foot tanks for natural gas storage to be used for equipment (Nellis AFB, 2018a). Facilities east of the flight line are currently served by individual propane tanks, as there is no natural gas connection.

### 3.12.2.3 Liquid Fuel Storage

Jet fuel, diesel, and gasoline are delivered to Nellis AFB by the CALNEV Pipeline (owned and operated by Kinder Morgan) (Clark County Planning Commission [CCPC], 2006). The CALNEV Pipeline moves fuel from California to Nellis AFB and Reid International Airport via a 550-mile, two-line pipe system. It provides Clark County with approximately 130,000 barrels of fuel per day (CCPC, 2006).

Nellis AFB manages a bulk storage system with four jet fuel aboveground tanks, with a total of 47,400 barrels or 1,990,800 gallons. Nellis AFB also manages two operating storage tank facilities: the West Transient Ramp Type III Hydrant System and the Eastside Revetment modified Type III Hydrant System (Nellis AFB, 2018). The West Transient Ramp system includes two 10,000-barrel tanks with six aircraft refueling fill stands and nine aircraft fueling outlets. This facility receives fuel from the four bulk operating storage tanks, just outside of the north gate (Nellis AFB, 2018). JET-A is provided by Kinder-Morgan, located just north of the Nellis AFB Bulk Fuel Storage Tank facility. Nellis AFB has seven combined commercial and governmental fill stations that provide unleaded, diesel, biodiesel, and JET-A products. Spill prevention, control, and countermeasures are specified in the *Nellis, Creech, and NTTR Facility Response Plan* (Nellis AFB, 2021c).

### 3.12.2.4 Potable Water Supply

The Southern Nevada Water Authority (SNWA) provides potable water to the region of southern Nevada that includes Nellis AFB. The Las Vegas Valley gets approximately 90 percent of its water from the Colorado River, which is currently facing the worst drought in the river basin's recorded history (SNWA, 2020). The SNWA delivers water from the Colorado River via an intake in Lake Mead to one of two treatment facilities: the Alfred Merritt Smith Water Treatment Facility or the River Mountains Water Treatment Facility. The water level of Lake Mead, which serves as the source of most of the community's drinking water, has dropped more than 130 feet since January 2000. As the water level of Lake Mead declines, Nevada will have its allocation of water reduced. The SNWA connection is the primary supply connection to Nellis AFB.

The Nellis AFB drinking water system provides water for domestic, irrigation, and fire protection. The system provides water to the entire Base, excluding military family housing, which has been privatized since 2008 (Nellis AFB, 2015b). Currently, the Base drinking water system consists of three supply connections (two North Las Vegas Water District [NLVWD] connections and one SNWA connection) and two active groundwater wells. The supply connections from SNWA and NLVWD are the primary sources of water on Base, while the groundwater wells are run sparingly to keep water permits active and to improve water quality.

### 3.12.2.5 Sanitary Sewer System and Stormwater Channels

The Clark County Water Reclamation District (CCWRD) currently takes in approximately 1.5 million gallons of wastewater per day from Nellis AFB (Nellis AFB, 2019c). Septic systems are in place for areas that have remote access or no access to pipes. The maximum capacity of Clark County's discharge connection is estimated at 26 million gallons per day, which allows for additional capacity if future capacity expansion is required. CCWRD is a member of the SNWA and governs the Clark County section of SNWA. The District services all areas in Clark County and collects influent of 108 million gallons of wastewater per day (CCWRD, 2019).

Stormwater drainage channels have been excavated within and adjacent to the airfield, as well as within the residential areas to the west of the airfield. These channels facilitate the flow of stormwater from the installation into Clark County Regional Flood Control District channels, which in turn divert stormwater from Nellis AFB into the Las Vegas Wash.

### 3.12.2.6 Solid Waste Management

On average, Nellis AFB generates 1,700 tpy of nonhazardous waste (Nellis AFB, 2018a). The majority of solid waste is taken to an approved landfill by Republic Services.

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## 4 ENVIRONMENTAL IMPACTS

### 4.1 NOISE

#### 4.1.1 Evaluation Criteria

When evaluating noise effects, several aspects are examined, including: (1) the degree to which noise levels generated by training and operations, as well as construction, demolition, and renovation activities, would be higher than the ambient noise levels; (2) the degree to which there would be hearing loss and/or annoyance; and (3) the proximity of noise-sensitive receptors (e.g., residences, schools, hospitals, parks) to the noise source. An environmental analysis of noise includes the potential effects on the local population and estimates the extent and magnitude of the noise generated by the proposed and alternative actions. For purposes of analysis of activities associated with the Proposed Action and Alternative analyzed in this EA, impacts would be considered significant if the activities resulted in a 2-dB DNL increase in persistent noise exposure at a sensitive receptor.

#### 4.1.2 Alternative 1

Proposed projects under Alternative 1 would include construction, demolition, and renovation activities that would occur entirely within the boundaries of Nellis AFB. The affected environment for noise effects from these activities and ongoing operations is narrowly focused and compact and generally would include the area lying within 0.5-mile to 1-mile of the proposed projects.

Model results indicate that existing DNLs range from 50 dBA DNL to 85 dBA across Nellis AFB and do not exceed 75 dBA DNL in the vicinities of the proposed projects (Nellis AFB, 2021a). Noise associated with the operation of construction equipment is generally short-term, intermittent, and highly localized, with the loudest machinery typically producing peak sound pressure levels ranging from 86 to 95 dBA at a 50-foot distance from the source (see **Table 4-1**). However, construction noise does not typically generate a predicted noise exposure of 65 dBA DNL or greater even at extremely high rates of operation because the equipment itself does not generate noise that would produce a 65 dBA DNL when averaged over a year. Additionally, adherence to standard Air Force Occupational Safety and Health regulations that require hearing protection along with other personnel protective equipment and safety training would minimize the risk of hearing loss to construction workers. Therefore, noise associated with construction, demolition, and renovation projects proposed under Alternative 1 would not be anticipated to result in any significant direct or indirect impacts on noise-sensitive receptors. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to the noise environment would be anticipated to occur under implementation of Alternative 1.

There would be no operational increases in noise resulting from implementation of Alternative 1.

**Table 4-1.**  
**Peak Sound Pressure Level of Construction Equipment from a Distance of 50 Feet**

Equipment	Sound Pressure Level (dBA)
Bulldozer	95
Scraper	94
Front Loader	94
Backhoe	92
Grader	91
Crane	86

Source: Reagan and Grant, 1977

Note:

dBA = A-weighted decibel

#### **4.1.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. However, construction and demolition activities would still occur; therefore, impacts anticipated to occur under Alternative 2 would be the same or less as those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to the noise environment would be anticipated to occur under implementation of Alternative 2.

#### **4.1.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur on Nellis AFB. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Noise on Nellis AFB would not change from current conditions, and no significant impacts on noise-sensitive receptors would be anticipated.

### **4.2 SAFETY**

#### **4.2.1 Evaluation Criteria**

Impacts from a proposed action are assessed according to the potential to increase or decrease safety risks to personnel, the public, property, or the environment. For the purposes of this EA, an impact is considered significant if Air Force OSHA criteria would be exceeded or if established or proposed safety measures would not be properly implemented, resulting in unacceptable safety risk to personnel.

#### **4.2.2 Alternative 1**

Alternative 1 proposes construction, demolition, and renovation projects that would not result in a change to existing Flight Safety or explosive safety quantity distance (ESQD) arcs; therefore, no impacts to Flight Safety or ESQD arcs would occur.

Construction and demolition activities can potentially expose personnel to health and safety hazards from heavy equipment operation, hazardous materials and chemicals use, and working in confined, poorly ventilated, and noisy environments. Therefore, short-term, negligible-to-minor adverse impacts on contractor health and safety would be anticipated as a result of proposed construction and demolition projects under Alternative 1. To minimize health and safety risks, contractors would be required to use appropriate personal protective equipment and establish and maintain site-specific health and safety programs that follow all applicable OSHA regulations. Additionally, all construction contractors at Nellis AFB would be required to follow ground safety regulations and worker's compensation programs to avoid posing any risks to workers or personnel on- or off-Base. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to safety would be anticipated to occur under implementation of Alternative 1.

#### **4.2.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. However, construction and demolition activities would still occur; therefore, impacts anticipated to occur under Alternative 2 would be the same or less as those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to safety would be anticipated to occur under implementation of Alternative 2.



#### 4.2.4 No Action Alternative

Under the No Action Alternative, the proposed construction, renovation, or demolition projects would not occur on Nellis AFB. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Safety on Nellis AFB and the immediate surrounding area would remain unchanged from current conditions, and no significant safety-related impacts would be anticipated.

### 4.3 AIR QUALITY

#### 4.3.1 Evaluation Criteria

The CAA Section 176(c), General Conformity, requires federal agencies to demonstrate that their proposed activities would conform to the applicable state implementation plans (SIPs) for attainment of the NAAQS. General conformity applies to nonattainment and maintenance areas. If the emissions from a federal action proposed in a nonattainment area exceed annual *de minimis* thresholds identified in the rule, a formal conformity determination is required of that action. The thresholds are more restrictive as the severity of the nonattainment status of the region increases.

Potential impacts to air quality are evaluated with respect to the affected area and degree of effects in relation to relevant regulations, guidelines, and scientific documentation. Construction operations evaluate the operation of construction equipment and other fuel-burning sources as the primary emission sources of that activity. These data, along with information on the affected environment and the proposed and alternative actions, are used to produce a consistent determination of environmental consequences.

The Air Conformity Applicability Model (ACAM) (version 5.0.17a) was used to provide emissions estimates for construction activities proposed for the Installation Development projects. For motor vehicle emissions, the most current version of the motor vehicle emissions model specified by USEPA and available for use in the preparation or revision of state implementation plans in the subject state must be used for the conformity analysis. To address this requirement, each year, the Air Force Civil Engineering Center (AFCEC) air quality support contractor runs USEPA's Motor Vehicle Emission Simulator (MOVES) model to secure the appropriate vehicle emissions factors across the Air Force enterprise. Therefore, MOVES is already integrated into ACAM along with several other USEPA-approved models/methodologies to provide a complete NEPA and General Conformity assessment.

Potential impacts to air quality are evaluated with respect to the affected area and degree of effect in relation to relevant regulations, guidelines, and scientific documentation. For attainment area criteria pollutants, the project air quality analysis used the USEPA's Prevention of Significant Deterioration (PSD) permitting threshold of 250 tpy as an initial indicator of the local significance of potential impacts to air quality. It is important to note that these indicators only provide a clue to the potential impacts to air quality. In the context of criteria pollutants for which the ROI is in attainment of a NAAQS, the analysis compared the annual net increase in emissions estimated for each project alternative to the 250 tpy PSD permitting threshold. The PSD permitting threshold represents the level of potential new emissions below which a new or existing minor, non-listed stationary source may acceptably emit without triggering the requirement to obtain a permit. Thus, if the intensity of any net emissions increase for a project alternative is below 250 tpy in the context of an attainment criteria pollutant, the indication is the air quality impacts would not be significant for that pollutant. In the case of criteria pollutants for which the ROI does not attain a NAAQS or has been designated a maintenance area for the NAAQS, the analysis compared the net increase in annual direct and indirect emissions to the applicable pollutant *de minimis* threshold(s). If the net direct and indirect emissions from the project alternative equal or exceed an applicable *de minimis* threshold, then a general conformity determination is required before any emissions from the actions may occur.

For CO, PM<sub>10</sub>, and PM<sub>2.5</sub>, and the O<sub>3</sub> precursors VOC and NO<sub>x</sub>, the estimated direct and indirect air emissions associated with implementing an alternative were compared to the General Conformity Rule *de*

*minimis* thresholds to assess significance in areas that have been designated as nonattainment or maintenance for those pollutants.

Construction and renovation activities for both Alternatives 1 and 2 would be estimated to occur from calendar years 2022 through 2027. During this time, demolition, construction, and renovation activities would take place, involving new building and infrastructure construction, additions to several existing buildings, a warmup apron for aircraft, and additional parking.

### 4.3.2 Alternative 1

Under Alternative 1, construction activities would generate temporary emissions at various locations at the installation as identified in **Figure A-2** (refer to **Appendix A**).

**Table 4-2** provides estimated air emissions of criteria pollutants SO<sub>2</sub> and PM<sub>2.5</sub>, for which Nellis AFB is in attainment and has no maintenance area designations. These estimates represent emissions from the proposed building construction under Alternative 1 (see **Section 2.1**). The net change between the existing environment and proposed operations is solely additive, as implementation of Alternative 1 would not change operations at Nellis AFB. Estimated emissions are evaluated against the initial indicator of significance for the pollutants.

**Table 4-2.**  
**SO<sub>2</sub> and PM<sub>2.5</sub> Emission Estimates for Alternative 1 Proposed**  
**Demolition/Renovation/Construction at Nellis AFB**

Activity	Total Annual Emissions in Tons	
	SO <sub>2</sub>	PM <sub>2.5</sub>
<b>2022</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.041
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2023</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.057
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2024</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.005	0.063
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2025</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.007	0.084
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2026</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.037
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2027</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.002	0.019
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>

Note: Years presented are fiscal years

SO<sub>2</sub> = sulfur dioxide; PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns

SO<sub>2</sub> and PM<sub>2.5</sub> emissions would increase slightly during the construction years with implementation of Alternative 1, but the proposed net changes would be less than the initial indicator of significance. Therefore, increases in these pollutant emissions would not be significant.

Clark County is nonattainment for O<sub>3</sub> and a maintenance area for CO and PM<sub>10</sub>. For the General Conformity Applicability Analysis of CO, PM<sub>10</sub>, and the O<sub>3</sub> precursors VOC and NO<sub>x</sub>, the estimated direct and indirect air emissions associated with implementing Alternative 1 were compared to the General Conformity Rule *de minimis* thresholds in **Table 4-3**. (see **Section 2.1**). The net change between the existing environment and proposed operations is solely additive, as implementation of Alternative 1 would not change operations at Nellis AFB.

**Table 4-3.**  
**General Conformity Applicability Emissions Estimates for Alternative 1 Proposed**  
**Demolition/Renovation/Construction Activities at Nellis AFB**

Activity	Total Annual Emissions in Tons			
	VOCs	CO	NO <sub>x</sub>	PM <sub>10</sub>
<b>2022</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.379	1.191	1.018	0.243
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2023</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.420	1.901	1.387	3.672
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2024</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.281	2.148	1.757	2.101
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2025</b>				
Proposed Nellis AFB Construction/Renovation Activities	1.487	3.206	2.227	0.839
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2026</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.467	1.608	1.088	0.081
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2027</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.101	0.853	0.571	0.019
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Note: Years presented are fiscal years.

CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than or equal to 10 microns in diameter; VOC = volatile organic compound

While emissions for all of the pollutants would slightly increase during the years of construction, the proposed net changes would be less than the *de minimis* thresholds. Because the VOC, NO<sub>x</sub>, CO, and PM<sub>10</sub> emissions associated with Alternative 1 are below the *de minimis* thresholds, the requirements of the General Conformity Rule are not applicable, as documented in the Detail Air Conformity Applicability Model Report and Record of Conformity Analysis (ROCA). When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to air quality would be anticipated to occur under implementation of Alternative 1.

### 4.3.3 Alternative 2

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. Under Alternative 2, construction activities would generate temporary emissions at various locations at the installation as identified in **Figure A-3** (refer to **Appendix A**).

**Table 4-4** provides estimated air emissions of criteria pollutants SO<sub>2</sub> and PM<sub>2.5</sub>, for which Nellis AFB is in attainment and has no maintenance area designations. These estimates represent emissions from the proposed building construction under Alternative 2 (see **Section 2.1.4**). The net change between the existing environment and proposed operations is solely additive, as implementation of Alternative 2 would not otherwise change operations at Nellis AFB. Estimated emissions are evaluated against the initial indicator of significance for the pollutants.

**Table 4-4.**  
**SO<sub>2</sub> and PM<sub>2.5</sub> Emission Estimates for Alternative 2**  
**Proposed Demolition/Renovation/Construction at Nellis AFB**

Activity	Total Annual Emissions in Tons	
	SO <sub>2</sub>	PM <sub>2.5</sub>
<b>2022</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.041
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2023</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.044
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2024</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.052
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2025</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.006	0.074
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2026</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.037
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>
<b>2027</b>		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.032
Initial Indicator of Significance	250	250
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>

Note: Years presented are fiscal years.

SO<sub>2</sub> = sulfur dioxide; PM<sub>2.5</sub> = particulate matter less than or equal to 2.5 microns

SO<sub>2</sub> and PM<sub>2.5</sub> emissions would increase slightly during the construction years with implementation of Alternative 2, but the proposed net changes would be less than the initial indicator of significance. Therefore, increases in these pollutant emissions would not be significant.

Clark County is nonattainment for O<sub>3</sub> and a maintenance area for CO and PM<sub>10</sub>. For the General Conformity Applicability Analysis of CO, PM<sub>10</sub>, and the O<sub>3</sub> precursors VOC and NO<sub>x</sub>, the estimated direct and indirect air emissions associated with implementing Alternative 2 were compared to the General Conformity Rule *de minimis* thresholds in **Table 4-5** (see **Section 2.1**). The net change between the existing environment and proposed operations is solely additive, as implementation of Alternative 2 would not change operations at Nellis AFB.

**Table 4-5.**  
**General Conformity Applicability Emissions Estimates for Alternative 2 Proposed**  
**Demolition/Renovation/Construction Activities at Nellis AFB**

Activity	Total Annual Emissions in Tons			
	VOCs	CO	NO <sub>x</sub>	PM <sub>10</sub>
<b>2022</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.379	1.191	1.018	0.243
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2023</b>				
Proposed Nellis AFB Construction/Renovation Activities	1.472	1.459	1.089	2.738
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2024</b>				
Proposed Nellis AFB Construction/Renovation Activities	2.591	1.893	1.386	0.228
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2025</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.868	2.860	1.976	0.731
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2026</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.467	1.608	1.088	0.081
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>
<b>2027</b>				
Proposed Nellis AFB Construction/Renovation Activities	0.354	1.559	0.969	0.036
Initial Indicator of Significance	100	100	100	100
<b>Exceed Initial Indicator of Significance?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Notes: Years presented are fiscal years

CO = carbon monoxide; NO<sub>x</sub> = nitrogen oxides; PM<sub>10</sub> = particulate matter less than or equal to 10 microns in diameter; VOC = volatile organic compound

While emissions for all of the pollutants would increase with implementation of Alternative 2, the proposed net changes would be less than the *de minimis* thresholds. Because the VOC, NO<sub>x</sub>, CO, and PM<sub>10</sub> emissions associated with implementation of Alternative 2 would be below the *de minimis* thresholds, the requirements of the General Conformity Rule are not applicable, as documented in the Detail Air Conformity Applicability Model Report and ROCA. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to air quality would be anticipated to occur under implementation of Alternative 2.

#### 4.3.4 No Action Alternative

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). There would be no change to Base air quality or GHG emissions under the No Action Alternative.

### 4.3.5 Climate Change Considerations

The state of Nevada has warmed about 2°F since the beginning of the 20th century. Throughout the southwestern United States, heat waves are becoming more common, and snow is melting earlier in spring. Soils are likely to be drier, and periods without rain are likely to become longer, making droughts more severe. Higher temperatures and drought will increase the severity, frequency, and extent of wildfires in Nevada, which could harm property, livelihoods, and human health (USEPA, 2016b). Higher temperatures and drought will also decrease the availability of water in the future. Lake Mead has already reached its first critical marker and is projected to reach its second marker by 2026 (U.S. Bureau of Reclamation, 2021). Rising temperatures will also increase the formation of ground-level O<sub>3</sub>, which can exacerbate the existing issues with attainment of the O<sub>3</sub> NAAQS standard for areas that are currently classified as maintenance or nonattainment.

Table 4-6 presents the annual GHG emissions under both Alternatives 1 and 2.

**Table 4-6.  
Maximum Annual Greenhouse Gas Emissions under Alternatives 1 and 2**

Year	Total Annual Emissions in Tons	
	Alternative 1 CO <sub>2</sub> e	Alternative 2 CO <sub>2</sub> e
2022	281.1	281.1
2023	416.4	322.6
2024	519.4	400.1
2025	683.7	615.7
2026	343.0	343.0
2027	178.3	343.3

Note:  
CO<sub>2</sub>e = carbon dioxide equivalent

Implementing Alternative 1 or Alternative 2 at Nellis AFB would temporarily increase GHG and this increase would stop upon completion of construction. Newer construction may reduce ongoing GHG emissions for the installation due to energy efficiencies in modern buildings.

Climate change presents a global problem caused by increasing concentrations of GHG emissions. While climate change results from the incremental addition of GHG emissions from millions of individual sources, the significance of an individual source alone is impossible to assess on a global scale beyond the overall need for global GHG emissions reductions to avoid catastrophic global outcomes. Therefore, the quantitative analysis of CO<sub>2</sub>e emissions in this EA is for purposes of disclosing the net increase of alternative actions.

## 4.4 BIOLOGICAL RESOURCES

### 4.4.1 Evaluation Criteria

The level of impact on biological resources is based on the following:

- Importance (i.e., legal, commercial, recreational, ecological, or scientific) of the resource;
- Proportion of the resource that would be affected relative to its occurrence in the region;
- Sensitivity of the resource to the proposed activities; and
- Duration of potential ecological ramifications.

The potential impacts on biological resources would be considered adverse if species or habitats of high concern would be negatively affected over relatively large areas. Impacts would also be considered adverse if estimated disturbances cause reductions in population size or distribution of a species of high concern.

As a requirement under the ESA, federal agencies must provide documentation that ensures that the agency's Proposed Actions would not adversely affect the existence of any threatened or endangered species. The ESA requires that all federal agencies avoid "taking" federally threatened or endangered species (which includes jeopardizing threatened or endangered species habitat). Section 7 of the ESA establishes a consultation process with USFWS and NMFS that ends with USFWS and NMFS concurrence or a determination of the risk of jeopardy from a federal agency's proposed project.

#### **4.4.2 Alternative 1**

##### **4.4.2.1 Vegetation**

The areas designated for proposed construction, demolition, and renovation activities under Alternative 1 are generally adjacent to existing facilities and are either paved or graveled areas maintained to be generally free of vegetation with the exception of relatively small areas of fragmented native plant communities. Under Alternative 1, the existing building footprints of the nine buildings slated for demolition would be covered with four inches of rock mulch. Due to the lack of intact native vegetation in the areas proposed for development under Alternative 1 and the minimal vegetation clearing associated with construction, demolition, and renovation activities that would occur under Alternative 1, no significant impacts to vegetation would be anticipated to occur. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to vegetation would be anticipated to occur under implementation of Alternative 1.

##### **4.4.2.2 Wildlife**

There is limited suitable habitat for wildlife in the areas on Nellis AFB where construction, demolition, and renovation activities would occur under Alternative 1. The developed portion of Nellis AFB, in which the projects proposed under Alternative 1 would be located, supports relatively common wildlife species such as small mammals and migratory birds. Wildlife, and especially avian species, utilizing small undeveloped areas between buildings for foraging and breeding would normally be sensitive to increased noise impacts from military aircraft. However, operations have been ongoing at Nellis AFB for decades and are now part of the natural noise environment. The noise and movement temporarily caused by construction, demolition, and renovation activities would have negligible short-term impacts on wildlife. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to wildlife would be anticipated to occur under implementation of Alternative 1.

##### **4.4.2.3 Threatened and Endangered Species**

As noted in **Section 3.4.2**, no federally listed threatened or endangered species are known to occur on Nellis AFB near the proposed activities and no federally designated critical habitat is present on the Installation. As discussed in **Section 3.4.2.2**, previous surveys for the desert tortoise on Nellis AFB have identified desert tortoises in Area II, the eastern part of Area I, and on the Small Arms Range (Nellis AFB, 2019a). The proposed facilities would be located on previously disturbed land on Nellis AFB grounds in the western part of Area I. Therefore, no proposed construction activities would occur where desert tortoises have previously been found.

All projects proposed under Alternative 1 would be sited in the vicinity of existing infrastructure. Suitable habitat for special status species is not located in the vicinity of any of the projects proposed under Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to special status species would be anticipated to occur under implementation of Alternative 1.

##### **4.4.2.4 Invasive Species**

None of the construction, demolition, or renovation projects associated with Alternative 1 would have the potential to directly impact invasive species. In areas where demolition of existing buildings would occur, a

four-inch layer of rock mulch would be installed. In order to limit the potential for introduction of invasive species, equipment and off-site vehicles would be required to be cleaned prior to use on-site. Fill dirt, straw, and any plantings would also be checked for evidence of invasive non-native plants. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to invasive species would be anticipated to occur under implementation of Alternative 1.

#### **4.4.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would include an increased amount of renovation to existing facilities instead of demolition and new construction. Therefore, potential impacts to biological resources would be anticipated to occur in a reduced capacity. However, construction and demolition activities would still occur; therefore, the types of potential impacts anticipated to occur under Alternative 2 would be the same as those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to biological resources would be anticipated to occur under implementation of Alternative 2.

#### **4.4.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Biological resources in the area near the proposed activities would remain unchanged from current conditions, and no significant impacts to biological resources would be anticipated.

### **4.5 WATER RESOURCES**

#### **4.5.1 Evaluation Criteria**

Evaluation criteria for potential impacts on water resources are based on water availability, quality, and use; existence of floodplains; and associated regulations. Adverse impacts to water resources would occur if the proposed or alternative actions results in the following:

- Reduce water availability or supply to existing users;
- Overdraft groundwater basins;
- Exceed safe annual yield of water supply sources;
- Adversely affected water quality;
- Endanger public health by creating or worsening health hazard conditions; or,
- Violate established laws or regulations adopted to protect sensitive water resources.

#### **4.5.2 Alternative 1**

Under Alternative 1, 32 projects have been proposed and consist of building construction, addition, and demolition. Of the 32 proposed projects, 27 projects would be concentrated in the western to southwestern portion of Nellis AFB with 5 of the projects located in the northeastern portion of the Installation.

##### **4.5.2.1 Surface Water and Stormwater**

Surface water and stormwater have the potential to be affected by any construction or demolition projects due to water contamination or runoff from project materials. Under Alternative 1, 23 projects would result in the generation of construction materials and construction of new impervious surfaces such as paved walkways or parking spaces. As part of Alternative 1, 92,065 ft<sup>2</sup> of new construction would occur with 29,300 ft<sup>2</sup> of building additions, 75,600 ft<sup>2</sup> of new roads, and 285,091 ft<sup>2</sup> of new impervious surfaces.



Inversely, the demolition of 457,457 ft<sup>2</sup> of buildings has the potential to increase permeability by reducing the amount of paved or impervious surfaces; nine projects are categorized for demolition and introduce the increased potential of surface water contamination due to stormwater or runoff. Increased permeability would allow easier penetration of surface water, stormwater, and runoff to the groundwater system (see **Section 4.5.2.1** for more information on environmental consequences to groundwater).

None of the proposed projects would be expected to have impacts to the identified seasonal streams on the Installation. Two fence construction projects are located within 50 ft of a seasonal stream, while the next closest project is over 900 ft from a stream. Best Management Practices would be implemented during construction to prevent stream degradation by sedimentation and erosion. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to surface water or stormwater would be anticipated to occur under implementation of Alternative 1.

#### **4.5.2.2 Groundwater**

Proposed demolition, construction, and renovation projects under the implementation of Alternative 1 would have the potential to impact groundwater. Groundwater is impacted when contaminated water seeps down through the ground and enters underground reserves. Project construction introduces potential contamination points as increased construction and demolition produce debris. As described above, net impervious surfaces would increase by 24,599 ft<sup>2</sup>. Because groundwater resources in the Las Vegas Valley range from 300 to 1,500 feet below the ground surface, groundwater contamination would be less likely to occur. Any contamination likely would be filtered by the thick layers of clay and fine-grained sediments before reaching aquifer depths (LVVWD, 2021). When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects groundwater would be anticipated to occur under implementation of Alternative 1.

#### **4.5.3 Floodplains**

According to 2011 Effective Flood Insurance Rate Map panels, FEMA has identified an area of the 100-Year floodplain within the southern portion of the Installation. None of the proposed project areas would be located within the identified floodplain; the closest project location would be approximately 0.5-mile away.

Severe weather is common in the area increasing flash-flood susceptibility within the vicinity of the project areas on the Installation. Increasing the impervious surface area by paving over formerly permeable surfaces would have the potential to increase flash-flood risk in the project area and low-lying adjacent areas. However, under Alternative 1, a net increase of approximately 24,599 ft<sup>2</sup> of impervious surfaces would occur. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to floodplains would be anticipated to occur under implementation of Alternative 1.

#### **4.5.4 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have less demolition and would be more focused on the potential renovation of existing facilities. The footprint of demolition projects under Alternative 2 would decrease, leaving more impervious surfaces and infrastructure standing. More impervious surfaces would alter the way water resources interact with the natural environment, resulting in a potential increase of stormwater runoff as compared to Alternative 1. A net increase of impervious coverage of 265,805 ft<sup>2</sup> is proposed under Alternative 2. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to water resources would be anticipated to occur under implementation of Alternative 2.

#### **4.5.5 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and

geographically separated facilities (see **Section 2.3.3**). Water resources on the Nellis AFB airfield and environs would remain unchanged from current conditions, and no significant impacts to water resources would be anticipated.

## **4.6 GEOLOGICAL RESOURCES**

### **4.6.1 Evaluation Criteria**

Evaluation criteria for potential impacts on geological resources are based on soil stability, land use, and mitigation measures. Adverse impacts to geological resources would occur if Alternatives 1 and 2 result in the following:

- Increase susceptibility to erosion either due to lack of proper drainage for stormwater or improper grounding of foundations during construction,
- Increase erosion of soils along the floodplain, or
- Violate established laws or regulations adopted to protect sensitive cultural resources as defined in **Section 3.10**.

### **4.6.2 Alternative 1**

Ground surface disturbance from military construction, road construction, building additions, and infrastructure improvements projects proposed under Alternative 1 would include activities such as clearing, grading, excavating, and recontouring of soils, which present the risk of potential short- and long-term increased soil erosion and sedimentation (the transport of eroded sediment). However, this risk would be low given the flat topography of the Base in the vicinity of the proposed projects and would be minimized through the implementation of appropriate erosion and sediment control BMPs. Construction, demolition, and renovation projects associated with Alternative 1 would not be anticipated to result in any significant direct or indirect impacts to geological resources.

Facilities proposed for construction, demolition, and renovation would be located on previously disturbed land adjacent to existing buildings and infrastructure on Nellis AFB. Military construction, building additions, and infrastructure construction projects proposed under Alternative 1 would increase impervious surfaces by approximately 24,599 ft<sup>2</sup>. This slight increase of impervious and paved surfaces at the Base would have no significant impacts on geological resources. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to geologic resources would be anticipated to occur under implementation of Alternative 1.

### **4.6.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have less construction and would be more focused on the potential renovation of existing facilities. The reduction of new construction would decrease the disturbance of geological resources. By reducing the number of demolition projects, the Base would be preserving the use of seven of its buildings but would be decreasing the opportunity to reduce overall soil erosion issues as stated above. A net increase of impervious coverage of 265,805 ft<sup>2</sup> is proposed under Alternative 2. This slight increase of impervious and paved surfaces at the Base would have no significant impacts on geological resources. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to geologic resources would be anticipated to occur under implementation of Alternative 2.

### **4.6.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and

geographically separated facilities (see **Section 2.3.3**). Further, buildings left in poor condition could result in increased soil erosion due to improper drainage.

## **4.7 LAND USE**

### **4.7.1 Evaluation Criteria**

Potential impacts on land use are based on the level of land use sensitivity in areas potentially affected by a Proposed Action as well as compatibility of the action with existing conditions. In general, a land use impact would be adverse if it meets one of the following criteria:

- Inconsistency or noncompliance with existing land use plans or policies,
- Precluded the viability of existing land use,
- Precluded continued use or occupation of an area,
- Incompatibility with adjacent land use to the extent that public health or safety is threatened, or
- Conflict with planning criteria established to ensure the safety and protection of human life and property.

### **4.7.2 Alternative 1**

Land use on Nellis AFB would not be negatively impacted under the implementation of Alternative 1. Construction, demolition, and renovation activities associated with Alternative 1 would occur entirely within the existing boundaries of Nellis AFB. The proposed projects that would occur under Alternative 1 would be implemented in areas of existing land use including airfield operations, industrial, administrative, training, community service, and community commercial, all of which have been previously disturbed. All facilities would be located on previously disturbed land. No permanent changes to the noise environment would occur under the implementation of Alternative 1. Noise impacts to sensitive receptors would be temporary during the construction period and no changes to the existing DNL noise contours would occur (see **Section 4.1**). Therefore, there would be no changes to existing land use or land use compatibility under implementation of Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to land use would be anticipated to occur under implementation of Alternative 1.

### **4.7.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. Under Alternative 2, construction activities at Nellis AFB would be located on previously disturbed land adjacent to existing buildings and infrastructure within the cantonment area. Construction and demolition activities would still occur; therefore, impacts anticipated to occur under Alternative 2 would be the same or less as those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to land use would be anticipated to occur under implementation of Alternative 2.

### **4.7.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Land use in the area near the proposed activities would remain unchanged from current conditions, and no significant impacts to land use would be anticipated.

## **4.8 SOCIOECONOMICS**

### **4.8.1 Evaluation Criteria**

Consequences to socioeconomic resources were assessed in terms of the potential impacts on the local economy from implementation of Alternatives 1 and 2. The level of impacts from expenditures associated with the Alternatives was assessed in terms of direct impacts on the local economy and related impacts on other socioeconomic resources (e.g., housing, employment). The magnitude of potential impacts can vary greatly depending on the location of an action. For example, implementation of an action that creates 10 employment positions might be unnoticed in an urban area but might have significant impacts in a rural region. In addition, if potential socioeconomic changes from a Proposed Action resulted in substantial shifts in population trends or in adverse effects on regional spending and earning patterns, they may be considered adverse.

### **4.8.2 Alternative 1**

The proposed construction, demolition, and renovation projects that would occur under Alternative 1 would not be associated with the addition of more permanent military, contract, or civilian personnel or their families. Therefore, no impacts to the local or regional population would occur under implementation of Alternative 1.

Under Alternative 1, construction of new buildings and additions/demolition/renovation of existing buildings would result in a temporary increase of 20 to 50 construction personnel, depending on the number of projects occurring at one time; this temporary increase would have a negligible beneficial impact on the socioeconomic condition on the region. Because there would be no permanent increase in military, contract, or civilian personnel, there would be no need for additional housing. Therefore, no adverse impacts on employment, housing, or educational resources would occur under Alternative 1.

No permanent changes to the noise environment would occur under the implementation of Alternative 1. Noise impacts to sensitive receptors would be temporary during the construction period, and no changes to the existing DNL noise contours would occur (see **Section 3.1**). No significant cumulative effects employment, housing, or educational resources would occur under Alternative 1.

### **4.8.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. However, the projects would require a temporary increase of 20 to 50 construction personnel, depending on the number of projects occurring at one time; this temporary increase would have a negligible beneficial impact on the socioeconomic condition on the region. No permanent additions of military, contract, or civilian personnel would occur under Alternative 2. No significant cumulative effects employment, housing, or educational resources would occur under Alternative 2.

### **4.8.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Socioeconomic conditions on Nellis AFB and the environs would remain unchanged from current conditions. Any beneficial impacts associated with local and regional expenditures to support the Proposed Action and Alternative would not be realized.

## 4.9 ENVIRONMENTAL JUSTICE

### 4.9.1 Evaluation Criteria

Environmental justice analysis applies to potential disproportionately and adverse effects on minority, low-income, and youth populations. Environmental justice issues could occur if an adverse environmental or socioeconomic consequence to the human population fell disproportionately upon minority, low-income, or youth populations. In **Section 3.10**, ethnicity and poverty status and compared it to state and national data to determine if these populations could be disproportionately affected by Alternatives 1 or 2.

### 4.9.2 Alternative 1

Under Alternative 1, the proposed construction, demolition, and renovation projects would not result in a disproportionate impact on minorities, low-income, and youth populations because these actions would not impact the availability of housing, community resources, and community services in the ROI and would occur entirely within the boundaries of Nellis AFB. The impact assessment for each of the resource topics considered in the preceding sections identified insignificant impacts on the physical, natural, and human environment (see **Table 2-1**). Implementation of Alternative 1 would not result in the disproportionately high and adverse impacts on minority, low-income, or youth populations. Therefore, the activities proposed under Alternative 1 would not disproportionately affect minorities, low-income populations, children, or the elderly. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects would disproportionately affect minorities, low-income populations, children, or the elderly under Alternative 1.

### 4.9.3 Alternative 2

Alternative 2 differs from Alternative 1 in that Alternative 2 would have substantially less demolition and would be more focused on the potential renovation of existing facilities. Therefore, impacts under Alternative 2 would be anticipated to be less than or equal to impacts that would occur under Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects would disproportionately affect minorities, low-income populations, children, or the elderly under Alternative 2.

### 4.9.4 No Action Alternative

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Impacts to minority, low-income, and youth populations on Nellis AFB and the environs would remain unchanged from current conditions, and no significant impacts to minority, low-income, and youth populations would be anticipated.

## 4.10 CULTURAL RESOURCES

### 4.10.1 Evaluation Criteria

Adverse impacts on cultural resources might include physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; neglecting the resource to the extent that it deteriorates or is destroyed; or the sale, transfer, or lease of the property out of agency ownership (or control) without adequate enforceable restrictions or conditions to ensure preservation of the property's historic significance. For the purposes of this EA, an impact is considered significant if it alters the integrity of a NRHP-listed, eligible, or potentially eligible resource or potentially impacts TCPs.

#### **4.10.2 Alternative 1**

Under implementation of Alternative 1, nine demolition projects would impact 33 structures, 23 of which are more than 50 years old. As of July 2021, the buildings proposed for demolition under Alternative 1 have been deemed not eligible for listing on the NRHP on an individual basis. However, projects involving renovation or addition to existing buildings could have the potential to impact eligible or potentially eligible historic resources based on the potential designation of a new historic district on Nellis AFB. Further evaluation and consultation with the SHPO and Nevada Department of Conservation and Natural Resources would be needed to assess impacts to structures older than 50 years or otherwise eligible under NRHP criteria. Construction projects would not likely affect cultural resources as these projects are located in already heavily disturbed areas of the Installation. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to cultural resources would be anticipated to occur under implementation of Alternative 1.

#### **4.10.3 Alternative 2**

Under Alternative 2, both proposed demolition projects involve structures older than 50 years. As of July 2021, the buildings proposed for demolition under Alternative 2 have been deemed not eligible for listing on the NRHP on an individual basis. However, projects involving renovation or addition to existing buildings could have the potential to impact eligible or potentially eligible historic resources based on the potential designation of a new historic district on Nellis AFB. Further evaluation and consultation with the SHPO and Nevada Department of Conservation and Natural Resources would be needed to assess impacts to structures older than 50 years or otherwise eligible under NRHP criteria. Construction projects would not likely affect cultural resources as these projects are located in already heavily disturbed areas of the Installation. No significant cumulative effects on cultural resources would be expected. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects to cultural resources would be anticipated to occur under implementation of Alternative 2.

#### **4.10.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Impacts to cultural resources in the APE would remain unchanged from current conditions, and no significant impacts to cultural resources would be anticipated.

### **4.11 HAZARDOUS MATERIALS AND WASTES, CONTAMINATED SITES, AND TOXIC SUBSTANCES**

#### **4.11.1 Evaluation Criteria**

Impacts on hazardous materials management would be considered adverse if the federal action resulted in noncompliance with applicable federal and state regulations, or increased the amounts generated or procured beyond current Nellis AFB waste management procedures and capacities. Impacts on the ERP would be considered adverse if the federal action disturbed (or created) contaminated sites resulting in negative effects on human health or the environment.

#### **4.11.2 Alternative 1**

##### **4.11.2.1 Hazardous Materials and Wastes**

The use of certain hazardous materials would be required during proposed construction, demolition, and renovation projects associated with Alternative 1; hazardous materials that could be used include paints, welding gases, solvents, preservatives, sealants, and pesticides. Additionally, hydraulic fluids and petroleum products, such as diesel and gasoline, would be used in construction and demolition vehicles.

Construction contractors would be responsible for monitoring exposure to hazardous materials. Adherence to the Nellis AFB *Hazardous Waste Management Plan* would minimize impacts from the handling and disposal of hazardous substances and ensure compliance with state and federal hazardous materials regulations (Nellis AFB, 2015a). Potential impacts from the accidental release of such products would be minimized by following response procedures specified in Nellis AFB's *Facility Response Plan* (Nellis AFB, 2021c). Therefore, short-term, negligible to minor, adverse impacts would be anticipated to result from the use of hazardous materials and petroleum products during the proposed construction, demolition, and renovation projects associated with Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on hazardous materials and waste would occur under Alternative 1.

#### 4.11.2.2 Environmental Restoration Program Sites

There are currently nine active ERP sites on Nellis AFB. Construction for proposed Alternative 1 projects and buildings would take place on five of these sites (see **Figure A-11**, refer to **Appendix A**). An ERP waiver would be required if proposed construction occurred. **Table 4-7** lists the associated areas and potentially impacted footprint. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on ERP sites would occur under Alternative 1.

**Table 4-7.**  
**Alternative 1 ERP Potential Impacts**

ERP	Program Description	Buildings/Projects Potentially Impacted by Alternative 1 (map location)
SS-28	Historic fuel spill located near Building 941. Remedial action operations are ongoing for extraction of product in ground water and long-term monitoring to ensure CERCLA compliance.	New AFCEC ISS Admin Building (12) New ARC AP ANG Facility ARC AP ANG Facility (17)
SS-45	Fuel hydrocarbon plume in soil and groundwater due to past leaking USTs at the Car Care Center.	Building 604 (22)
SS-46	Located east of the propulsion maintenance building. Contains groundwater plume of dissolved chlorinated hydrocarbons (TCE, PCE, and DCE).	Alt Control Tower (2) Cargo Deployment Yard (29)
ST-44	Fuel leak from two USTs at the AGE service island. Remedial action operations have continued with the injection of potassium permanganate to further degrade onsite contamination.	New warm-up apron (28)
TU/US-C267	Groundwater contamination consisting of a dissolved-phase VOC plume originating from a former JP-4/JP-8 UST and associated piping.	Building 118 (19)

Note:

AFCEC = Air Force Civil Engineering Center; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; CERCLA = *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*; DCE = 1,2-dichloroethane; DERA = Defense Environmental Restoration Account; ERP = Environmental Restoration Program; ISS = Intelligence Support Squadron; TCE = trichloroethylene; PCE = perchloroethylene; MXS = maintenance squadron; UST = underground storage tank; VOC = volatile organic compound

#### 4.11.2.3 Asbestos and Lead-Based Paint

Due to the age of some of the facilities that would be demolished or renovated under Alternative 1, ACMs could be encountered as part of the proposed renovation or demolition activities. Construction contractors would be responsible for monitoring exposure to asbestos. It is current Air Force practice to remove exposed friable asbestos and manage other ACMs in place, depending on the potential threat to human health. If encountered, friable asbestos would be removed by licensed contractors and disposed of in a local asbestos-permitted landfill. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on ACMs would occur under Alternative 1.

Policies and procedures documented in the Nellis AFB *Asbestos Management Plan* to manage, identify, and assess ACMs would be followed (Nellis AFB, 2021b). In addition, Clark County Department of Environment and Sustainability (CCDES) requires buildings undergoing renovation or demolition to be surveyed for asbestos regardless of their age. The same regulation requires a notification to CCDES for the buildings undergoing renovation or demolition at least 10 workdays before the work begins.

LBP, while no longer used at Nellis AFB, may be present in buildings proposed for demolition and renovation under Alternative 1. LBP removal and disposal would be conducted in accordance with federal, state, and local regulations, and all paint waste generated from paint removal operations under Alternative 1 would be containerized, sampled, and analyzed to determine if the waste meets the definition of hazardous waste. No significant cumulative effects on LBPs would be expected.

#### **4.11.2.4 Radon**

There is a low potential for radon to pose a health hazard at Nellis AFB. As such, no impact from radon would be anticipated under Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on radon would occur under Alternative 1.

#### **4.11.2.5 Polychlorinated Biphenyls**

PCBs could be disturbed if interior renovation projects proposed under Alternative 1 would require the removal of fluorescent light fixtures. Surveys for PCBs would be completed as necessary by a certified contractor prior to renovation activities to ensure that appropriate measures that comply with all federal, state, and local regulations would be taken to reduce potential exposure to, and release of, PCBs. PCB-containing light fixtures would be stored and disposed of in a USEPA-approved chemical waste landfill in accordance with 40 CFR § 761. Therefore, removal and proper disposal of light fixtures containing PCBs would be a potential long-term, minor, beneficial impact under Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on PCBs would occur under Alternative 1.

#### **4.11.3 Alternative 2**

Alternative 2 differs from Alternative 1 in that Alternative 2 would include substantially less demolition and an increased amount of renovation to existing facilities. Potential impacts for this alternative would be the same or less than those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on hazardous materials and wastes, contaminated sites, and toxic substances would be expected under Alternative 2.

#### **4.11.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Impacts to HAZMAT, contaminated sites, and toxic substances on Nellis AFB would remain unchanged from current conditions, and no significant impacts to HAZMAT, contaminated sites, and toxic substances would be anticipated.

### **4.12 INFRASTRUCTURE, TRANSPORTATION, AND UTILITIES**

#### **4.12.1 Evaluation Criteria**

Impacts on infrastructure from a Proposed Action are evaluated for their potential to disrupt or improve existing levels of service in the ROI as well as generate additional requirements for energy or water consumption and impacts to resources such as sanitary sewer systems and solid waste management.



Adverse transportation impacts would occur if a Proposed Action resulted in a substantial increase in traffic generation that would cause a decrease in the level of service, a substantial increase in the use of the connecting street systems or mass transit, or if on-site parking demand would not be met by projected supply. Adverse impacts related to utilities/services would occur if a Proposed Action required more than the existing infrastructure could provide or required services in conflict with adopted plans and policies for the area.

#### **4.12.2 Alternative 1**

##### **4.12.2.1 Transportation**

Under Alternative 1, 6,300 LF at a width of 10 feet (75,600 ft<sup>2</sup>) of new access road would be constructed in the vicinity of the Area 2 security fence to provide increased access for maintenance and security personnel. This road would not be accessible to the public and would not impact the flow of traffic on Nellis AFB.

It would be anticipated that Nellis AFB roadways would experience temporary impacts on transportation and circulation from construction-related traffic (i.e., heavy construction equipment and construction worker vehicles) during construction, demolition, and renovation projects proposed under Alternative 1. These projects would be expected to occur over the six-year period FY 2022–FY 2027, with the construction schedule for each proposed building being roughly 12 to 18 months and infrastructure construction ranging from 8 to 12 months. Traffic levels on the Base would be anticipated to increase during these activities, with potential impacts determined by the amount of construction occurring at once. Although implementation of Alternative 1 would impact existing transportation resources, such impacts would be temporary and localized. Nearby Las Vegas and Nellis Boulevards, Craig Road, and I-15 would be able to accommodate the anticipated temporary increase in traffic from demolition, renovation, and construction activities. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on traffic would occur under Alternative 1.

##### **4.12.2.2 Electricity and Natural Gas**

Potential short-term, negligible, adverse impacts on the electrical distribution system could occur during construction and demolition activities proposed under Alternative 1 as a result of temporary electrical service interruptions, rerouting aboveground or underground electrical lines, or when a proposed facility would be connected to the Installation's electrical distribution system.

Short-term, negligible, adverse impacts on the electrical distribution system could occur under Alternative 1 because the operation of newly constructed buildings may increase the demand on the system; however, energy efficient construction to decrease energy consumption consistent with EO 13693, *Planning for Federal Sustainability in the Next Decade*, and cessation of operations at outdated and inefficient buildings proposed for demolition would decrease the demand. Therefore, net changes in long-term demand would be anticipated to be minimal. The electrical system would have the capacity required to meet new demands. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on the electrical system would occur under Alternative 1.

Short-term, negligible, adverse impacts on the natural gas supply system would occur during construction and demolition activities when existing lines would be connected to new buildings or capped, as appropriate. Long-term, negligible, adverse impacts would occur because the operation of new buildings would increase the demand on the natural gas supply system; however, the cessation of operations at demolished buildings would decrease the demand. Changes in demand would be minimal, and the natural gas supply system has the capacity required to meet new demands. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on the natural gas supply would occur under Alternative 1.

#### **4.12.2.3 Liquid Fuel Storage**

Proposed projects associated with Alternative 1 would not require the use of existing fuel storage facilities located on Nellis AFB or the addition of new fuel storage facilities; therefore, no impacts to fuel storage would occur under Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on liquid fuel storage would occur under Alternative 1.

#### **4.12.2.4 Potable Water Supply**

The Las Vegas Valley gets approximately 90 percent of its water from the Colorado River, which is currently facing the worst drought in the river basin's recorded history. Since 2000, snowfall and runoff into the basin have been well below normal. These conditions have resulted in significant water level declines at major system reservoirs, including Lake Mead and Lake Powell. Drought conditions are expected to continue in the future and will impact future development at Nellis AFB.

Short-term, negligible, adverse impacts on the potable water supply system would occur during construction and demolition when existing lines would be connected to new buildings or capped as appropriate. Long-term, negligible, adverse impacts would occur because the operation of the new buildings would increase the demand on the potable water supply system; however, the cessation of operations at demolished buildings would decrease the demand. Changes in demand would be minimal, and the potable water supply system has the capacity required to meet new demands. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on potable water supply would occur under Alternative 1.

#### **4.12.2.5 Sanitary Sewer**

Short-term, negligible, adverse impacts on the sanitary sewer and wastewater treatment system would occur during construction and demolition when existing lines would be connected to new buildings or capped as appropriate. Long-term, negligible, adverse impacts would occur because the operation of the new buildings would increase the demand on the sanitary sewer and wastewater treatment system; however, the cessation of operations at demolished buildings would decrease the demand. Changes in demands would be minimal, and the sanitary sewer and wastewater treatment system has the capacity required to meet new demands. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on the sanitary sewer would occur under Alternative 1.

#### **4.12.2.6 Solid Waste Management**

Short-term, minor, adverse impacts on solid waste management may occur with construction and demolition projects proposed under Alternative 1. The USEPA guidance on estimating solid waste resulting from construction and demolition projects indicates that approximately 4.39 pounds (lbs)/ft<sup>2</sup> of debris would be generated for each square foot of construction activity, and approximately 158 lbs/ft<sup>2</sup> would be generated from the demolition of existing facilities; this formula can be applied to the construction of both buildings and impervious surfaces. Using this formula, solid waste generated from all construction and demolition projects proposed under Alternative 1 would be anticipated to be approximately 9 tons and 36,065 tons, respectively. Contractors would be required to comply with federal, state, and local regulations for the collection and disposal of solid waste generated with the implementation of Alternative 1, and all solid waste generated would be collected and transported off site for disposal or recycling in accordance with Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*. Demolition projects would take place over a period of four years from FY 2022 through 2025; therefore, the annual volume of solid waste would be reduced relative to the above scenario of all demolitions occurring at the same time.

No long-term impacts on solid waste management would be anticipated to occur under Alternative 1 because the projects would not appreciably increase the amount of solid waste generated on the Base from

everyday functions. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on solid waste management occur under Alternative 1.

#### **4.12.3 Alternative 2**

Under Alternative 2, 6,300 LF at a width of 10 feet (75,600 ft<sup>2</sup>) of new access road would be constructed in the vicinity of the Area 2 security fence to provide increased access for maintenance and security personnel. This road would not be accessible to the public and would not impact the flow of traffic on Nellis AFB.

Alternative 2 differs from Alternative 1 in that Alternative 2 would include substantially less demolition and an increased amount of renovation to existing facilities. Impacts to infrastructure, transportation, and utilities for this alternative would be the same or less than those described for Alternative 1. When considered in conjunction with other past, present, and reasonably foreseeable future actions at Nellis AFB, no significant cumulative effects on infrastructure, transportation of utilities would occur under Alternative 2.

#### **4.12.4 No Action Alternative**

Under the No Action Alternative, the proposed construction, renovation, and demolition projects would not occur. Activities in existing facilities would continue to operate in substandard, congested, and geographically separated facilities (see **Section 2.3.3**). Impacts to infrastructure, transportation, and utilities on Nellis AFB would remain unchanged from current conditions, and no significant impacts to infrastructure, transportation, and utilities would occur.

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## Appendix A. FIGURES

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## TABLE OF CONTENTS

Figure A-1.	Regional Map of Nellis Air Force Base, Nevada.....	A-5
Figure A-2.	Potential Improvement Projects at Nellis Air Force Base – Alternative 1 .....	A-6
Figure A-3.	Potential Improvement Projects at Nellis Air Force Base – Alternative 2 .....	A-7
Figure A-4.	Typical A-weighted Sound Levels of Common Sounds.....	A-8
Figure A-5.	Nellis AFB Safety Zones .....	A-9
Figure A-6.	Surface Waters and 100-Year Floodplain at Nellis AFB.....	A-10
Figure A-7.	Soil Types Classified at Nellis Air Force Base .....	A-11
Figure A-8.	Land Use at Nellis AFB .....	A-12
Figure A-9.	Area of Potential Effects – Western Side of Runway.....	A-13
Figure A-10.	Area of Potential Effects – Eastern Side of Runway.....	A-14
Figure A-11.	Environmental Restoration Sites Near Alternative 1 Project Locations.....	A-15

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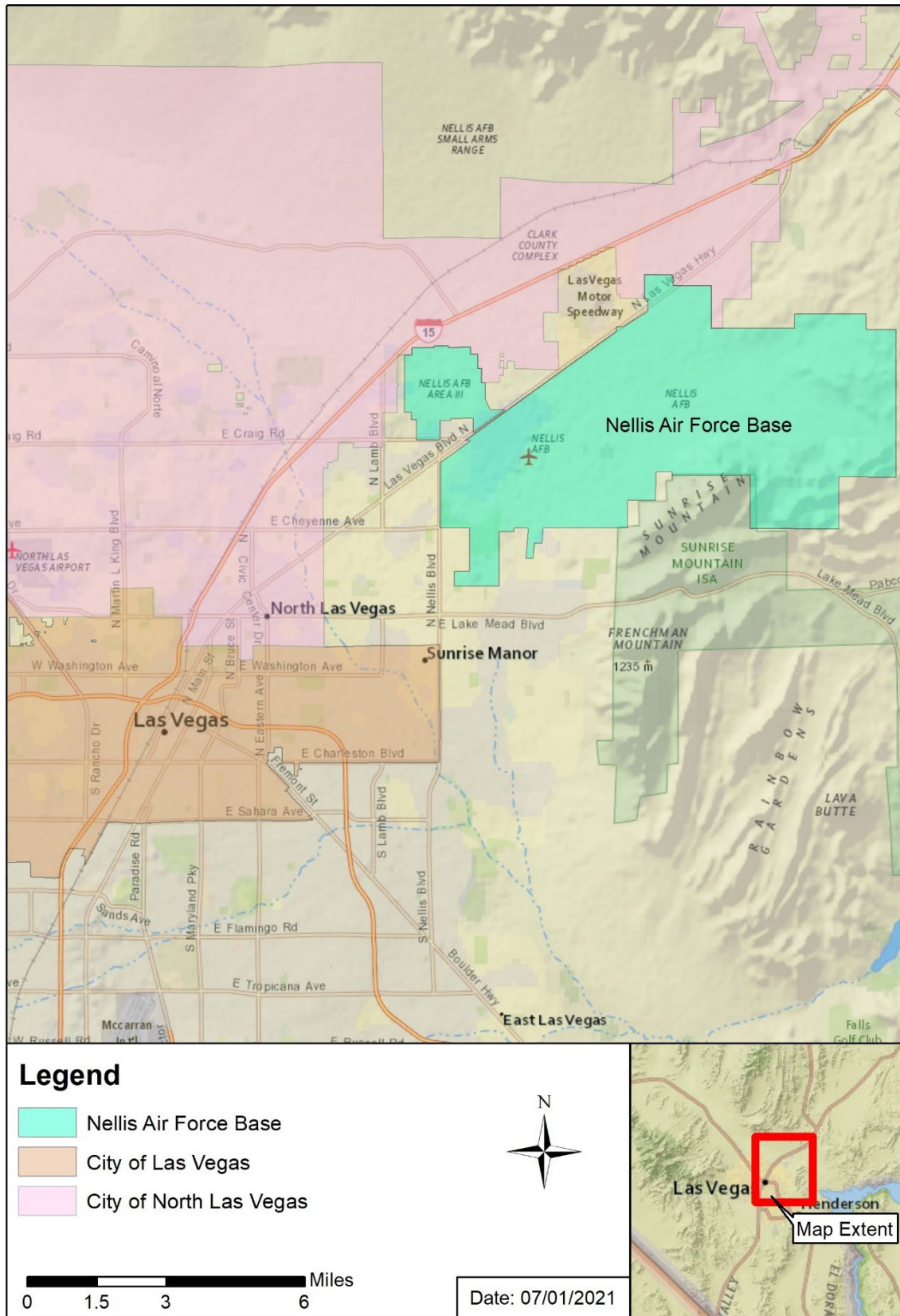


Figure A-1. Regional Map of Nellis Air Force Base, Nevada



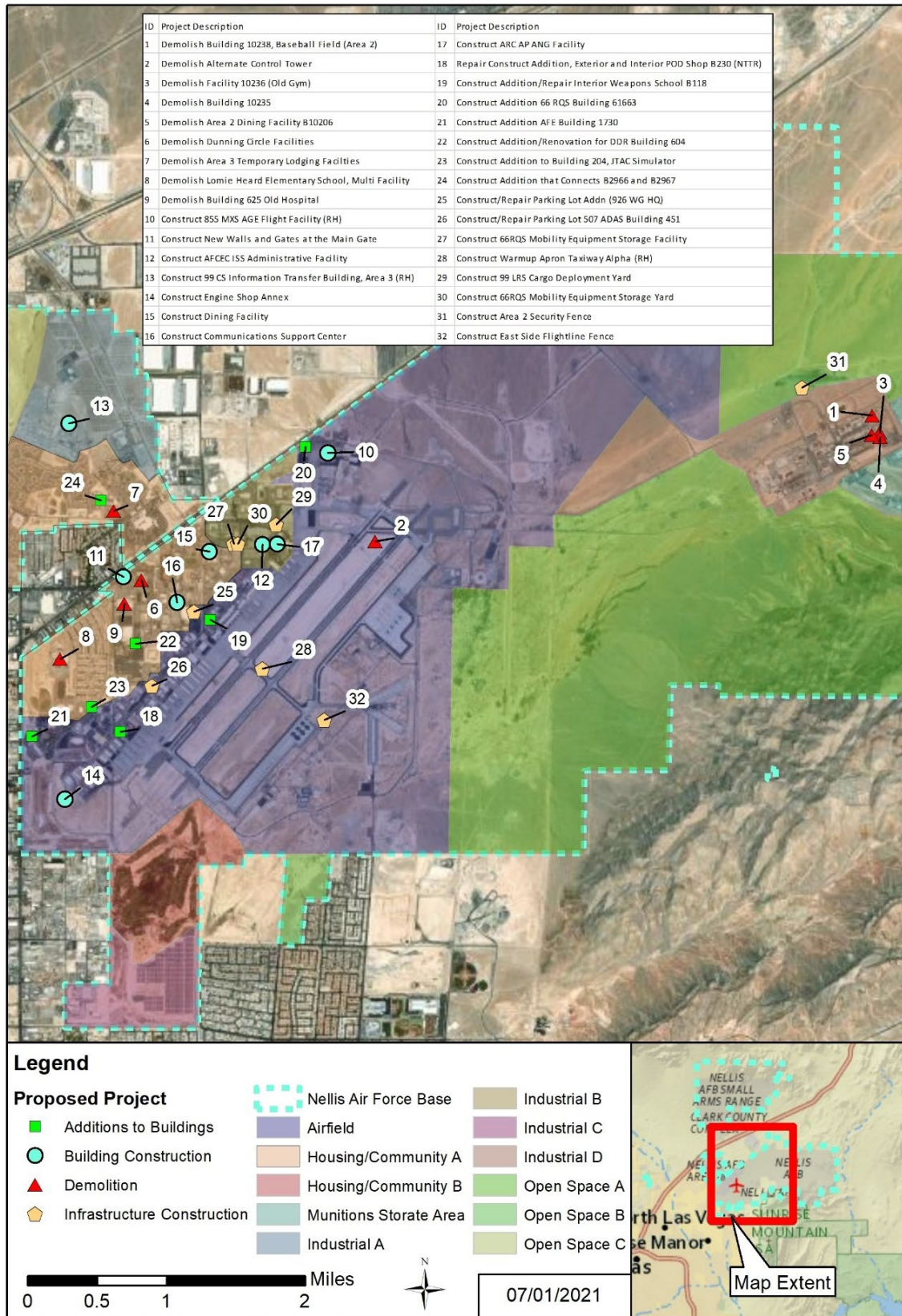


Figure A-2. Potential Improvement Projects at Nellis Air Force Base – Alternative 1



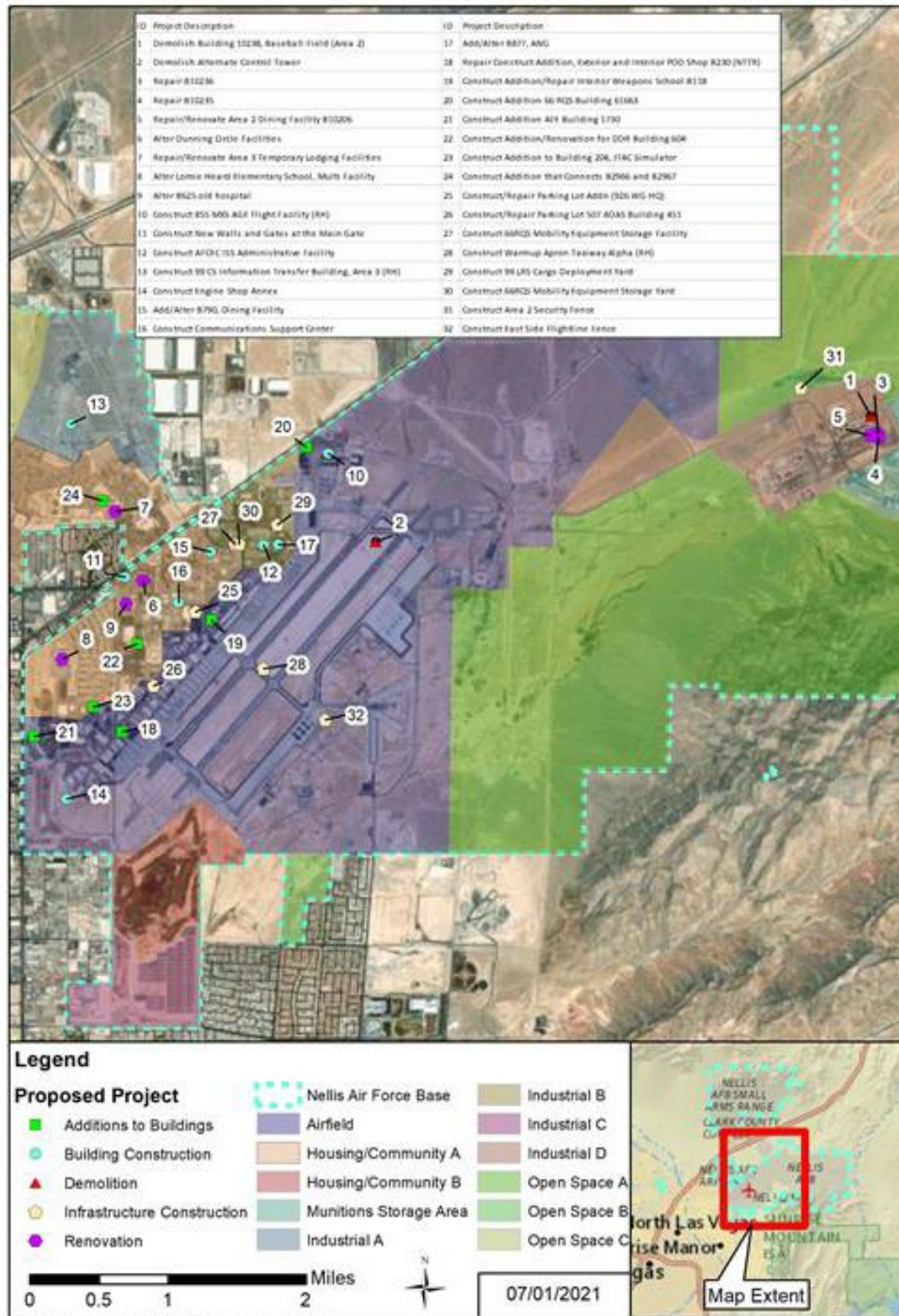


Figure A-3. Potential Improvement Projects at Nellis Air Force Base – Alternative 2

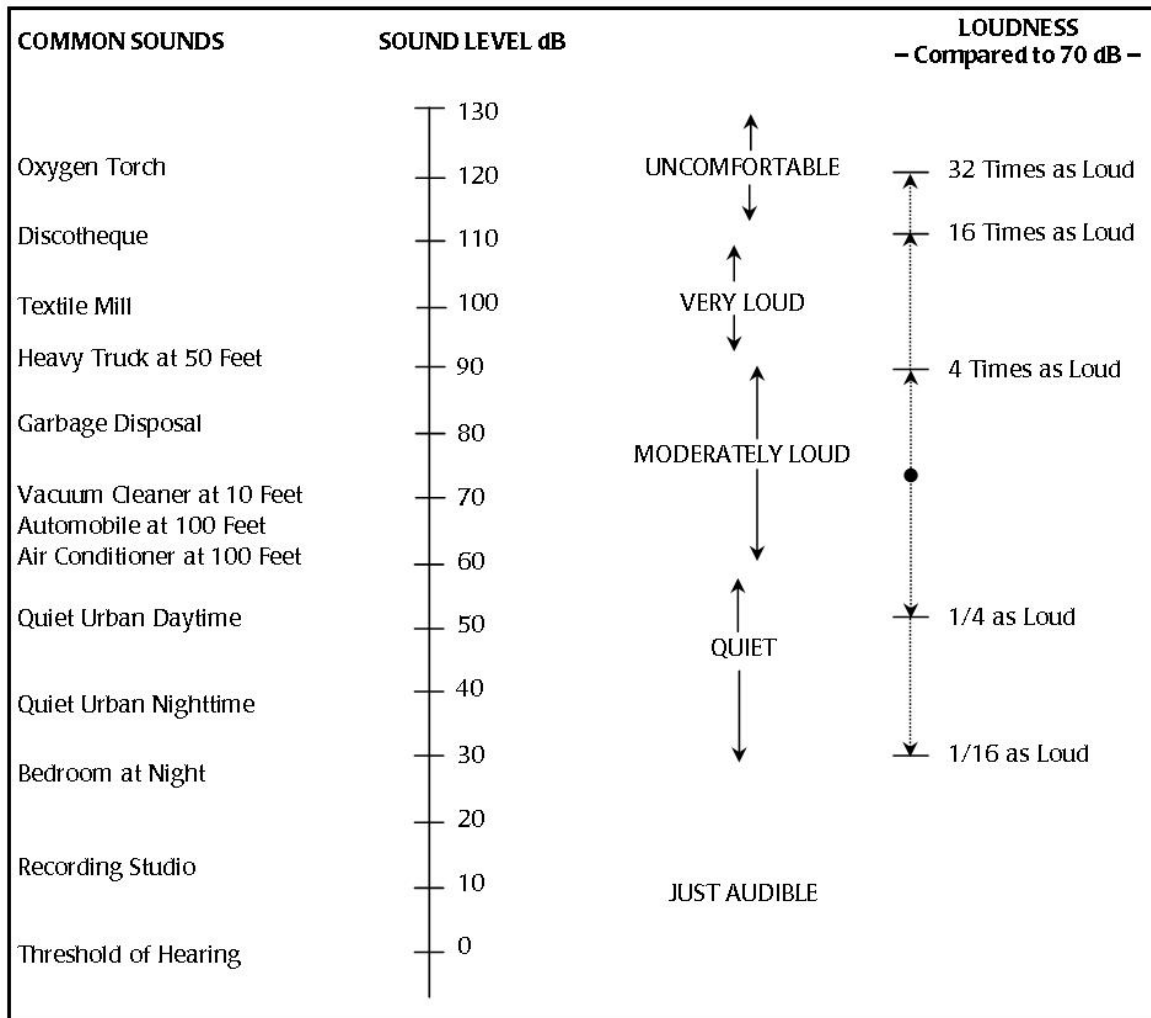


Figure A-4. Typical A-weighted Sound Levels of Common Sounds (Source: Harris, 1979)



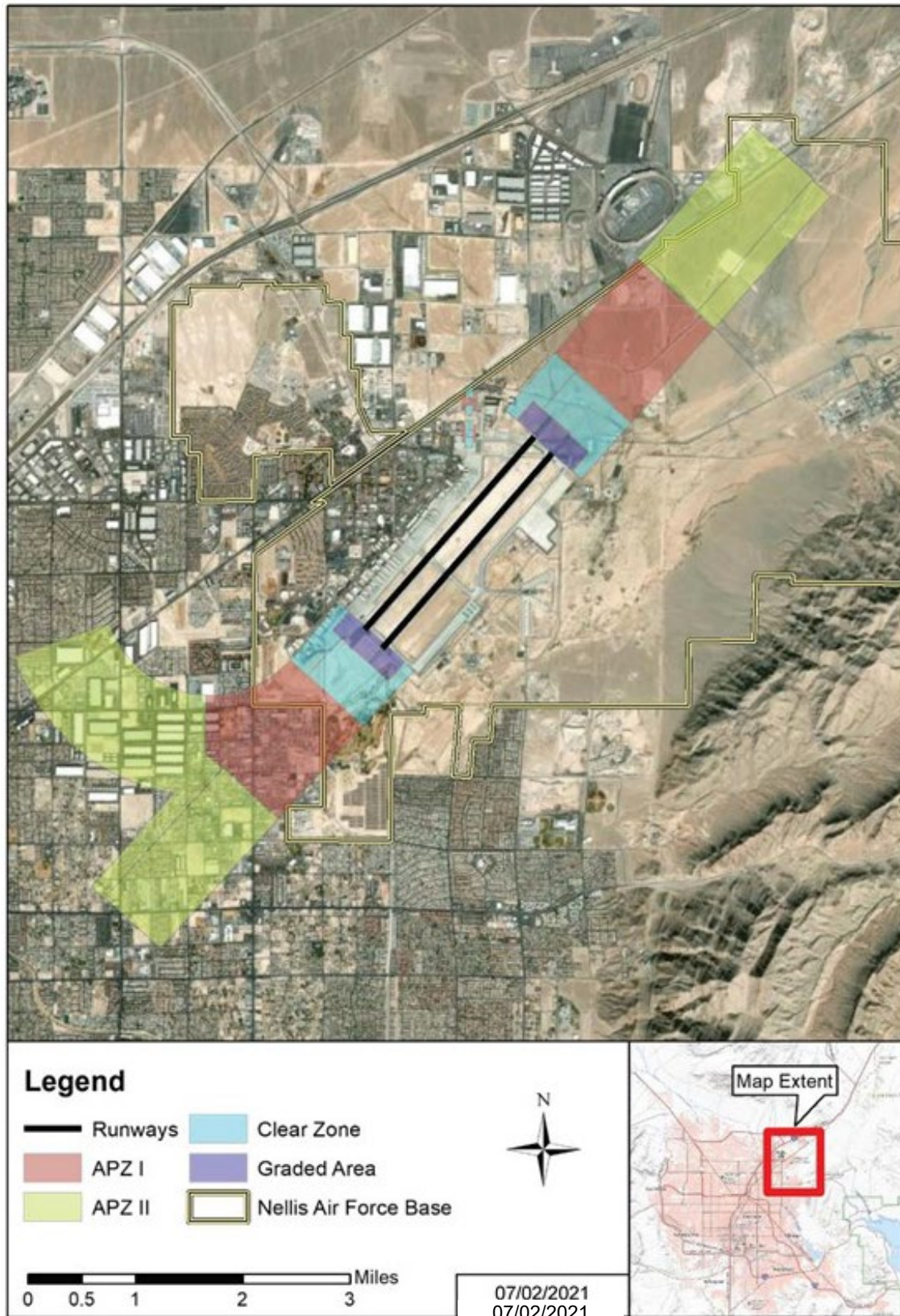


Figure A-5. Nellis AFB Safety Zones



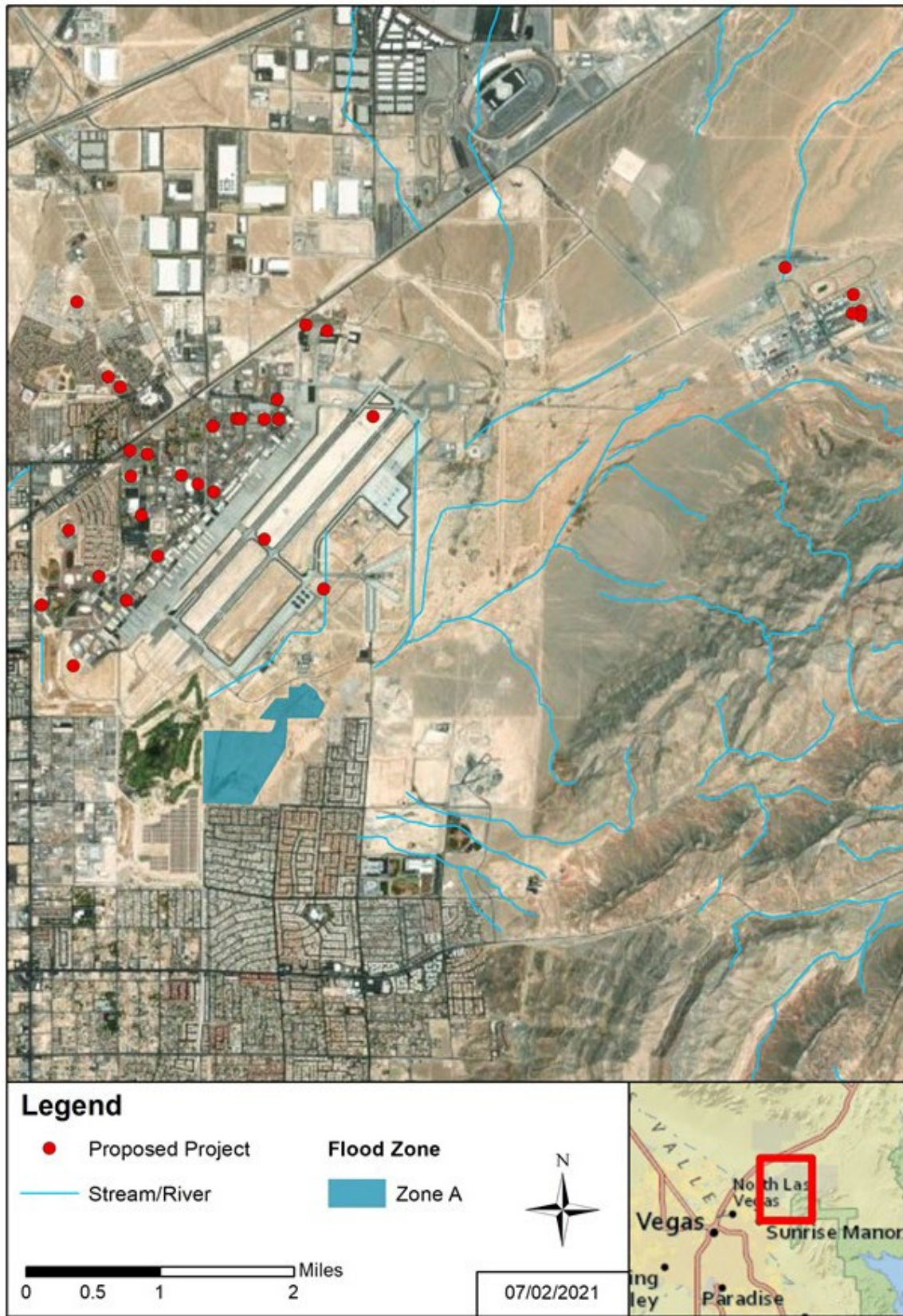


Figure A-6. Surface Waters and 100-Year Floodplain at Nellis AFB



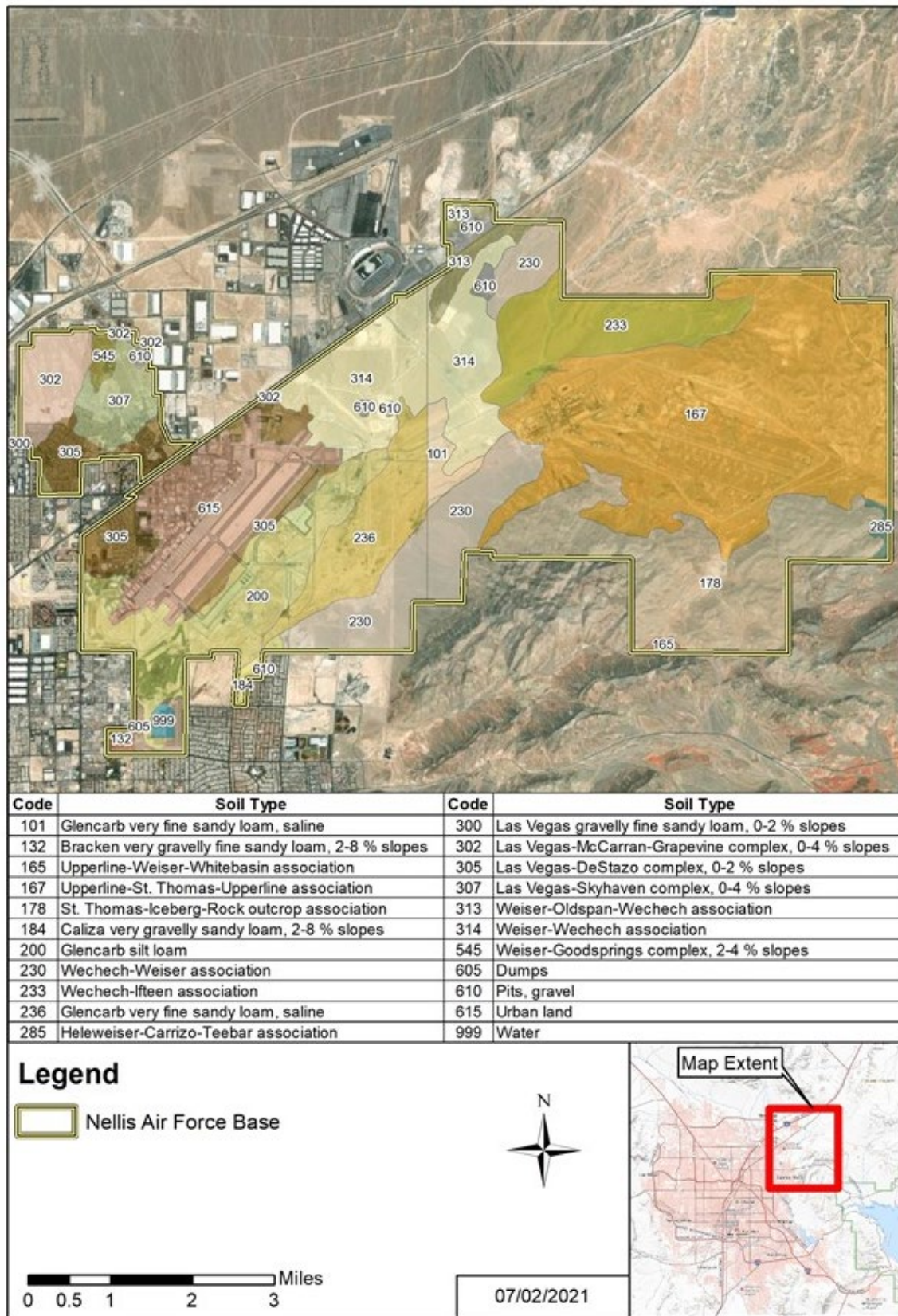


Figure A-7. Soil Types Classified at Nellis Air Force Base



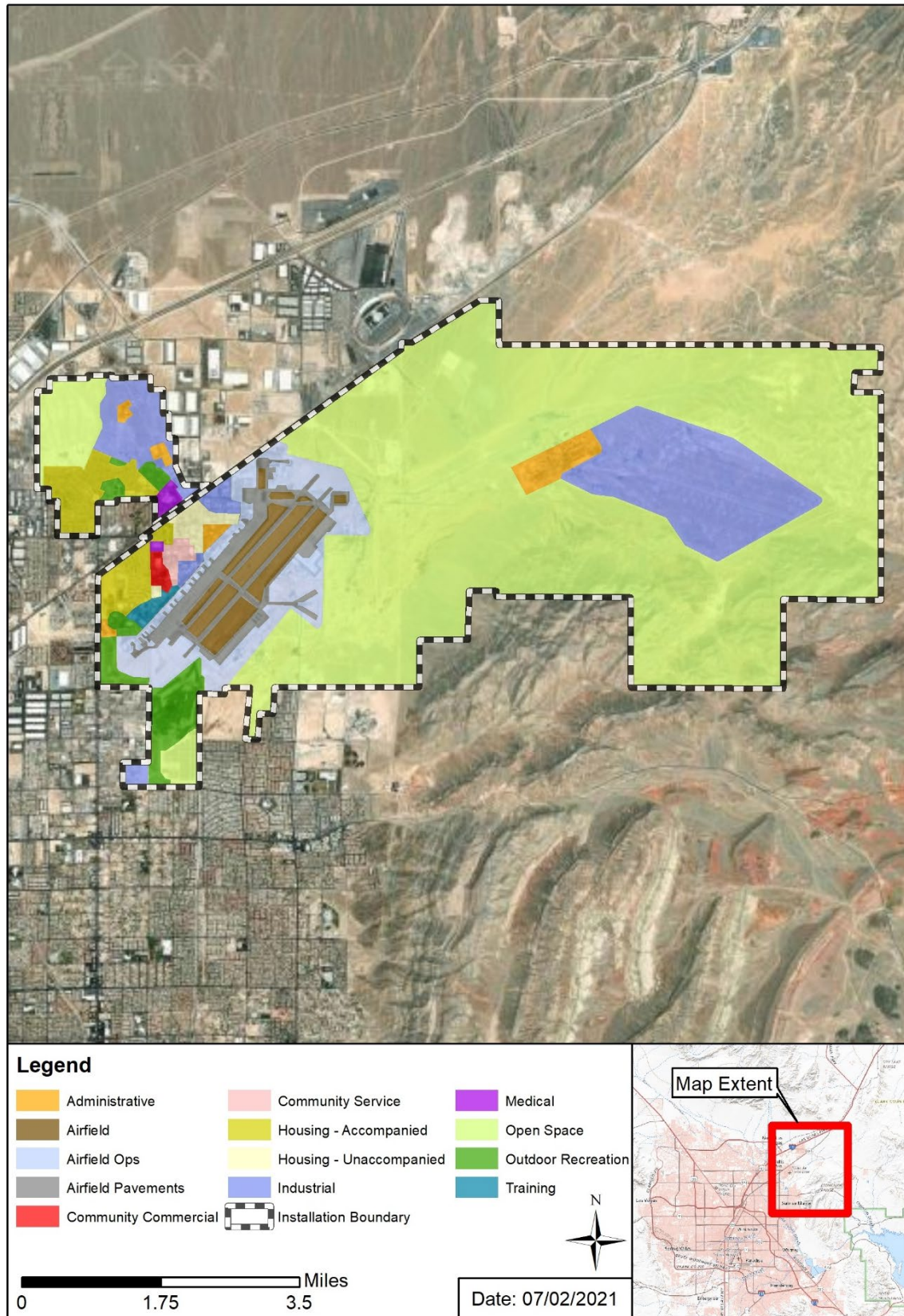


Figure A-8. Land Use at Nellis AFB



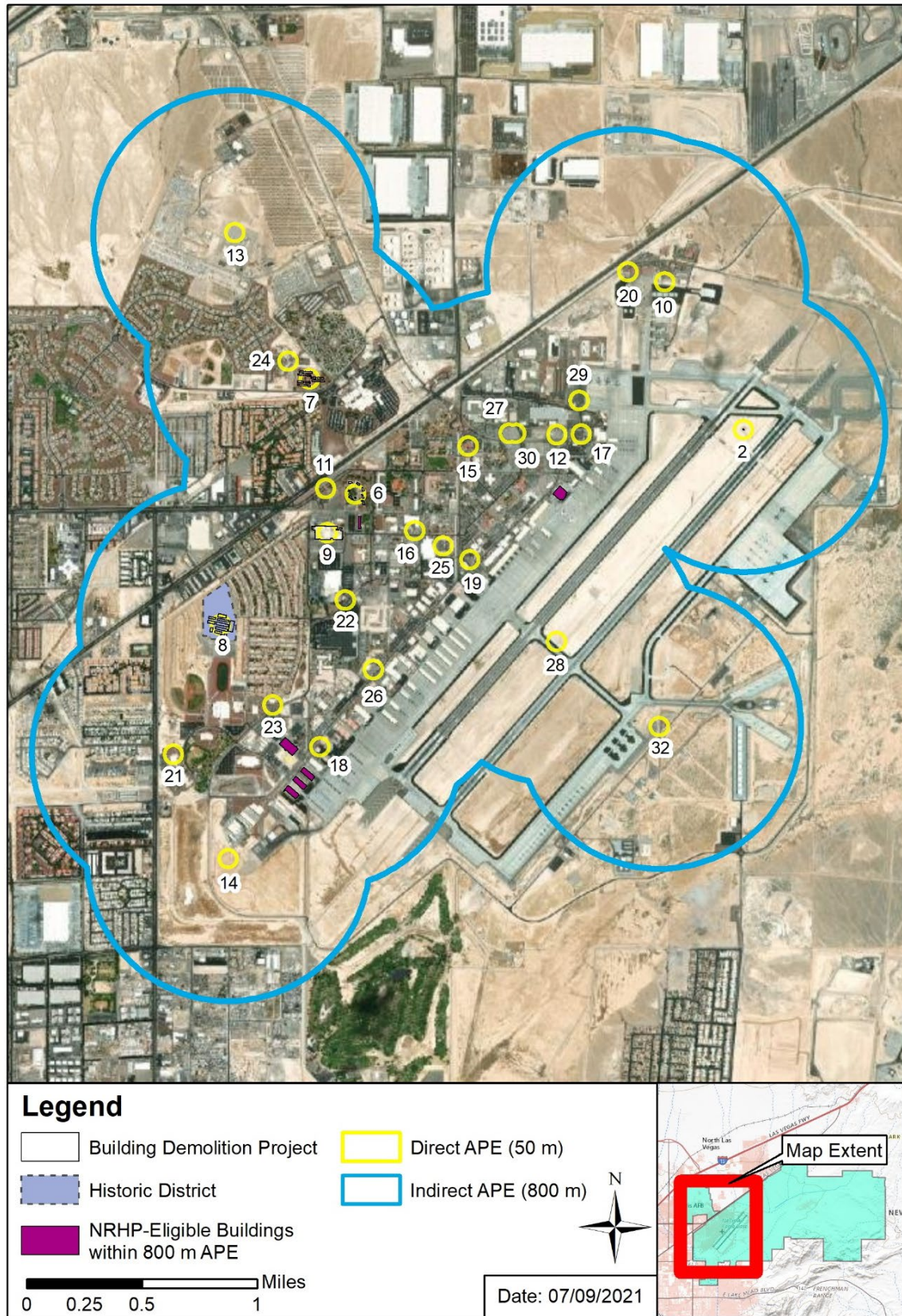


Figure A-9. Area of Potential Effects – Western Side of Runway





Figure A-10. Area of Potential Effects – Eastern Side of Runway





Figure A-11. Environmental Restoration Sites Near Alternative 1 Project Locations

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**Appendix B.**  
**INTERAGENCY AND INTERGOVERNMENTAL AGENCY COORDINATION AND**  
**CONSULTATION**

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**TABLE OF CONTENTS**

APPENDIX B-1 MAILING LIST .....B-5

APPENDIX B-2 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR  
ENVIRONMENTAL PLANNING – DESCRIPTION OF PROPOSED ACTION AND  
ALTERNATIVES.....B-11

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**APPENDIX B-1  
MAILING LIST**

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**APPENDIX B-2  
INTERAGENCY AND INTERGOVERNMENTAL COORDINATION FOR  
ENVIRONMENTAL PLANNING – DESCRIPTION OF PROPOSED ACTION AND  
ALTERNATIVES**

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## Sample general correspondence letter.



**DEPARTMENT OF THE AIR FORCE**  
**99TH CIVIL ENGINEER SQUADRON (ACC)**  
**NELLIS AIR FORCE BASE, NEVADA**

6 OCTOBER 2021

99 CES/CENP  
6020 Beale Avenue  
Nellis AFB, NV 89191-6520

Marilyn Kirkpatrick  
Chairperson  
Clark County Commission  
500 Grand Central Parkway  
Las Vegas, NV 89108

Dear Chairperson Kirkpatrick,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected resource agencies as it formulates the undertaking. Accordingly, the USAF seeks consultation with your office.

### **Proposed Action**

The EA will, as required by law and regulations, consider the potential impacts resulting from the implementation of installation development planning activities. Facility construction, demolition, renovation, and additions would occur as part of the Proposed Action.

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

### **Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and U.S. Department of Defense (DoD) current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### Project Location

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

### Environmental Assessment

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. The EA also will examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a consultation, we would appreciate any input regarding concerns of potential effects of the Proposed Action. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

The USAF Point of Contact for Environmental Planning is Mr. Tod Oppenborn. Please send your comments and concerns to Mr. Oppenborn at 6020 Beale Avenue, Nellis AFB, NV 89191 or by email at [tod.oppenborn@us.af.mil](mailto:tod.oppenborn@us.af.mil) or by phone at (702) 652-9366. We look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,

ROWLAND.CHARL  
ES.W.JR.10734381  
24

Digitally signed by  
ROWLAND CHARLES W. JR.107  
3438124  
Date: 2021.05.11 10:08:37 -07'00'

CHARLES W. ROWLAND JR.  
Chief, Portfolio Optimization

Attachment:  
Summary of Description of Proposed Action and Alternatives



## Sample USFWS coordination letter.



**DEPARTMENT OF THE AIR FORCE**  
**99TH CIVIL ENGINEER SQUADRON (ACC)**  
**NELLIS AIR FORCE BASE, NEVADA**

6 OCTOBER 2021

99 CES/CENP  
6020 Beale Avenue  
Nellis AFB, NV 89191-6520

Shaun Sanchez  
US Fish and Wildlife Service - Southern Nevada Fish and Wildlife Office  
4701 North Torrey Pines Drive  
Las Vegas, NV 89130

Dear Mr. Sanchez,

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected resource agencies as it formulates the undertaking. Accordingly, the USAF seeks consultation with the United States Fish and Wildlife Service (USFWS).

### **Proposed Action**

The EA will, as required by law and regulations, consider the potential impacts resulting from the implementation of installation development planning activities. The Air Force has determined the "action area" as defined in 50 Code of Federal Regulations (CFR) § 402.02. Facility construction, demolition, renovation, and additions would occur as part of the Proposed Actions. The purpose of this letter is to initiate Endangered Species Act Sec. 7 consultation. To begin that process, we request a list of Federally listed species that may be present in the action area pursuant to 50 CFR § 402.12(c).

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and training requirements, development constraints and opportunities, and land use planning.

### **Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet USAF and U.S. Department of Defense (DoD) current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

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#### Environmental Assessment

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. The EA will also examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a consultation, we would appreciate any input regarding concerns of potential effects of the Proposed Action on biological resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please provide the species list to my point of contact identified below.

The USAF Point of Contact for Environmental Planning is Mr. Tod Oppenborn. Please send your comments and concerns to Mr. Oppenborn at 6020 Beale Ave., Nellis AFB, NV, 89191, or by email at [tod.oppenborn@us.af.mil](mailto:tod.oppenborn@us.af.mil) or by phone at (702) 652-9366. We look forward to receiving any input you may have regarding this endeavor. Thank you in advance for your assistance in this effort.

Sincerely,

ROWLAND.CHARL  
ES.W.JR.10734381  
24

Digitally signed by  
ROWLAND.CHARLES.W.JR.107  
3438124  
Date: 2021.05.11 10:51:19 -07'00'

CHARLES W. ROWLAND JR.  
Chief, Portfolio Optimization

Attachment:  
Summary of Description of Proposed Action and Alternatives

## USFWS response to coordination letter.

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**From:** Kallstrom, Corey <[corey\\_kallstrom@fws.gov](mailto:corey_kallstrom@fws.gov)>  
**Sent:** Monday, November 8, 2021 9:08 AM  
**To:** OPPENBORN, TOD GS-12 USAF ACC 99 CES/CENPP <[tod.oppenborn@us.af.mil](mailto:tod.oppenborn@us.af.mil)>  
**Cc:** JOHNSON, ANNA M GS-12 USAF ACC 99 CES/CEIA <[anna.johnson.18@us.af.mil](mailto:anna.johnson.18@us.af.mil)>; BAEZ, OLIVIA L GS-12 USAF ACC 99 CES/CEIA <[olivia.baez@us.af.mil](mailto:olivia.baez@us.af.mil)>; Berry, Kellie <[Kellie\\_Berry@fws.gov](mailto:Kellie_Berry@fws.gov)>  
**Subject:** [Non-DoD Source] Species List for Installation Development Planning on Nellis Air Force Base

Dear Mr. Oppenborn,

We received the letter from Charles Rowland regarding the preparation of an Environmental Assessment for Installation Development Planning on Nellis Air Force Base, Nevada and request for a list of Federally listed species that may be present in the action area. The Service issues official species list electronically via our Information for Planning and Consultation (IPAC) website <https://ecos.fws.gov/ipac/>. Answers to frequently asked questions for obtaining a species list are available through the IPAC website but don't hesitate to contact me if I can be of further assistance. Thank you.

*Corey Kallstrom*

Corey Kallstrom  
Fish and Wildlife Biologist  
Southern Nevada Fish and Wildlife Office  
U.S. Fish and Wildlife Service  
4701 N. Torrey Pines Dr.  
Las Vegas, NV 89130  
(702) 515-5461  
[Corey\\_Kallstrom@fws.gov](mailto:Corey_Kallstrom@fws.gov)

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Ms. Rebecca Palmer  
State Historic Preservation Officer  
Department of Conservation and Natural Resources  
901 South Stewart Street, Ste. 5004  
Carson City NV 89701-5248

Dear Ms. Palmer

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected resource agencies as it formulates the undertaking. Accordingly, the USAF seeks consultation with the State Historic Preservation Office.

**Proposed Action**

The EA will, as required by law and regulations, consider the potential impacts resulting from the implementation of installation development planning activities. Facility construction, demolition, renovation, and additions would occur as part of the Proposed Action. Pursuant to 36 CFR §§ 800.4(a) and (b), we request your assistance defining the Area of Potential Effects (APE) and information on any historic properties located therein that may be affected by the proposed undertaking. Location maps of each alternative are attached for your review.

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and U.S. Department of Defense (DoD) current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of

personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

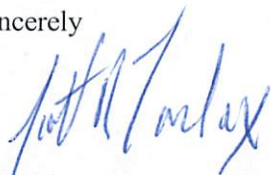
### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. The EA also will examine the cumulative effects when combined with past, present, and any reasonably foreseeable future actions. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a consultation, we would appreciate any input regarding concerns of potential effects of the Proposed Action on historic properties as well as assistance in defining the APE for the Proposed Action. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Should you or your staff have any questions about the project, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or by email at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Native American Heritage Commission  
915 Capital Mall, Room 364  
Sacramento CA 95814

Dear Sir/Madam

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Native American Heritage Commission.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Native American Heritage Commission chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked,

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facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

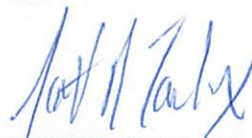
### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Timothy Williams  
Chairperson  
Ft. Mojave Tribe  
500 Merriman Avenue  
Needles CA 92363

Dear Chairperson Williams

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Ft. Mojave Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Ft. Mojave Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

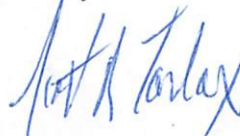
### **Environmental Assessment**

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As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Ross Stone  
Elder  
Big Pine Paiute Tribe  
P.O. Box 700  
Big Pine CA 93513

Dear Elder Stone

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Big Pine Paiute Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Big Pine Paiute Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

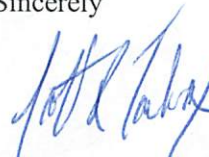
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Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

James Rambeau, Sr.  
Chairperson  
Big Pine Paiute Tribe  
P.O. Box 700  
Big Pine CA 93513

Dear Chairperson Rambeau, Sr.

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Big Pine Paiute Tribe.

**Proposed Action**

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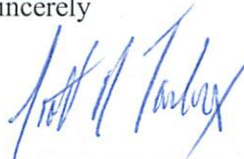
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As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Shane Saulque  
Chairperson  
Benton Paiute Indian Tribe  
25669 Highway 6, PMB I  
Benton CA 93512

Dear Chairperson Saulque

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Benton Paiute Indian Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Benton Paiute Indian Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.


### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Ronnie Snooks  
Chairperson  
Yomba Shoshone Tribe  
HC 61, Box 6275  
Austin NV 89310

Dear Chairperson Snooks

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Yomba Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Yomba Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

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### **Project Location**

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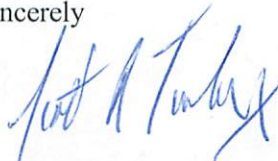
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Daryl Brady  
Vice-Chairperson  
Yomba Shoshone Tribe  
HC 61, Box 6275  
Austin NV 89310

Dear Vice-Chairperson Brady

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Yomba Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Yomba Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

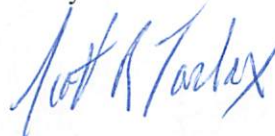
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

White Dove Kennedy  
Chairperson  
Timbisha Shoshone Tribe  
621 West Line St. Suite 109  
Bishop CA 93514

Dear Chairperson Kennedy

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Timbisha Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Timbisha Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

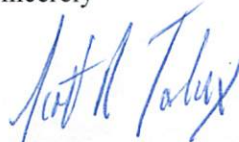
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Tamra Borchardt-Slayton  
Chairperson  
Paiute Indian Tribe of Utah  
440 North Paiute Drive  
Cedar City UT 84721

Dear Chairperson Borchardt-Slayton

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Paiute Indian Tribe of Utah.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

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**Purpose and Need**

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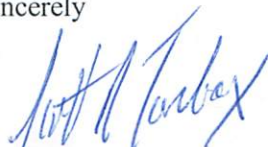
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Richard Arnold  
Native American Coordinator  
Pahrump Paiute Tribe  
P.O. Box 3411  
Pahrump NV 89041

Dear Chairperson Arnold

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Pahrump Paiute Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Pahrump Paiute Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

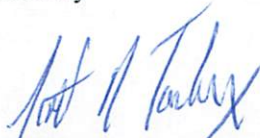
### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Laura Parry  
Chairperson  
Moapa Band of Paiutes  
P.O. Box 340  
Moapa NV 89025

Dear Chairperson Parry

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Moapa Band of Paiutes.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Moapa Band of Paiutes chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

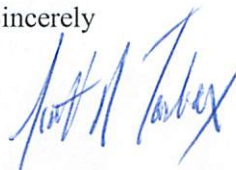
### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Richard Button  
Chairperson  
Lone Pine Paiute-Shoshone Tribe  
P.O. Box 747  
Lone Pine CA 93545

Dear Chairperson Button

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Lone Pine Paiute-Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Lone Pine Paiute-Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

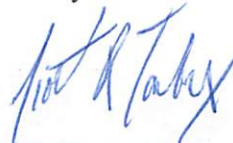
### **Environmental Assessment**

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As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Curtis Anderson  
Chairperson  
Las Vegas Paiute Tribe  
#1 Paiute Drive  
Las Vegas NV 89106

Dear Chairperson Anderson

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Las Vegas Paiute Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Las Vegas Paiute Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Ona Segundo  
Chairperson  
Kaibab Band of Southern Paiutes  
HC 65 Box 2  
Fredonia AZ 86022

Dear Chairperson Segundo

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Kaibab Band of Southern Paiutes.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Kaibab Band of Southern Paiutes chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

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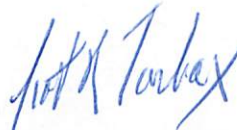
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Carl Dahlberg  
Chairperson  
Fort Independence Indian Tribe  
P.O. Box 67  
Independence CA 93526

Dear Chairperson Dahlberg

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Fort Independence Indian Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Fort Independence Indian Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

The attached figures illustrate the proposed project locations under each alternative. Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. All projects included as part of Alternatives 1 and 2 would take place within the existing boundaries of Nellis AFB. Details of the preliminary Proposed and Alternative Action are included in the attached Summary of the Description of the Proposed Action and Alternatives.

### **Environmental Assessment**

The EA will assess the potential environmental consequences associated with the Proposed Action Alternatives and the No Action Alternative. Potential impacts identified during the initial planning stages include effects on noise, air quality, infrastructure/utilities, biological and cultural resources, and socioeconomic resources. In support of this process, we request your input in identifying general or specific issues or areas of concern you believe should be addressed in the EA.

As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Diana Buckner  
Chairperson  
Ely Shoshone Tribe  
250 Heritage Drive #B  
Ely NV 89301

Dear Chairperson Buckner

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Ely Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Ely Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

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As a government-to-government consultation, we would appreciate any input you have to identify properties of cultural and religious significance that may be located within the area of potential effects for this action and regarding concerns of potential effects of the Proposed Action on significant cultural resources. We also intend to provide your agency with a copy of the Draft EA once the document is completed and welcome comments and input at that time as well. Please inform us if additional copies are needed or if someone else within your organization other than you should receive the Draft EA.

Please let us know if you would like to meet to discuss the proposed action. Should you or your staff have any questions about the project or to arrange dates and times for consultation, please contact our Tribal Liaison/Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at [michael.chodoronek@us.af.mil](mailto:michael.chodoronek@us.af.mil). Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at [joseph.green.34@us.af.mil](mailto:joseph.green.34@us.af.mil).

Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Rodney Mike  
Chairperson  
Duckwater Shoshone Tribe  
P.O. Box 140068  
Duckwater NV 89314

Dear Chairperson Mike

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Duckwater Shoshone Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Duckwater Shoshone Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

The purpose of the Proposed Action is to facilitate ongoing and future construction efforts at Nellis AFB in support of the Base's training and mission requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of

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infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facilities and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and DoD current and future mission requirements relative to state and federal requirements. Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99th Air Base Wing (99 ABW) and its tenant units in a manner that meets applicable DoD regulations and requirements, supports and enhances the morale and welfare of personnel assigned to the Base, and conforms to Nellis AFB planning documents. The Proposed Action would meet the purpose and need for the action by providing facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units.

### **Project Location**

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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Dennis Patch  
Chairperson  
Colorado River Indian Tribes  
26600 Mohave Road  
Parker AZ 85344

Dear Chairperson Patch

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Colorado River Indian Tribes.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

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**Purpose and Need**

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### **Project Location**

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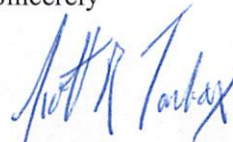
### **Environmental Assessment**

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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:  
Summary of Description of Proposed Action and Alternatives





**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Charles Wood  
Chairperson  
Chemehuevi Indian Tribe  
P.O. Box 1976  
Havasupai Lake CA 92363

Dear Chairperson Wood

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Chemehuevi Indian Tribe.

**Proposed Action**

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

Pursuant to Section 106 of the *National Historic Preservation Act* (NHPA), implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, and Department of Defense (DoD) Instruction 4710.02 Section 6, *DoD Interactions with Federally-Recognized Tribes*, we would like to initiate government-to-government consultation on the Proposed Action under 36 CFR Part 800. The Air Force requests assistance from your Tribe to identify properties of cultural and religious significance that may be located within the area of potential effects for this action. The Air Force desires to discuss the proposal in detail with you so that we may understand and consider any comments, concerns, and suggestions you may have. In particular, we invite you, pursuant to 36 CFR § 800.4(a)(4), to provide information on any properties of historic, religious, or cultural significance that may be affected by our proposed undertaking. Regardless of whether the Chemehuevi Indian Tribe chooses to consult on this project, the USAF will comply with the *Native American Graves Repatriation Act* by informing you of any inadvertent discovery of archaeological or human remains and consulting on their disposition. Being defined as a federal undertaking, we will be seeking input and inviting other potential consulting parties, such as the Nevada State Historic Preservation Officer (SHPO).

**Purpose and Need**

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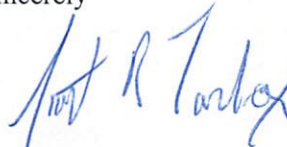
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

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**DEPARTMENT OF THE AIR FORCE  
99TH CIVIL ENGINEER SQUADRON (ACC)  
NELLIS AIR FORCE BASE NEVADA**

Scott R. Tarbox  
Environmental Element Chief  
99th Civil Engineering Squadron  
6020 Beale Ave.  
Nellis AFB NV 89191

Allen Summers  
Chairperson  
Bishop Paiute Tribe  
50 Tusu Lane  
Bishop CA 93514

Dear Chairperson Summers

The United States Air Force (USAF) is preparing an Environmental Assessment (EA) for Installation Development Planning on Nellis Air Force Base (AFB), Nevada (NV). To take into account possible environmental concerns, the USAF is engaging early with all potentially affected Native American Tribes as it formulates the undertaking. Accordingly, the USAF seeks consultation with the Bishop Paiute Tribe.

**Proposed Action**

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**Purpose and Need**

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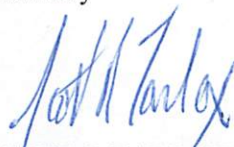
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Sincerely



SCOTT R. TARBOX, GS-14, DAF  
Environmental Element Chief

Attachment:

Summary of Description of Proposed Action and Alternatives

# **Attachment Summary Description of the Proposed Action and Alternatives**

## **1.0 PURPOSE AND NEED FOR ACTION**

### **1.1 INTRODUCTION**

The United States Air Force (Air Force), Air Combat Command (ACC) at Nellis Air Force Base (AFB), Nevada, has identified construction, renovation, infrastructure, and demolition projects and proposes to implement them over a six (6)-year period (fiscal year [FY] 2021–FY 2026). This Environmental Assessment (EA) was prepared to evaluate the potential environmental impacts associated with installation development activities in compliance with the *National Environmental Policy Act of 1969* (NEPA) (42 United States Code [USC] § 4331 et seq.); regulations of the President's Council on Environmental Quality (CEQ) that implement NEPA procedures (40 Code of Federal Regulations [CFR] Parts 1500–1508 [the September 14, 2020 version of CEQ NEPA rules is being used, 85 FR 43304-43376]); and the Air Force's Environmental Impact Analysis Process (EIAP) Regulations at 32 CFR Part 989, *Environmental Impact Analysis Process*.

The intent of these projects is to provide improvements necessary to support the mission of Nellis AFB and its tenant units. The proposed projects were identified as priorities for the installation for the improvement of the physical infrastructure and functionality of Nellis AFB, including current and future mission and facility requirements, development constraints and opportunities, and land use planning.

### **1.2 PURPOSE OF THE ACTION**

The purpose of the Proposed Action is to support Nellis AFB's future training requirements and next-generation aircraft arrival. The construction of new facilities, renovations and repair of existing facilities, implementation of infrastructure improvements (such as roads, utility lines, and sanitation), and demolition of obsolete facilities will address deficiencies in existing facility and infrastructure at Nellis AFB. Left unchecked, deficiencies in facilities and infrastructure at Nellis AFB would degrade the ability of the Base to meet Air Force and United States (US) Department of Defense (DOD) current and future mission requirements relative to state and federal requirements.

### **1.3 NEED FOR THE ACTION**

Nellis AFB needs to provide facilities and infrastructure that are adequate to meet the mission requirements of the 99 ABW and its tenant units in a manner that:

- meets all applicable DOD installation master planning criteria, consistent with Unified Facilities Criteria 2-100-01, *Installation Master Planning*; Department of the Air Force Manual (DAFMAN) 32-1084, *Standard Facility Requirements*; Air Force Instruction (AFI) 32-1015, *Integrated Installation Planning*; and Air Force Policy Directive 32-10, *Installations and Facilities*;
- meets applicable DOD antiterrorism and force protection criteria, consistent with Unified Facilities Criteria 4-010-01, *DoD Minimum Antiterrorism Standards for Buildings*, and the *Air Force Installation Force Protection Guide*;
- supports and enhances the morale and welfare of personnel assigned to the Base, their families, and civilian staff, consistent with DOD Instruction 1015.10, *Military Morale, Welfare, and Recreation Programs*;
- conforms to the Major Command Civil Engineering Squadron Design Guide and Nellis AFB architectural compatibility guidelines to ensure a consistent and coherent architectural character throughout the Base; and
- achieves the goals and objectives laid out in the *Nellis AFB Installation Development Plan*.

## 2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

### 2.1 PROPOSED ACTION

The Air Force is proposing to implement a number of installation development projects in order to support and advance the mission of the ACC, including military construction and building additions, renovations and repairs, infrastructure improvements, and demolition projects. Project initiation would occur over the six (6)-year period FY 2021–FY 2026. The construction schedule for each proposed building is roughly 12 to 18 months and dependent on the timing of the design schedule relative to the weather cycle of the region. Infrastructure construction could range from eight (8) to 12 months depending on the timing of its design schedule relative to the weather cycle of the area. **Table 2-1** summarizes the actions that would occur from the proposed projects.

**Table 2-1.**  
**Summary of Alternatives**

Activity	Alternative 1	Alternative 2
<b>Demolition</b>		
Number of actions	9	2
Demolition amount	457,457 ft <sup>2</sup>	174,540 ft <sup>2</sup> demolished
<b>Renovation Only</b>		
Number of actions	0	7
Renovation amount	0	282,934 ft <sup>2</sup> renovated
<b>Building Construction</b>		
Number of actions	8	8
New construction	70,465 ft <sup>2</sup> 1,700 LF of walls/gates	55,754 ft <sup>2</sup> constructed 1,700 LF walls/gates 10,700 ft <sup>2</sup> renovated
<b>Additions to Buildings</b>		
Number of actions	7	7
Project totals	32,014 ft <sup>2</sup> renovation 29,300 ft <sup>2</sup> new construction (additions)	32,014 ft <sup>2</sup> renovation 29,300 ft <sup>2</sup> new construction (additions)
<b>Infrastructure Construction</b>		
Number of actions	8	8
New construction	21,600 ft <sup>2</sup> facilities construction 285,091 ft <sup>2</sup> new impervious surfaces 27,040 LF new fencing 75,600 ft <sup>2</sup> new access road	21,600 ft <sup>2</sup> facilities construction 285,091 ft <sup>2</sup> new impervious surfaces 27,040 LF new fencing 75,600 ft <sup>2</sup> new access road

Notes:

ft<sup>2</sup> = square feet, LF = linear feet

### 2.2 DETAILED DESCRIPTION OF THE SELECTED ALTERNATIVES

NEPA and the CEQ regulations mandate the consideration of reasonable alternatives to the Proposed Action. “Reasonable alternatives” are those that also could be utilized to meet the purpose of and need for the Proposed Action. The NEPA process is intended to support flexible, informed decision-making; the analysis provided by this EA and feedback from the public and other agencies will inform decisions made about whether, when, and how to execute the Proposed Action.

## 2.2.1 *Alternative 1*

Under Alternative 1, there would be nine (9) demolition projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Some of the construction projects would also include some renovation or some demolition actions. Under Alternative 1, all proposed projects would meet the selection standards listed in **Section 2.2** and would remedy facility deficiencies, would be consistent with land use requirements, would increase operational efficiencies and be sustainable development, and would improve the quality of life. Projects proposed under Alternative 1 are listed in **Table 2-2** and depicted in **Figure 2-1**.

### 2.2.1.1 Demolition Projects

Nine (9) demolition projects are proposed under Alternative 1. The demolition projects would include the removal of 32 buildings totaling approximately 283,217 ft<sup>2</sup> and one (1) baseball field totaling 174,240 ft<sup>2</sup>. The buildings to be removed include obsolete or substandard facilities. The descriptions of these proposed projects are listed in **Table 2-2** above.

### 2.2.1.2 Renovation Projects

There are no projects proposed under Alternative 1 that would consist solely of renovations or repairs to existing buildings. Renovation-only projects are proposed under Alternative 2.

### 2.2.1.3 Building Construction Projects

Eight (8) building construction projects are proposed under Alternative 1. While some of the projects listed also would include renovation actions, construction is the larger part of the action. Construction projects would include approximately 70,465 ft<sup>2</sup> of new buildings and facilities and 1,700 LF of walls and gates installed as part of the proposed projects. The descriptions of these proposed projects are listed in **Table 2-2** above.

### 2.2.1.4 Additions to Buildings

Seven (7) projects consisting primarily of additions to existing buildings and renovation of existing facilities are proposed under Alternative 1. Projects associated with additions to and renovations of existing buildings would include 29,300 ft<sup>2</sup> of new construction in the form of additions to existing buildings and 32,014 ft<sup>2</sup> of renovation activities. The descriptions of these proposed projects are listed in **Table 2-2** above.

### 2.2.1.5 Infrastructure Construction Projects

Eight (8) infrastructure construction projects are proposed under Alternative 1. These projects would include construction of new infrastructure and additions to existing infrastructure on Nellis AFB, including 306,691 ft<sup>2</sup> of new construction, 27,040 LF of new fencing, and 75,600 ft<sup>2</sup> of new access road. The descriptions of the proposed infrastructure actions are listed in **Table 2-2** above.



**Table 2-2.**  
**Proposed Installation Development Projects at Nellis Air Force Base – Alternative 1**

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
<b>Demolition</b>					
RKMF130140 DEMO B10238, BASEBALL FIELD (AREA 2)	Gate 2B, 4 acres. Demo Facility B10238 baseball field, including area lighting, fencing and associated structures surrounding the field. Install 4" of rock mulch over ground.	2023	174,240 ft <sup>2</sup>	-174,240 ft <sup>2</sup>	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways.	2022	300 ft <sup>2</sup>	-300 ft <sup>2</sup>	2
RKMF130142 DEMO FAC 10236 (Old Gym)	Demolish old prison camp Facility 10236 to include footing and service lines. Install 4" of rock mulch over ground.	2022	14,448 ft <sup>2</sup>	-14,448 ft <sup>2</sup>	3
RKMF130136 DEMO B10235	Gate 2B, 1,800 ft <sup>2</sup> . Demolish B10235 to include foundation and utilities. Install 4" of rock mulch over ground.	2022	1,800 ft <sup>2</sup>	-1,800 ft <sup>2</sup>	4
RKMF200044 DEMO AREA 2 DINING FAC B10206	Demolish B10206, 30,288 ft <sup>2</sup> dining facility Area II to include footing and service lines. Install 4" of rock mulch over ground.	2023	30,288 ft <sup>2</sup>	-30,288 ft <sup>2</sup>	5
RKMF190043 DEMO DUNNING CIRCLE FACILITIES	Demolish eight former housing units located at Dunning Circle on the Main Base. Install 4" of rock mulch over ground.	2022	14,904 ft <sup>2</sup>	-14,904 ft <sup>2</sup>	6
RKMF200014 DEMO AREA 3 TEMPORARY LODGING FACILITIES	Demolish Area 3 Temporary Lodging Facilities to include footing and service lines. Install 4" of rock mulch over ground. Building List includes B2935, B2940, B2945, B2950, B2955, B2960, B2965, B2970, B2975.	2025	Total area - 32,919 ft <sup>2</sup> B2935 - 2,400 ft <sup>2</sup> B2940 - 2,800 ft <sup>2</sup> B2945 - 5,773 ft <sup>2</sup> B2950 - 2,400 ft <sup>2</sup> B2955 - 5,773 ft <sup>2</sup> B2960 - 2,800 ft <sup>2</sup> B2965 - 2,800 ft <sup>2</sup> B2970 - 5,773 ft <sup>2</sup> B2975 - 2,400 ft <sup>2</sup>	-32,919 ft <sup>2</sup>	7

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF200021 DEMO LOMIE HEARD ELEMENTARY SCHOOL, MULTI FAC	Demolition includes ten dependent school facilities that have been replaced by a new charter school. B1781, B1782, B1783, B1784, B1785 B1786, B1787, B1788, B1789, B1790. Include footing and service lines. Install 4" of rock mulch over ground.	2023	Total area - 66,161 ft <sup>2</sup> B1781 - 4,612 ft <sup>2</sup> B1782 - 6,093 ft <sup>2</sup> B1783 - 7,637 ft <sup>2</sup> B1784 - 6,916 ft <sup>2</sup> B1785 - 6,456 ft <sup>2</sup> B1786 - 12,536 ft <sup>2</sup> B1787 - 7,330 ft <sup>2</sup> B1788 - 3,783 ft <sup>2</sup> B1798 - 7,375 ft <sup>2</sup> B1790 - 3,423 ft <sup>2</sup>	-66,161 ft <sup>2</sup>	8
RKMF220003 DEMO BLDG 625 OLD HOSPITAL	122,414 ft <sup>2</sup> . This was the former base hospital. Demolish facility to include foundation, north parking lot, and utilities back to the mains.	2024	122,414 ft <sup>2</sup>	-122,414 ft <sup>2</sup>	9
<b>Building Construction</b>					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY	Construct 7,200 ft <sup>2</sup> AGE MX facility by B61685.	2022	7,200 ft <sup>2</sup>	+7,200 ft <sup>2</sup>	10
RKMF190081 CONSTRUCT NEW WALLS AND GATES AT MAIN GATE	Construct new walls and gates at the Main Gate so that the gate can be closed to traffic and pedestrians.	2022	1,700 LF	+1,700 LF	11
RKMF200010 CONSTRUCT AFCEC ISS ADMINISTRATIVE FACILITY	Construct admin facility to include restrooms, networking, telephone, gas, water and any needed power support for usable office space for an executive facility in support of AFCEC.	2025	3,000 ft <sup>2</sup>	+3,000 ft <sup>2</sup>	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3	Construct 900 ft <sup>2</sup> Information Transfer Building and generator.	2023	900 ft <sup>2</sup>	+900 ft <sup>2</sup>	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2026	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	14

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF223001 DINING FACILITY	Construct new dining facility.	2026	18,201 ft <sup>2</sup>	+18,201 ft <sup>2</sup>	15
RKMF113004 COMMUNICATIONS SUPPORT CENTER	Construct new facility that consolidates 99 CS functions, as well as provides a redundant base comm hub, and demolishes B595.	2024	34,164 ft <sup>2</sup>	+34,164 ft <sup>2</sup>	16
RKMF200043 CONSTRUCT ARC AP ANG FACILITY	Construct conference room, bathrooms, break room, and storage in structure parallel to Building 877.	2024	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	17
<b>Additions to Buildings</b>					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230	Construct a 2,250 ft <sup>2</sup> addition to north end of B230 in order to provide adequate operational and storage space for 140 P5 Pods and associated equipment. Install 16ft by 16ft roll-up door on west side of addition. Relocate light pole in yard to provide access for roll-up door. Renovate the 1970 men's and women's bathrooms, office areas, operational areas and entrance to meet current design and security standards. Renovation includes replacing exterior siding and drainage gutters, sealing and coating concrete floors, replacing bay lights and office areas with energy efficient fixtures, painting interior workspaces, replacing piping, changing layout of office spaces for better efficiency, and modifying main front entrance for better security containment.	2025	5,520 ft <sup>2</sup> renovation 2,250 ft <sup>2</sup> addition	+2,250 ft <sup>2</sup>	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 ft <sup>2</sup> addition to B118. Addition to include SCIF/SAPF briefing rooms, mission planning and restrooms for GSUs during weapons school classes. Facility requires repair to the roofing systems, restrooms, flooring and fire detection system in the existing portion of the facility as well.	2023	4,805 ft <sup>2</sup> renovation 3,500 ft <sup>2</sup> addition	+3,500 ft <sup>2</sup>	19
RKMF190063 CONSTRUCT ADDITION 66 RQS B61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2022	B61663 Total area - 16,229 ft <sup>2</sup> 2,500 ft <sup>2</sup> renovation 7,500 ft <sup>2</sup> addition	+2,500 ft <sup>2</sup>	20
RKMF190085 CONSTRUCT ADDITION AFE B1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area - 36,596 ft <sup>2</sup> 2,000 ft <sup>2</sup> addition	+2,000 ft <sup>2</sup>	21

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR B604	Construct a 1050 ft <sup>2</sup> waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft <sup>2</sup> renovation 1,050 ft <sup>2</sup> addition	+1,050 ft <sup>2</sup>	22
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2023	B204 area - 7,547 ft <sup>2</sup> 3,000 ft <sup>2</sup> addition 2,500 ft <sup>2</sup> renovation	+2,500 ft <sup>2</sup>	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2.	2025	B204/B2966/B2967 Total area - 37,990 ft <sup>2</sup> 10,000 ft <sup>2</sup> addition 15,000 ft <sup>2</sup> renovation	+10,000 ft <sup>2</sup>	24
<b>Infrastructure Construction</b>					
RKMF180025 CONSTRUCT/ REPAIR PARKING LOT ADDITION (926 WG HQ)	Expands B334 parking lot over area where B336 is being demolished. Reconfigures existing lot in front of B334.	2022	54,789 ft <sup>2</sup> existing	+30,000 ft <sup>2</sup>	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS B451	Reconfigure and expand existing parking lot.	2023	55,732 ft <sup>2</sup> existing	+27,499 ft <sup>2</sup>	26
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY	Construct a 12,000 SF controlled storage facility for deployable UTC and training assets. A climate-controlled storage facility is required for 18 each ISU-90s that contain temperature sensitive electronics, shelving for mobility gear, 16 each short-notice tasking-prepped Polaris Ranger vehicles. Storage facility to include an office space for UTC processing.	2024	12,000 ft <sup>2</sup> new	+12,000 ft <sup>2</sup>	27
RKMF170045 CONSTRUCT WARMUP APRON TAXIWAY ALPHA (RH)	Construct new warm-up apron located north of Taxiway ALPHA between the runways in accordance with UFC 3-260-01, AFMAN 32-1084 and applicable guidance. The primary surface shall be constructed of PCC pavement and have 25' asphalt shoulder pavements.	2022	131,570 ft <sup>2</sup> new	+131,570 ft <sup>2</sup>	28



Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF140101 CONSTRUCT 99 LRS CARGO DEPLOYMENT YARD	Reconstructs layout of cargo deployment area. Extends flightline boundary by B810. Essentially closes off portions of Depot road and extends the existing boundary up to Wurtsmith Ave also.	2022	43,000 ft <sup>2</sup> new	+43,000 ft <sup>2</sup>	29
RKMF180011 CONSTRUCT 66 RQS MOBILITY EQUIPMENT STORAGE YARD	Construct sunshade/overhang to shade deployable UTC and training assets including C2 trailer, two Boston Whaler boats with trailers, 10 each ISU-90 storage containers, and 1 each F-450 truck.	2024	9,600 ft <sup>2</sup> new	+9,600 ft <sup>2</sup>	30
RKMF180054 CONSTRUCT AREA 2 SECURITY FENCE	Install approximately 11,200 LF of 8' type-A fencing (i.e. woven 9-gauge steel-wire, chain-link with 2" square mesh. Steel-wire fabric must have a steel core that measures 9-gauge, not including the coating), with triple strand barbed wire outriggers. Install 6,300 LF of access road at a width of 10 feet (75,600 ft <sup>2</sup> ). Install concrete headwalls with security gates and culverts as necessary to traverse drainage ditches and maintain water flow.	2025	Total length - 11,200 LF (fence) Total area - 75,600 ft <sup>2</sup> (access road)	+17,500 LF	31
RKMF110096 CONSTRUCT EAST SIDE FLIGHTLINE FENCE	Install Type A chain link fencing, 50 mm square mesh, woven 9 Gauge steel wire fabric, 2.1-meter high, surmounted by three strand barbed wire.	2023	Total length - 15,840 LF	+15,840 LF	32

Abbreviations: " = inch; ADAS = Air Defense Aggressor Squadron; AFCEC = Air Force Civil Engineering Center; AFMAN = Air Force Manual; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; B = building; CDC = Child Development Center; CS = Communications Squadron; CTS = Combat Training Squadron; DDR = Drug Demand Response Program; DFAC = dining facility; FAC = facility; ft<sup>2</sup> = square feet; HQ = headquarters; ISS = Intelligence Support Squadron; JTAC = Joint Terminal, Attack Controller; LF = linear feet; LRS = Logistics Readiness Squadron; PCC = Plain Cement Concrete; RQS = Rescue Squadron; SAPF = Special Access Program Facility; SCIF = Sensitive Compartmented Information Facility; UFC = Uniform Facilities Code; UTC = Unit Type Code; WG = Wing



### 2.2.2 *Alternative 2*

Under Alternative 2, there would be two (2) demolition projects, seven (7) renovation-only projects, eight (8) building construction projects, seven (7) additions to buildings projects, and eight (8) infrastructure construction projects. Under Alternative 2, all of the proposed projects would meet the selection standards listed in **Section 2.2** and would remedy facility deficiencies; would be consistent with land use requirements, force protection and planning concept; would minimize operational inefficiencies and be sustainable development; and would provide and promote quality of life. **Demolition Projects**

Two (2) demolition projects are proposed under Alternative 2. The demolition projects would include the removal of one building totaling approximately 300 ft<sup>2</sup> and one baseball field totaling 174,240 ft<sup>2</sup>. The descriptions of the proposed demolition actions are listed in **Table 2-3** above.

#### 2.2.2.2 Renovation Projects

Seven (7) renovation projects are proposed under Alternative 2. Each of these projects would consist of renovating buildings slated for demolition under Alternative 1. The renovation projects would involve renovation of 31 different buildings. Some construction and repair activities could also be associated with the proposed projects; however, the majority of the actions would consist of renovations to existing buildings. The descriptions of the proposed demolition actions are listed in **Table 2-3** above.

#### 2.2.2.3 Building Construction Projects

Eight (8) building construction projects are proposed under Alternative 2. While some of the projects listed also would include renovation actions, construction is the larger part of the action. Construction projects would include approximately 55,754 ft<sup>2</sup> of new buildings and facilities and 1,700 LF of walls and gates installed as part of the proposed projects, as well as 10,700 ft<sup>2</sup> of renovation activities. The descriptions of these proposed projects are listed in **Table 2-3** above.

#### 2.2.2.4 Additions to Buildings

The seven (7) projects consisting primarily of additions to and renovation of existing buildings proposed under Alternative 2 would be the same as those proposed under Alternative 1. No project-specific alternatives were identified for these actions. Projects associated with additions to and renovations of existing buildings would include 32,014 ft<sup>2</sup> of renovation activities and 29,300 ft<sup>2</sup> of new construction in the form of additions to existing buildings. The descriptions of these proposed projects are listed in **Table 2-3** above.

#### 2.2.2.5 Infrastructure Construction Projects

The eight (8) infrastructure construction projects proposed under Alternative 2 would be the same as those proposed under Alternative 1. No project-specific alternatives were identified for these actions. These projects would include construction of new infrastructure and additions to existing infrastructure on Nellis AFB, including 306,691 ft<sup>2</sup> of new construction, 27,040 LF of new fencing, and 75,600 ft<sup>2</sup> of new access road. The descriptions of the proposed infrastructure actions are listed in **Table 2-3** above.

### 2.2.3 *No Action Alternative*

CEQ regulations require evaluation of the No Action Alternative under NEPA. The No Action Alternative serves as a baseline for evaluating the impacts of the Proposed Action and alternatives. Under the No Action Alternative, the proposed installation development projects would not occur. Activities that occur in existing facilities would continue to operate in substandard, congested, and geographically separated facilities; security requirements necessary for compliance with guidelines would not be met; aging facilities and infrastructure would require extensive and costly upkeep; and inefficient work-arounds to meet mission requirements would continue. Failure to complete the needed installation development would degrade the unit's mission.

**Table 2-3.**  
**Proposed Installation Development Projects at Nellis Air Force Base – Alternative 2**

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
<b>Demolition</b>					
RKMF130140 DEMO BLDG 10238, BASEBALL FIELD (AREA 2)	Gate 2B, 4 acres. Demo Facility B10238 baseball field, including area lighting, fencing and associated structures surrounding the field. Install 4" of rock mulch over ground.	2023	174,240 ft <sup>2</sup>	-174,240 ft <sup>2</sup>	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways	2022	300 ft <sup>2</sup>	-300 ft <sup>2</sup>	2
<b>Renovation</b>					
RKMF130142 REPAIR/ALTER B10236 (Old Gym)	Repair B10236, old prison camp gym, to include footing and service lines. Upgrade facilities as necessary. Change category code as appropriate.	2023	14,448 ft <sup>2</sup> renovated	None	3
RKMF130136 REPAIR BLDG 10235, LATRINE/SHOWER	Renovate B10235, old prison camp latrine/shower to include foundation and utilities.	2023	1,800 ft <sup>2</sup> renovated	None	4
RKMF200044 REPAIR/RENOVATE AREA 2 DINING FAC B10206	Repair/renovate Building 10206, 30,288 ft <sup>2</sup> dining facility Area II.	2023	30,288 ft <sup>2</sup> renovated	None	5
RKMF190043 ALTER DUNNING CIRCLE FACILITIES	Renovate all eight former housing units located at Dunning Circle on the Main Base to serve miscellaneous administrative functions. Various users have been discussed for any installation available administrative space to include occupants of B625, visiting exercise	2023-2024	Total area - 14,904 ft <sup>2</sup> Renovations: B6441 - 2,068 ft <sup>2</sup> B6451 - 2,036 ft <sup>2</sup> B6461 - 2,068 ft <sup>2</sup> B6471 - 2,068 ft <sup>2</sup> B6481 - 2,421 ft <sup>2</sup> B6501 - 3,173 ft <sup>2</sup> B6541 - 470 ft <sup>2</sup> (garage) B6551 - 600 ft <sup>2</sup> (garage).	None	6



Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF200014 REPAIR/RENOVATE AREA 3 TEMPORARY LODGING FACILITIES	Repair/Renovate Area 3 Temporary Lodging Facilities to include utilities. Building List includes B2935, B2940, B2945, B2950, B2955, B2960, B2965, B2970, B2975	2025	Total area - 32,919 ft <sup>2</sup> Renovation: B2935 - 2,400 ft <sup>2</sup> B2940 - 2,800 ft <sup>2</sup> B2945 - 5,773 ft <sup>2</sup> B2950 - 2,400 ft <sup>2</sup> B2955 - 5,773 ft <sup>2</sup> B2960 - 2,800 ft <sup>2</sup> B2965 - 2,800 ft <sup>2</sup> B2970 - 5,773 ft <sup>2</sup> B2975 - 2,400 ft <sup>2</sup>	None	7
RKMF200021 ALTER LOMIE HEARD ELEMENTARY SCHOOL, MULTI FAC	Renovate all former school facilities to accommodate miscellaneous administrative and operations functions. Various users have been discussed for any installation available administrative and operations space to include occupants of B625, visiting exercise organizations, and the occasional safety investigation board for aircraft crashes.	2023 - 2027	Total area - 66,161 ft <sup>2</sup> Renovation: B1781- 4,612 ft <sup>2</sup> B1782 - 6,093 ft <sup>2</sup> B1783 - 7,637 ft <sup>2</sup> B1784 - 6,916 ft <sup>2</sup> B1785 - 6,456 ft <sup>2</sup> B1786 - 12,536 ft <sup>2</sup> B1787 - 7,330 ft <sup>2</sup> B1788 - 3,783 ft <sup>2</sup> B1798 - 7,375 ft <sup>2</sup> B1790 - 3,423 ft <sup>2</sup>	None	8
RKMF220003 ALTER BLDG 625 OLD HOSPITAL	This project would renovate and repair the existing facility to absorb some of the outstanding Weapons School program requirements.	2024	122,414 ft <sup>2</sup>	None	9
<b>Building Construction</b>					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY (RH)	Construct 7,200 SF AGE MX facility by 61685.	2022	7,200 ft <sup>2</sup>	+7,200 ft <sup>2</sup>	10
RKMF190081 CONSTRUCT NEW WALLS AND GATES AT MAIN GATE	Construct new walls and gates at the Main Gate so that the gate can be closed to traffic and pedestrians.	2022	1,700 LF	+1,700 LF	11

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF200010 CONSTRUCT AFCEC ISS ADMINISTRATIVE FACILITY	Construct admin facility to include restrooms, networking, telephone, gas, water and any needed power support for usable office space for an executive facility in support of AFCEC.	2025	3,000 ft <sup>2</sup>	+3,000 ft <sup>2</sup>	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3 (RH)	Construct 900 SF Information Transfer Building and generator.	2023	900 ft <sup>2</sup>	+900 ft <sup>2</sup>	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2026	3,500 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	14
RKMF223001 ADD/ALTER B790, DINING FACILITY	This project will update the existing DFAC and provide an addition of between 3,500 – 4,000 ft <sup>2</sup> to boost the capabilities of the existing facility.	2027	10,700 ft <sup>2</sup> renovation 4,000 ft <sup>2</sup> construction	+4,000 ft <sup>2</sup> new	15
RKMF113004 COMMUNICATIONS SUPPORT CENTER	Construct new facility that consolidates 99 CS functions, as well as provides a redundant base comm hub, and demolishes B595	2024	34,164 ft <sup>2</sup>	+34,164 ft <sup>2</sup>	16
RKMF200043 ADD/ALTER B877, ANG	This project will update the existing facility and provide 3,500 – 4,000 ft <sup>2</sup> of addition space in accordance with facility requirements	2025	6,990 ft <sup>2</sup>	+3,500 ft <sup>2</sup>	17

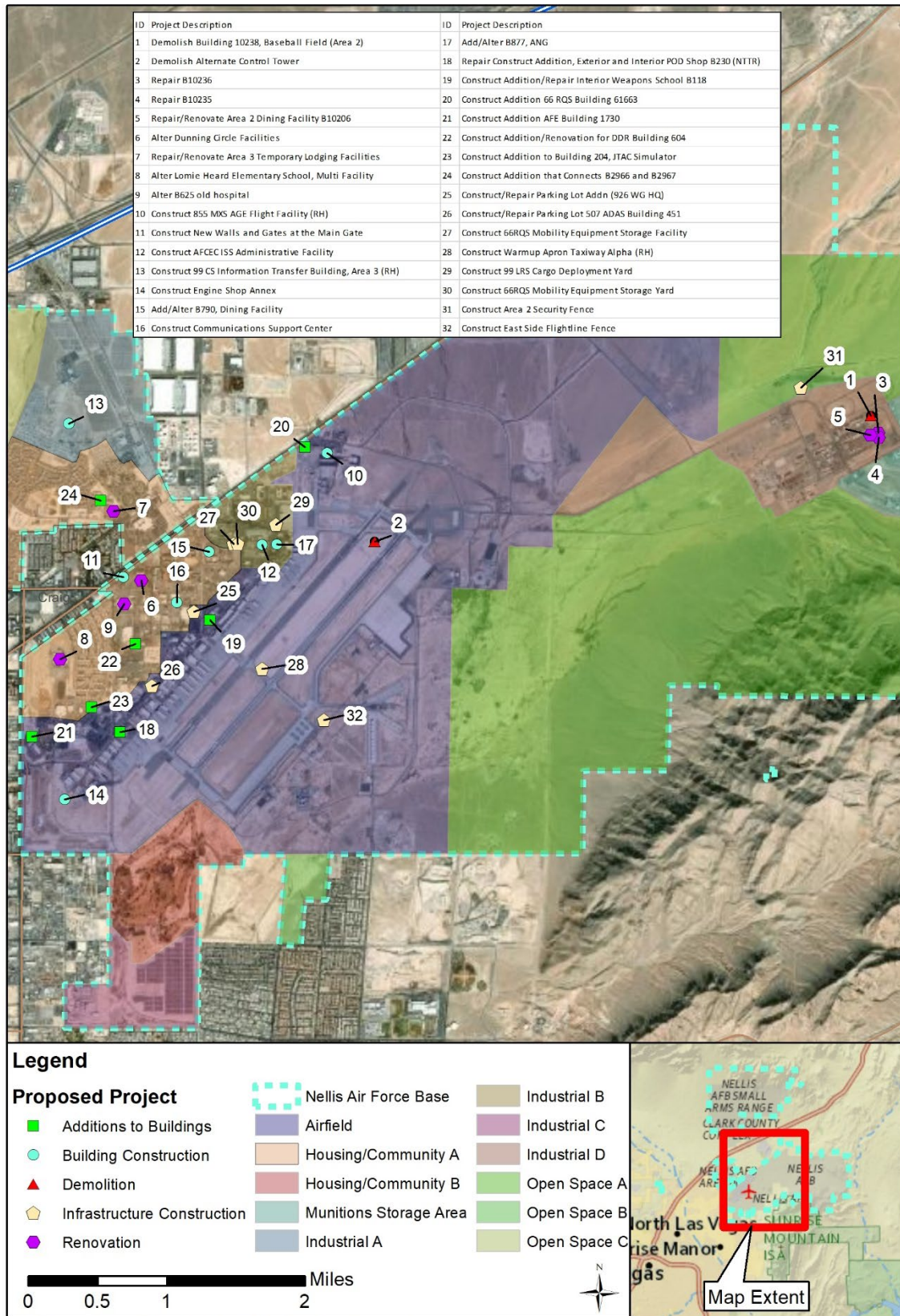
Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
<b>Additions to Buildings</b>					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230 (NTTR)	Construct a 2,250SF addition to north end of B230 in order to provide adequate operational and storage space for 140 P5 Pods and associated equipment. Install 16ft by 16ft roll-up door on west side of addition. Relocate light pole in yard to provide access for roll-up door. Renovate the 1970 men's and women's bathrooms, office areas, operational areas and entrance to meet current design and security standards. Renovation includes replacing exterior siding and drainage gutters, sealing and coating concrete floors, replacing bay lights and office areas with energy efficient fixtures, painting interior work spaces, replacing piping, changing layout of office spaces for better efficiency, and modifying main front entrance for better security containment.	2025	5,520 ft <sup>2</sup> renovation 2,250 ft <sup>2</sup> addition	+2,250 ft <sup>2</sup>	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 SF addition to B118. Addition to include SCIF/SAPF briefing rooms, mission planning and restrooms for GSUs during weapons school classes. Facility requires repair to the roofing systems, restrooms, flooring and fire detection system in the existing portion of the facility as well.	2023	4,805 ft <sup>2</sup> renovation 3,500 ft <sup>2</sup> addition	+3,500 ft <sup>2</sup>	19
RKMF190063 CONSTRUCT ADDITION 66 RQS BLDG 61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2022	B61663 Total area - 16,229 ft <sup>2</sup> 2,500 ft <sup>2</sup> renovation 7,500 ft <sup>2</sup> addition	+2,500 ft <sup>2</sup>	20
RKMF190085 CONSTRUCT ADDITION AFE BLDG 1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area - 36,596 ft <sup>2</sup> 2,000 ft <sup>2</sup> addition	+2,000 ft <sup>2</sup>	21
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR BLDG 604	Construct a 1050 ft <sup>2</sup> waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft <sup>2</sup> renovation 1,050 ft <sup>2</sup> addition	+1,050 ft <sup>2</sup>	22

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2023	B204 Total area - 7,547 ft <sup>2</sup> 3,000 ft <sup>2</sup> addition 2,500 ft <sup>2</sup> renovation	+2,500 ft <sup>2</sup>	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2.	2025	B2966/2967 Total area - 37,990 ft <sup>2</sup> 10,000 ft <sup>2</sup> addition 15,000 ft <sup>2</sup> renovation	+10,000 ft <sup>2</sup>	24
<b>Infrastructure Construction</b>					
RKMF180025 CONSTRUCT/ REPAIR PARKING LOT ADDITION (926 WG HQ)	Expands B334 parking lot over area where B336 is being demolished. Reconfigures existing lot in front of B334.	2022	54,789 ft <sup>2</sup>	+30,000 ft <sup>2</sup>	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS BLDG 451	Reconfigure and expand existing parking lot	2023	55,732 ft <sup>2</sup>	+27,499 ft <sup>2</sup>	26
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY (RH)	Construct a 12,000 ft <sup>2</sup> controlled storage facility for deployable UTC and training assets. A climate-controlled storage facility is required for 18 each ISU-90s that contain temperature sensitive electronics, shelving for mobility gear, 16 each short-notice tasking-prepped Polaris Ranger vehicles. Storage facility to include an office space for UTC processing.	2024	12,000 ft <sup>2</sup> new	+12,000 ft <sup>2</sup>	27
RKMF170045 CONSTRUCT WARMUP APRON TAXIWAY ALPHA (RH)	Construct new warm-up apron located north of Taxiway ALPHA between the runways in accordance with UFC 3-260-01, AFMAN 32-1084 and applicable guidance. The primary surface shall be constructed of PCC pavement and have 25' asphalt shoulder pavements.	2022	131,570 ft <sup>2</sup> new	+131,570 ft <sup>2</sup>	28
RKMF140101 CONSTRUCT 99 LRS CARGO DEPLOYMENT YARD	Reconstructs layout of cargo deployment area. Extends flightline boundary by B810. Essentially closes off portions of Depot road and extends the existing boundary up to Wurtsmith Ave also.	2022	43,000 ft <sup>2</sup> new	+43,000 ft <sup>2</sup>	29



Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF180011 CONSTRUCT 66 RQS MOBILITY EQUIPMENT STORAGE YARD	Construct sunshade/overhang to shade deployable UTC and training assets including C2 trailer, two Boston Whaler boats with trailers, 10 each ISU-90 storage containers, and 1 each F-450 truck.	2024	9,600 ft <sup>2</sup> new	+9,600 ft <sup>2</sup>	30
RKMF180054 CONSTRUCT AREA 2 SECURITY FENCE	Install approximately 11,200 LF of 8' type-A fencing (i.e. woven 9-gauge steel-wire, chain-link with 2" square mesh. Steel-wire fabric must have a steel core that measures 9-gauge, not including the coating), with triple strand barbed wire outriggers. Install 6,300 LF of access road. Install concrete headwalls with security gates and culverts as necessary to traverse drainage ditches and maintain water flow.	2025	Total length -11,200 LF (fence); Total length - 6,300 LF (access road)	+17,500 LF	31
RKMF110096 CONSTRUCT EAST SIDE FLIGHTLINE FENCE	Install Type A chain link fencing, 50 mm square mesh, woven 9 Gauge steel wire fabric, 2.1-meter high, surmounted by three strand barbed wire.	2023	Total length - 15,840 LF	+15,840 LF	32

Abbreviations: " = inch; ADAS = Air Defense Aggressor Squadron; AFCEC = Air Force Civil Engineering Center; AFMAN = Air Force Manual; AGE = Aerospace Ground Equipment; ANG = Air National Guard; AP = Advanced Programs; ARC = Air Reserve Component; B = building; CDC = Child development center; CS = Communications Squadron; CTS = Combat Training Squadron; DDR = Drug Demand Response Program; DFAC = dining facility; FAC = facility; ft<sup>2</sup> = square feet; HQ = headquarters; ISS = Intelligence Support Squadron; JTAC = Joint Terminal, Attack Controller; LF = linear feet; LRS = Logistics Readiness Squadron; PCC = Plain Cement Concreate; RQS = Rescue Squadron; SAPF = Special Access Program Facility; SCIF = Sensitive Compartmented Information Facility; UFC = Uniform Facilities Code; UTC = Unit Type Code; WG = Wing



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