Final
Environmental Assessment for Installation Development
Nellis Air Force Base, Nevada

November 2024

Prepared for:
United States Air Force
99th Air Base Wing
Nellis Air Force Base, Nevada

PRIVACY ADVISORY

This Environmental Assessment (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 Department of the Air Force (DAF) decision-making, allows the public to offer inputs on alternative ways for the DAF to accomplish what it is proposing, and solicits comments on the DAF's analysis of environmental effects.

Public commenting allows the DAF 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 the 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 Personal home addresses and phone numbers will not be published in the EA.

COMPLIANCE

This document has been certified that it does not exceed 75 pages, not including appendices as defined in 40 CFR § 1501.5(g). As defined in 40 CFR § 1508.1(bb), a "page" means 500 words and does not include maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information.

The DAF is aware of the 12 November 2024 decision in *Marin Audubon Society v. Federal Aviation Administration*, No. 23-1067 (D.C. Cir. November 12, 2024). To the extent that a court may conclude that the CEQ regulations implementing NEPA are not judicially enforceable or binding on this agency action, the DAF has nonetheless elected to follow those regulations at 40 CFR Parts 1500–1508 in addition to the DAF's procedures/regulations implementing NEPA at 32 CFR 989, to meet the agency's obligations under NEPA, 42 USC § 4321 et seq.

ACCESSIBILITY NOTICE

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COVER SHEET

Final 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.

d. For Additional Information: Mr. Tod Oppenborn, 99 CES/CENPP, 6020 Beale Avenue, Building 812, Nellis AFB, Nevada. Phone: 702-652-9366 or by email at tod.oppenborn@us.af.mil.

e. Designation: Final 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 et seq., 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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ACRONYMS AND ABBREVIATIONS

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_2e	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
ESQD	explosive safety quantity distance
°F	degree Fahrenheit
FAC	facility
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
ft^2	square feet
FY	fiscal year
GHG	greenhouse gas
GWP	global warming potential
HAZMAT	hazardous material
ICRMP	Integrated Cultural Resources Management Plan
IPaC	Information for Planning and Consultation
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
$\mu g/m^3$	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_2	nitrogen dioxide
NOA	Notice of Availability
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_3	ozone
OSHA	Occupational Safety and Health Administration
pCi/L	picocurie per liter
PCB	polychlorinated biphenyl
PCC	Plain Cement Concrete
PCE	perchloroethylene
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PM_{10}	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_2	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 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[1]); 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 (**Figure 1-1**). 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.

[1] This EA is following the September 14, 2020, update to the CEQ rules (85 FR 43304).

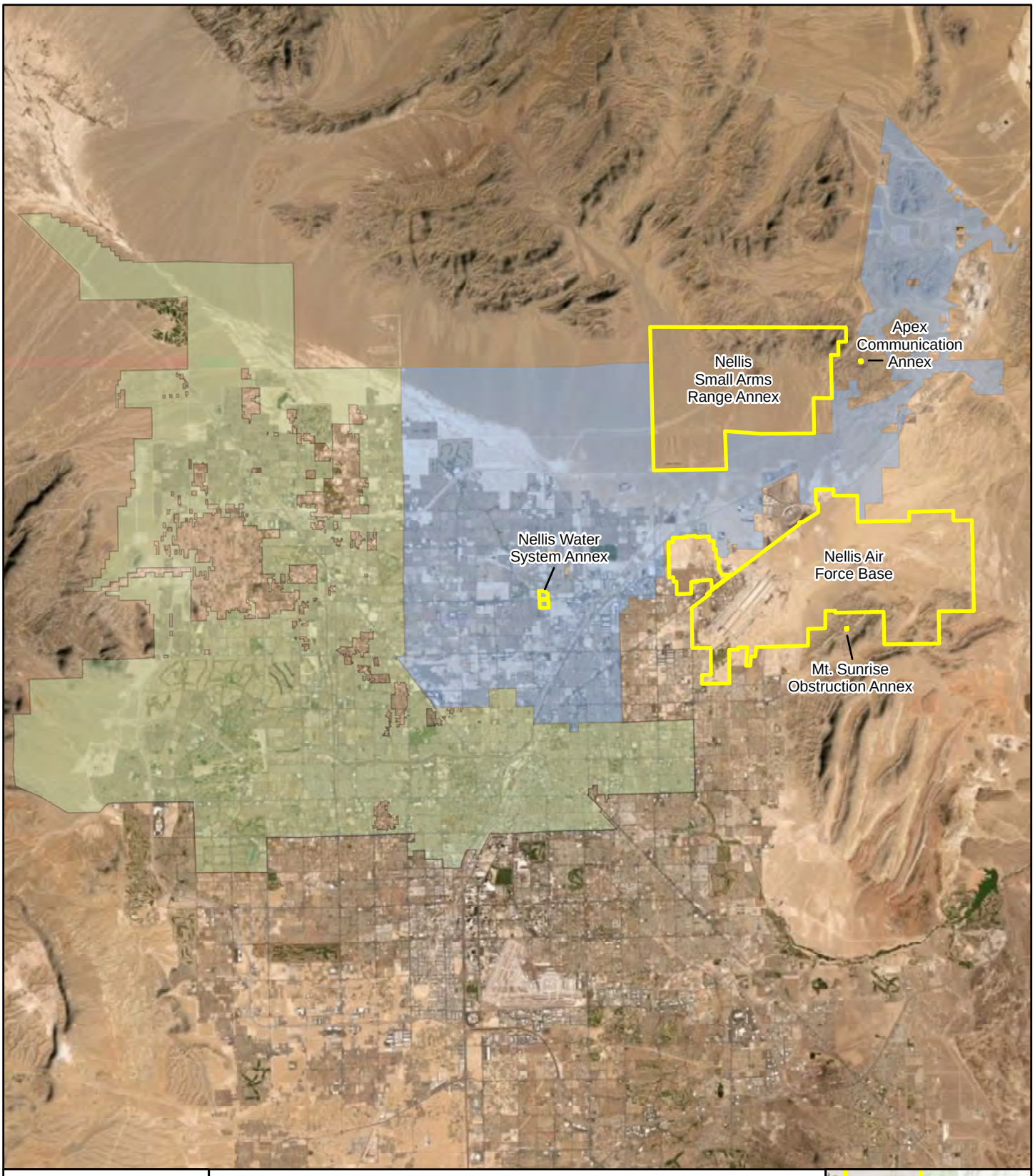
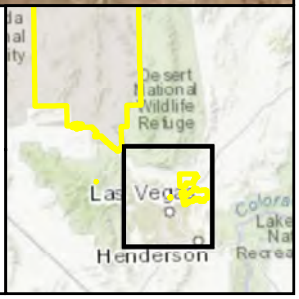


FIGURE 1-1
REGIONAL
OVERVIEW

Installation Boundary

City of Las Vegas

City of North Las Vegas



N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 2 4 Miles

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 A**.

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, *DoD Interactions with Federally Recognized Tribes*, and Department of the AFI 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 A.**

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) and/or National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service. On 10 June 2021, the Air Force initiated Section 7 of the ESA consultation for the Proposed Action using the USFWS's Information for Planning and Consultation (IPaC) tool. Basic information concerning the location and nature of the Proposed Action was input into IPaC to obtain an official species list from the USFWS. The list identifies threatened and endangered species and other protected species (e.g., migratory birds) with potential to be affected by the Proposed Action. The Air Force accessed the IPaC tool again on 23 August 2024 and obtained an updated list. This information is included in **Appendix A** and incorporated into this EA where applicable. The Air Force determined that the Proposed Action would have no effect on threatened and endangered species or designated critical habitat. While not required, to date, the USFWS has not responded to or concurred with the Air Force's "no effect determination." Correspondence with the USFWS is provided in **Appendix A**.

Compliance with Section 106 of the NHPA (54 U.S.C. § 300101) and implementing regulations (36 CFR Part 800) was accomplished through coordination with the Nevada State Historic Preservation Office (SHPO). The SHPO's response, indicating a finding of "adverse effect," is provided in **Appendix A**. Discussion of impacts to cultural resources is provided in **Section 4.10**.

The Nevada Department of Environmental Protection and Clark County Department of Environment and Sustainability was included for air and water quality, and the Nevada Department of Wildlife was included in this coordination on habitat and species of concern. All agency correspondence is included in **Appendix A**.

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 on 13 and 14 May 2022 announcing the availability of the EA for review. The NOA invited the public to review and comment on the Draft EA and Draft FONSI. Copies of the announcements are provided in **Appendix B**. The public and agency review period ended on 13 June 2022. This Final EA was updated to address public comments received on the Draft EA. Copies of all comments received are provided in **Appendix A**.

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.

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 **Tables 2-2** and **2-3**, respectively. The proposed locations for each specific project are identified on **Figures 2-1** and **2-2.**

Table 2-1.
Summary of Alternatives

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

ft^2 = square feet, LF = linear feet

Based on Table 2-1, the net impervious coverage for Alternative 1 would increase by 24,599 ft^2 (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^2.

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 2-1)
Demolition					
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.	2026	174,240 ft^2	-174,240 ft^2	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways.	2025	300 ft^2	-300 ft^2	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.	2025	14,448 ft^2	-14,448 ft^2	3
RKMF130136 DEMO B10235	Gate 2B, 1,800 ft^2. Demolish B10235 to include foundation and utilities. Install 4" of rock mulch over ground.	2025	1,800 ft^2	-1,800 ft^2	4
RKMF200044 DEMO AREA 2 DINING FAC B10206	Demolish B10206, 30,288 ft^2 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.	2026	30,288 ft^2	-30,288 ft^2	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.	2025	14,904 ft^2	-14,904 ft^2	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.	2026	Total area: 32,919 ft^2 B2935: 2,400 ft^2 B2940: 2,800 ft^2 B2945: 5,773 ft^2 B2950: 2,400 ft^2 B2955: 5,773 ft^2 B2960: 2,800 ft^2 B2965: 2,800 ft^2 B2970: 5,773 ft^2 B2975: 2,400 ft^2	-32,919 ft^2	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. Closure of grease interceptors associated with dinning facility; in accordance with Clark County Water Reclamation District, rules would be ensured.	2026	Total area: 66,161 ft^2 B1781: 4,612 ft^2 B1782: 6,093 ft^2 B1783: 7,637 ft^2 B1784: 6,916 ft^2 B1785: 6,456 ft^2 B1786: 12,536 ft^2 B1787: 7,330 ft^2 B1788: 3,783 ft^2 B1798: 7,375 ft^2 B1790: 3,423 ft^2	-66,161 ft^2	8
RKMF220003 DEMO BLDG 625 OLD HOSPITAL	122,414 ft^2. 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 dinning facility; in accordance with Clark County Water Reclamation District, rules would be ensured.	2027	122,414 ft^2	-122,414 ft^2	9
Building Construction					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY	Construct 7,200 ft^2 AGE MX facility by B61685. In accordance with AFMAN 32-1067, oil-water separators would not be installed.	2025	7,200 ft^2	+7,200 ft^2	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.	2025	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.	2028	3,000 ft^2	+3,000 ft^2	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3	Construct 900 ft^2 Information Transfer Building and generator.	2026	900 ft^2	+900 ft^2	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2029	3,500 ft^2	+3,500 ft^2	14
RKMF223001 DINING FACILITY	Construct new dining facility.	2029	18,201 ft^2	+18,201 ft^2	15

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF113004 COMMUNICATIONS SUPPORT CENTER	Construct new facility that consolidates 99 CS functions, as well as provides a redundant base comm hub, and demolishes B595.	2027	34,164 ft^2	+34,164 ft^2	16
RKMF200043 CONSTRUCT ARC AP ANG FACILITY	Construct conference room, bathrooms, break room, and storage in structure parallel to Building 877.	2027	3,500 ft^2	+3,500 ft^2	17
Additions to Buildings					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230	Construct a 2,250 ft^2 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.	2028	5,520 ft^2 renovation 2,250 ft^2 addition	+2,250 ft^2	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 ft^2 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.	2026	4,805 ft^2 renovation 3,500 ft^2 addition	+3,500 ft^2	19
RKMF190063 CONSTRUCT ADDITION 66 RQS B61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2025	B61663 Total area: 16,229 ft^2 2,500 ft^2 renovation 7,500 ft^2 addition	+2,500 ft^2	20
RKMF190085 CONSTRUCT ADDITION AFE B1730	Expand the aircrew flight equipment work area in B1730.	2029	B1730 Total area: 36,596 ft^2 2,000 ft^2 addition	+2,000 ft^2	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^2 waiting room for 70 people along with bathrooms, secure storage.	2025	1,689 ft^2 renovation 1,050 ft^2 addition	+1,050 ft^2	22
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2026	B204 area: 7,547 ft^2 3,000 ft^2 addition 2,500 ft^2 renovation	+2,500 ft^2	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.	2028	B204/B2966/B2967 Total area: 37,990 ft^2 10,000 ft^2 addition 15,000 ft^2 renovation	+10,000 ft^2	24
Infrastructure Construction					
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.	2025	54,789 ft^2 existing	+30,000 ft^2	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS B451	Reconfigure and expand existing parking lot.	2026	55,732 ft^2 existing	+27,499 ft^2	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.	2027	12,000 ft^2 new	+12,000 ft^2	27
RKMF170045 CONSTRUCT WARM-UP 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.	2025	131,570 ft^2 new	+131,570 ft^2	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.	2025	43,000 ft^2 new	+43,000 ft^2	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 one each F-450 truck.	2027	9,600 ft^2 new	+9,600 ft^2	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^2). Install concrete headwalls with security gates and culverts as necessary to traverse drainage ditches and maintain water flow.	2028	Total length: 11,200 LF (fence) Total area: 75,600 ft^2 (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.	2026	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^2 = 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 2-2)
Demolition					
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.	2026	174,240 ft^2	-174,240 ft^2	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways.	2025	300 ft^2	-300 ft^2	2
Renovation					
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.	2026	14,448 ft^2 renovated	None	3
RKMF130136 REPAIR BLDG 10235, LATRINE/SHOWER	Renovate B10235, old prison camp latrine/shower to include foundation and utilities.	2026	1,800 ft^2 renovated	None	4
RKMF200044 REPAIR/RENOVATE AREA 2 DINING FAC B10206	Repair/renovate Building 10206, 30,288 ft^2 dining facility Area II.	2026	30,288 ft^2 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.	2026-2027	Total area: 14,904 ft^2 Renovations: B6441: 2,068 ft^2 B6451: 2,036 ft^2 B6461: 2,068 ft^2 B6471: 2,068 ft^2 B6481: 2,421 ft^2 B6501: 3,173 ft^2 B6541: 470 ft^2 (garage) B6551: 600 ft^2 (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.	2026	Total area: 32,919 ft2 Renovations: B2935: 2,400 ft^2 B2940: 2,800 ft^2 B2945: 5,773 ft^2 B2950: 2,400 ft^2 B2955: 5,773 ft^2 B2960: 2,800 ft^2 B2965: 2,800 ft^2 B2970: 5,773 ft^2 B2975: 2,400 ft^2	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.	2026 - 2030	Total area: 66,161 ft^2 Renovations: B1781: 4,612 ft^2 B1782: 6,093 ft^2 B1783: 7,637 ft^2 B1784: 6,916 ft^2 B1785: 6,456 ft^2 B1786: 12,536 ft^2 B1787: 7,330 ft^2 B1788: 3,783 ft^2 B1798: 7,375 ft^2 B1790: 3,423 ft^2	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.	2027	122,414 ft^2	None	9
Building Construction					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY (RH)	Construct 7,200 SF AGE MX facility by 61685.	2025	7,200 ft^2	+7,200 ft^2	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.	2025	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.	2028	3,000 ft^2	+3,000 ft^2	12

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3 (RH)	Construct 900 SF Information Transfer Building and generator.	2026	900 ft^2	+900 ft^2	13
RKMF230003 CONSTRUCT ENGINE SHOP ANNEX	Construct an aircraft engine storage facility for spare parts, engine awaiting maintenance and engine support equipment storage.	2029	3,500 ft^2	+3,500 ft^2	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^2 to boost the capabilities of the existing facility.	2030	10,700 ft^2 renovation 4,000 ft^2 construction	+4,000 ft^2 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.	2027	34,164 ft^2	+34,164 ft^2	16
RKMF200043 ADD/ALTER B877, ANG	This project will update the existing facility and provide 3,500 – 4,000 ft^2 of addition space in accordance with facility requirements.	2028	6,990 ft^2	+3,500 ft^2	17
Additions to Buildings					
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.	2028	5,520 ft^2 renovation 2,250 ft^2 addition	+2,250 ft^2	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.	2026	4,805 ft^2 renovation 3,500 ft^2 addition	+3,500 ft^2	19

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF190063 CONSTRUCT ADDITION 66 RQS BLDG 61663	Construct 5,000 SF addition to the west side of 66 RQS B61663.	2025	B61663 Total area: 16,229 ft^2 2,500 ft^2 renovation 7,500 ft^2 addition	+2,500 ft^2	20
RKMF190085 CONSTRUCT ADDITION AFE BLDG 1730	Expand the aircrew flight equipment work area in B1730.	2029	B1730 Total area: 36,596 ft^2 2,000 ft^2 addition	+2,000 ft^2	21
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR BLDG 604	Construct a 1050 ft^2 waiting room for 70 people along with bathrooms, secure storage.	2025	1,689 ft^2 renovation 1,050 ft^2 addition	+1,050 ft^2	22
RKMF200117 CONSTRUCT ADDITION / REPAIR JTAC SIMULATOR BLDG 204 (6 CTS)	Construct addition to B204 which is the JTAC simulator.	2026	B204 Total area: 7,547 ft^2 3,000 ft^2 addition 2,500 ft^2 renovation	+2,500 ft^2	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2.	2028	B2966/2967 Total area: 37,990 ft^2 10,000 ft^2 addition 15,000 ft^2 renovation	+10,000 ft^2	24
Infrastructure Construction					
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.	2025	54,789 ft^2	+30,000 ft^2	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS BLDG 451	Reconfigure and expand existing parking lot.	2026	55,732 ft^2	+27,499 ft^2	26

Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY (RH)	Construct a 12,000 ft^2 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.	2027	12,000 ft^2 new	+12,000 ft^2	27
RKMF170045 CONSTRUCT WARM-UP 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.	2025	131,570 ft^2 new	+131,570 ft^2	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.	2025	43,000 ft^2 new	+43,000 ft^2	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 one each F-450 truck.	2027	9,600 ft^2 new	+9,600 ft^2	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.	2028	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.	2026	Total length: 15,840 LF	+15,840 LF	32

" = 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^2 = 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

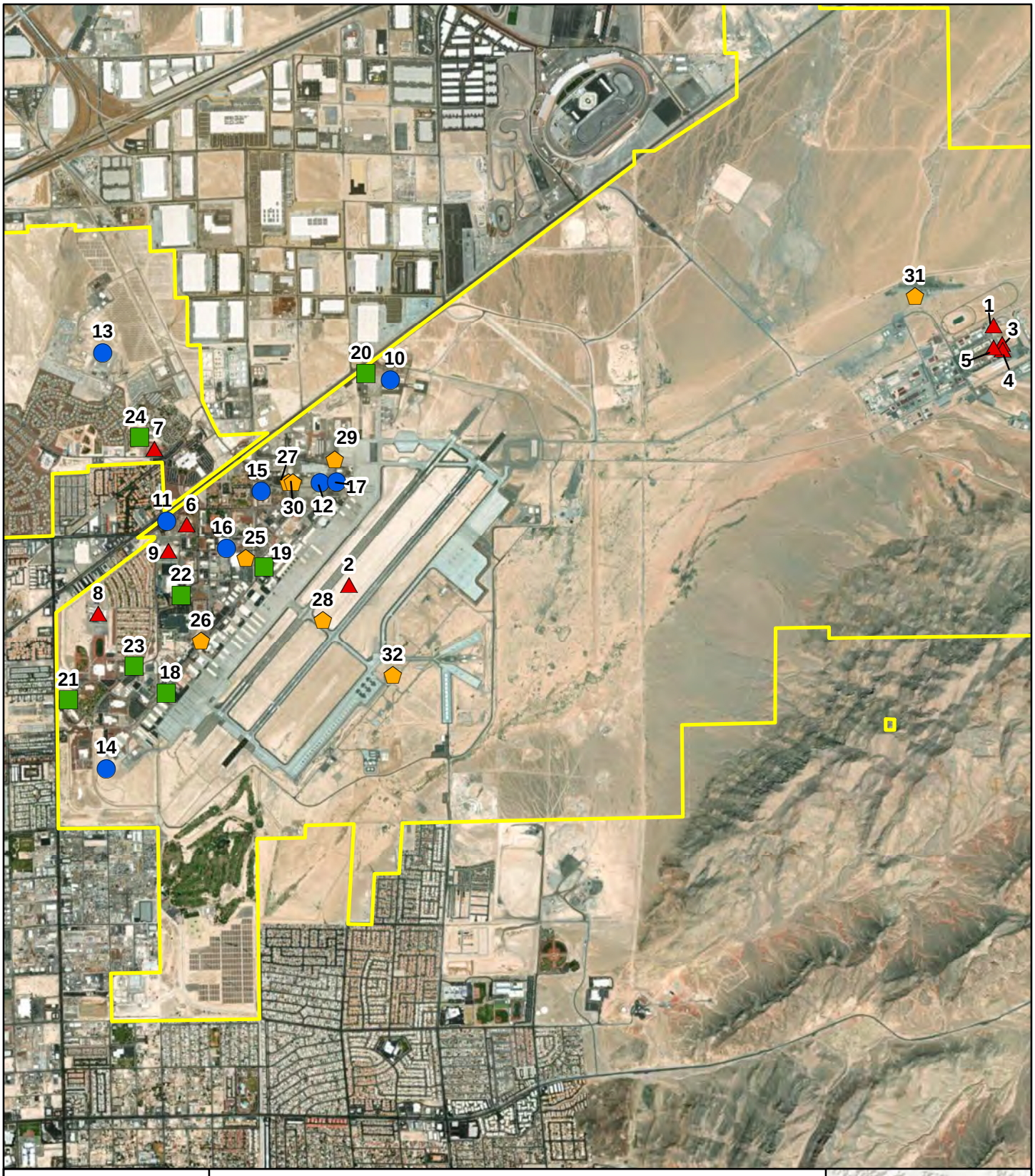


FIGURE 2-1
PROJECT LOCATIONS – ALTERNATIVE 1

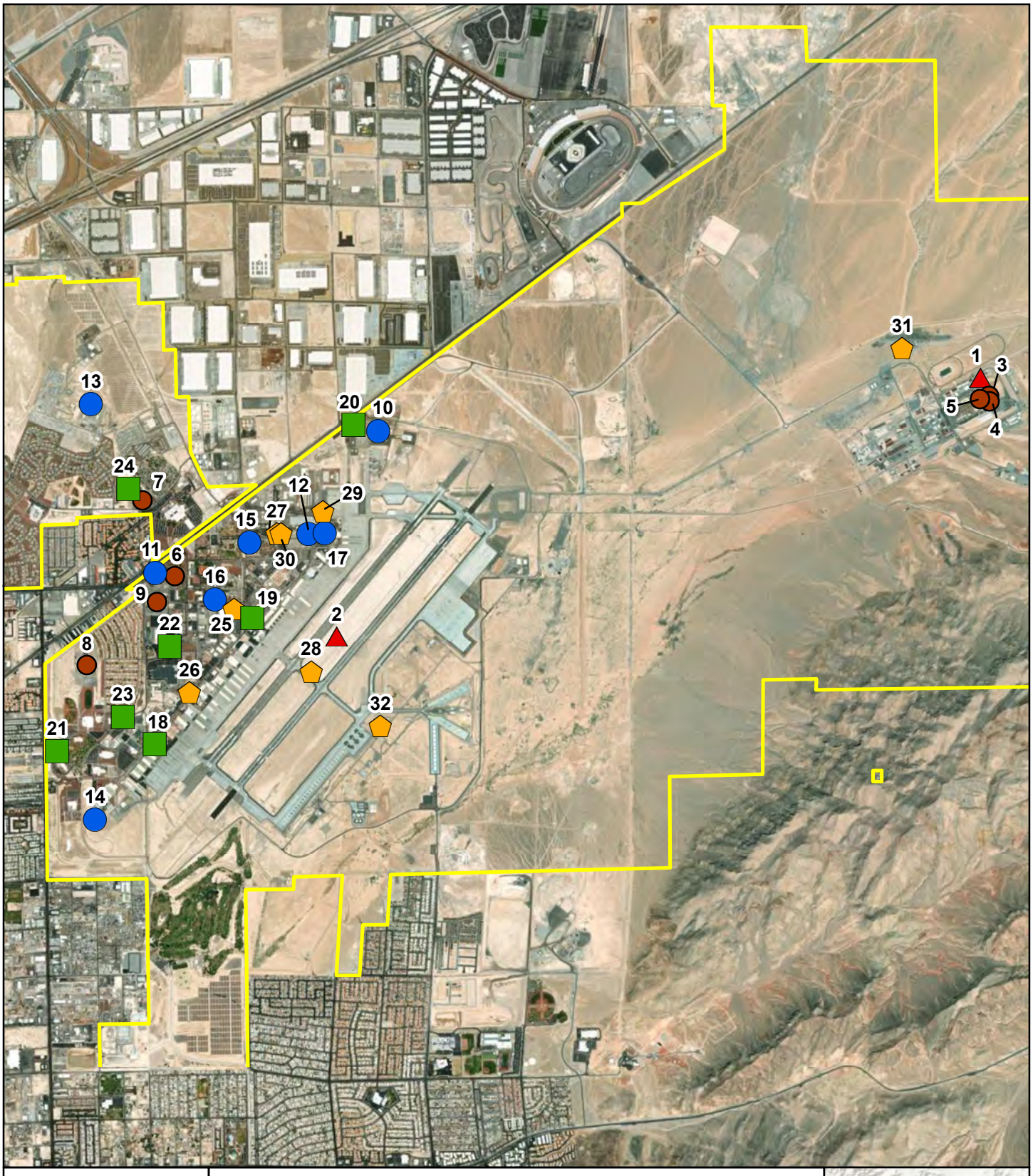


FIGURE 2-2
PROJECT LOCATIONS – ALTERNATIVE 2

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^2) and one baseball field totaling 174,240 ft^2. 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^2 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^2 of new construction in the form of additions to existing buildings and 32,014 ft^2 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^2 of new construction, 27,040 LF of new fencing, and 75,600 ft^2 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^2 and one baseball field totaling 174,240 ft^2. 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^2 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^2 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^2 of renovation activities and 29,300 ft^2 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^2 of new construction, 27,040 LF of new fencing, and 75,600 ft^2 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. Site inspection for nest and burrows would be conducted prior to ground-disturbing activities.	No significant impacts to biological resources. Site inspection for nest and burrows would be conducted prior to ground-disturbing activities.	No significant impacts to biological resources.
Water Resources	No significant impacts to water resources. Net impervious surfaces would increase by 24,599 ft^2.	No significant impacts to water resources. Net impervious surfaces would increase by 265,805 ft^2.	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^2.	No significant impacts to geological resources. Net impervious surfaces would increase by 265,805 ft^2.	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.

Resource Area	Alternative 1	Alternative 2	No Action Alternative
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.
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 archaeological deposits. No known traditional cultural resources or sacred sites are present. There would be an adverse effect to the Lomie Gray Heard School District and to nine NRHP-eligible buildings. However, effects to the Lomie Gray Heard School District are being mitigated in accordance with the 2022 Memorandum of Agreement between the Air Force and the Nevada State Historic Preservation Office (SHPO). Furthermore, the nine NRHP-eligible buildings were previously mitigated through documentation at the national level. The SHPO agreed with this determination in a letter dated 15 July 2024.	No significant impact to archaeological deposits. No known traditional cultural resources or sacred sites are present. There would be an adverse effect to the Lomie Gray Heard School District and to nine NRHP-eligible buildings. However, effects to the Lomie Gray Heard School District are being mitigated in accordance with the 2022 Memorandum of Agreement between the Air Force and the Nevada SHPO. Furthermore, the nine NRHP-eligible buildings were previously mitigated through documentation at the national level. The SHPO agreed with this determination in a letter dated 15 July 2024.	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.

ACM = asbestos-containing material; ERP = Environmental Restoration Program; ft^2 = square feet; LBP = lead-based paint; SHPO = State Historic Preservation Office

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 3-1**. 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.

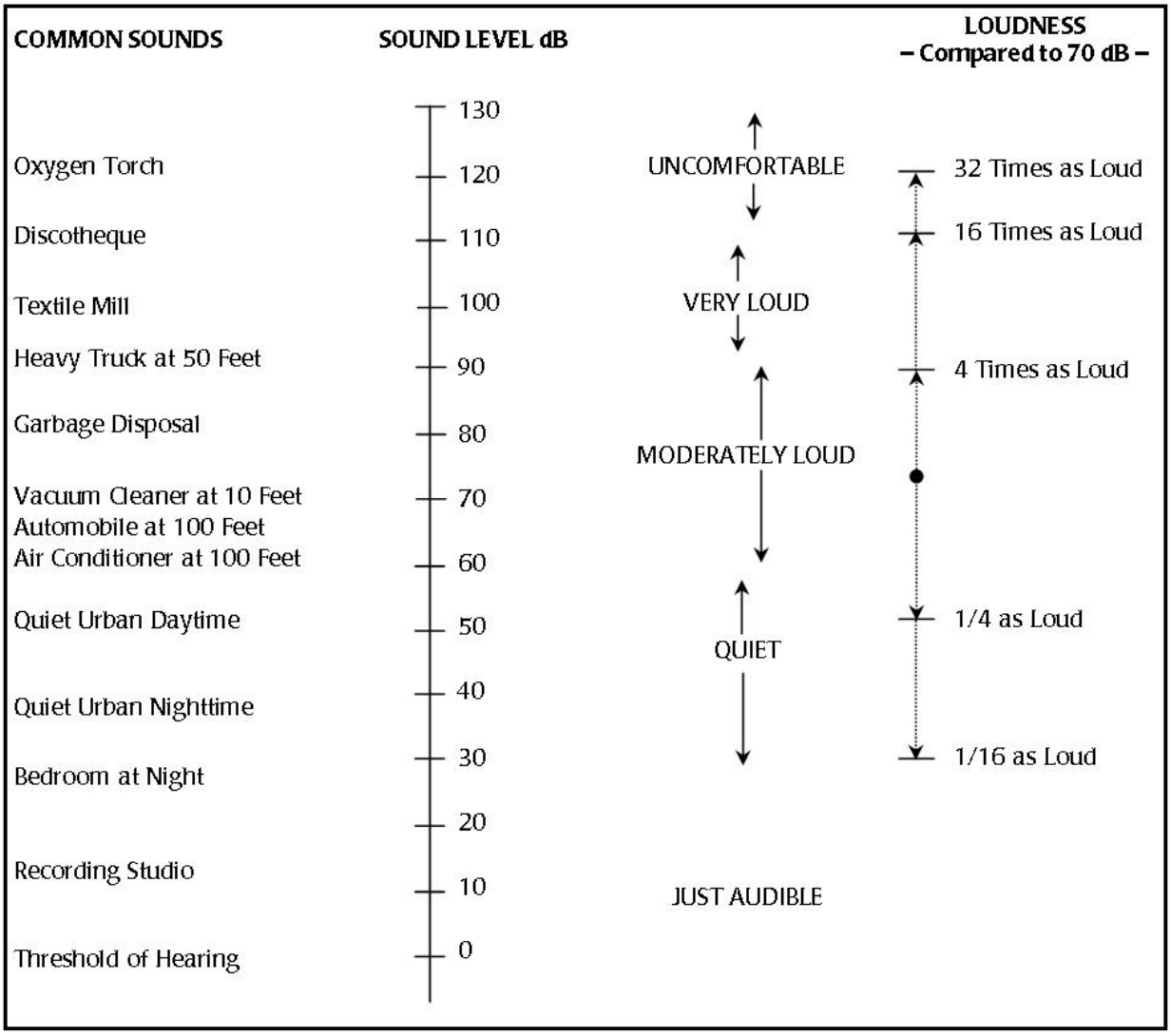


Figure 3-1 Type A-Weighted Sound Levels of Common Sounds

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 **Figures 3-2** and **3-3**, 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).

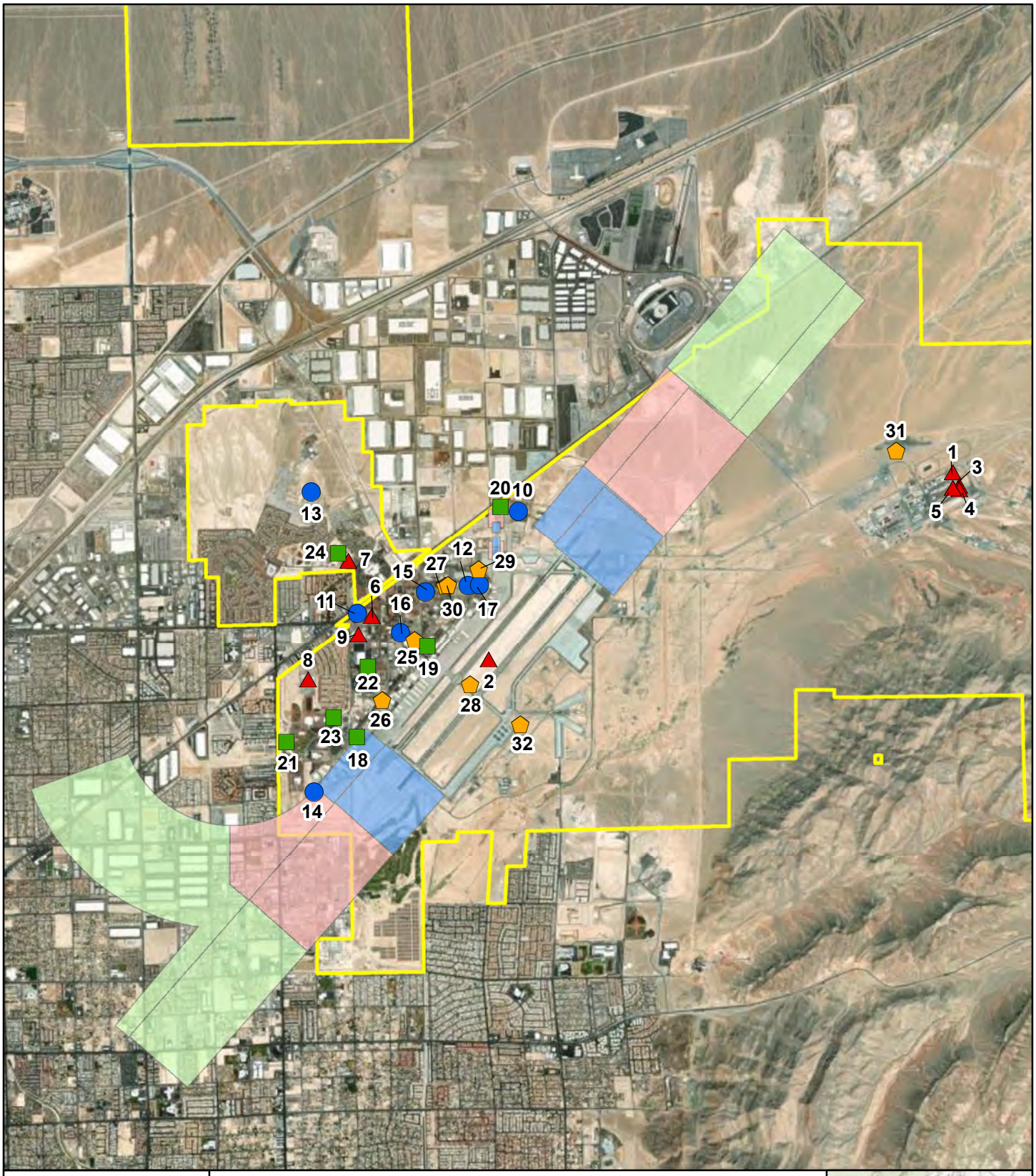


FIGURE 3-2
ACCIDENT POTENTIAL & CLEAR ZONES – ALTERNATIVE 1

APZ = Accident Potential Zone; CZ = Clear Zone.

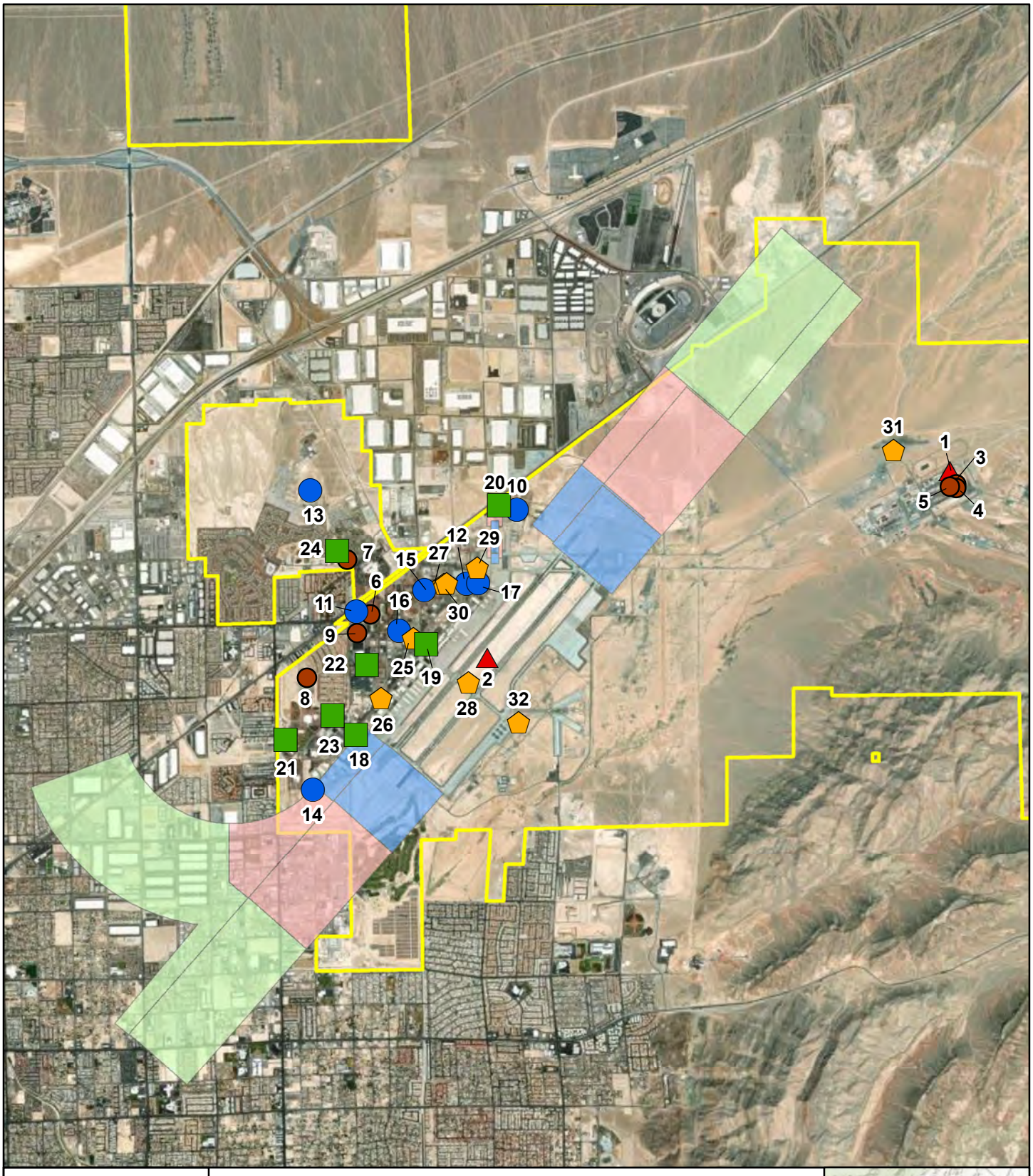


FIGURE 3-3
ACCIDENT POTENTIAL & CLEAR ZONES – ALTERNATIVE 2

APZ = Accident Potential Zone; CZ = Clear Zone.

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 ($\mu g/m^3$). 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_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (including particles equal to or less than 10 microns in diameter [PM_{10}] and particles equal to or less than 2.5 microns in diameter [$PM_{2.5}$]), 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 (NOx) are precursors to the formation of O_3.

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

- Unclassifiable/attainment for lead, NO_2, SO_2, and $PM_{2.5}$
- Maintenance/attainment for CO and PM_{10}
- Marginal nonattainment for the 2015 O_3 NAAQS standard

Table 3-1.
National Ambient Air Quality Standards

Pollutant	Primary/ Secondary[a,b]	Averaging Time	Level[c]	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-monthaverage	0.15 µg/m^3	Not to be exceeded
Nitrogen dioxide	primary	1 hour	100 ppb	98th 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 ($PM_{2.5}$)	primary	1 year	12 µg/m^3	annual mean, averaged over 3 years
	secondary	1 year	15 µg/m^3	annual mean, averaged over 3 years
	primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
Particle pollution (PM_{10})	primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur dioxide	primary	1 hour	75 ppb	99th 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

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^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; ppb = parts per billion; ppm = parts per million

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, NOx, 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_2e) or the amount of CO_2e 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 (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_2	PM_{10}	$PM_{2.5}$
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
Total	**76.54**	**586.12**	**210.63**	**12.34**	**47.29**	**26.75**

Sources: Nellis AFB 2018b, 2020; USEPA 2020a
Notes:
CO = carbon monoxide; NOx = nitrogen oxides; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; SO_2 = 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.

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, 2024). 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, 2024). This vegetation community occurs below 3,937 feet in elevation and is characterized by thermophilic plant species. Traditionally, nonnative 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 nonnative vegetation are contained mostly within and adjacent to developed areas at the Base (Nellis AFB, 2024). 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, 2024).

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 (*Zenaida 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 (*Campylorhyncus brunneicapillus*), Scott's oriole (*Icterus spurius*), phainopepla (*Phainopepla nitens*), ashthroated flycatcher (*Myiarchus cinerascens*), and blacktailed gnatcatcher (*Polioptila melanura*) (Nellis AFB, 2024).

Common reptiles known to occur at Nellis AFB include side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorous tigris*), zebra-tailed lizard (*Callisaurus draconoides*), yellow-backed spiny lizard (*Sceloporus uniformis*), desert night lizard (*Xantusia vigilis*), desert horned lizard (*Phyronosoma platyrhinos*), coachwhip (*Coluber flagellum*), western patch-nosed snake (*Salvadora hexalepis*), gopher snake (*Pituophis catenifer*), western shovel-nosed snake (*Chionactis occipitalis*), and Mojave rattlesnake (*Crotalus scultulatus*) (Nellis AFB, 2024). 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, 2024). 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 IPaC service and Nevada Natural Heritage Program and is provided in **Table 3-3.** Currently, there is no designated critical habitat for any federally protected species on Nellis AFB. Only the desert tortoise has been documented to occur in the ROI (Nellis AFB, 2024). 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, 2024). 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[a]	State Status[b]
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	Endangered	S1B
Yuma Clapper Rail (*Rallus logirostris yumanensis*)	Endangered	S1B
Desert Tortoise (*Gopherus agassizii*)	Threatened	
Pahrump Poolfish (*Empetrichthys latos*)	Endangered	S1
Razorback Sucker (*Xyrauchen texanus*)	Endangered	S1

Notes:
a. Source: U.S. Fish and Wildlife Service IPaC (see **Appendix A**).
b. Source: Nevada Natural Heritage Program, 2019.
S1 = Critically Imperiled; S1B = critically imperiled, breeds in the area

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, 2024), but three state-listed weeds are known to occur: salt cedar (*Tamarix* spp.), African mustard (*Brassica tournefortii*), and yellow starthistle (*Centaurea solstitalis*). 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, 2024). 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 **Figures 3-4** and **3-5**).

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, 2024; 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, 2024). 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, 2024). The project areas are not located within a 100-year floodplain (see **Figures 3-4** and **3-5**).

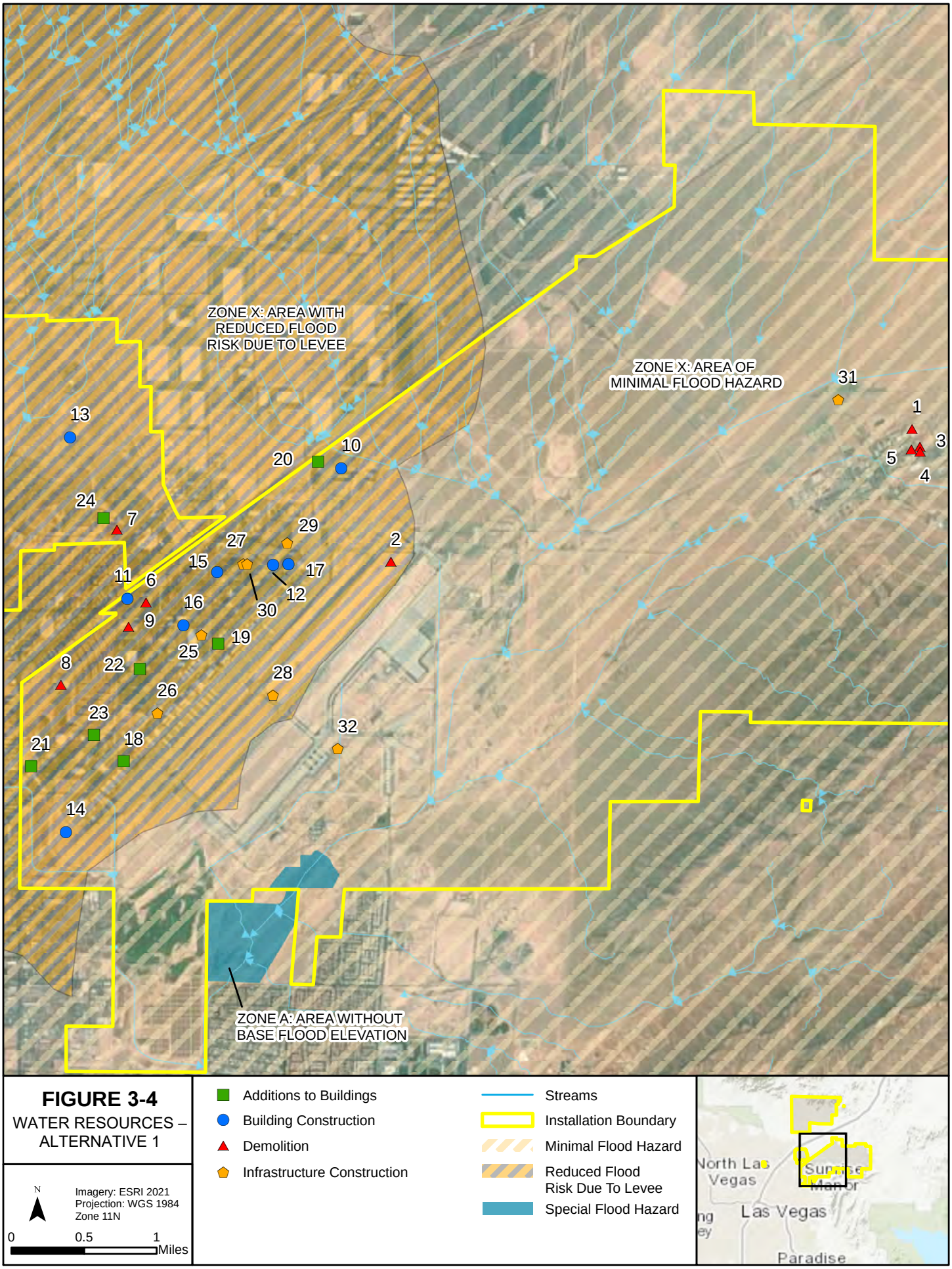


FIGURE 3-4
WATER RESOURCES – ALTERNATIVE 1

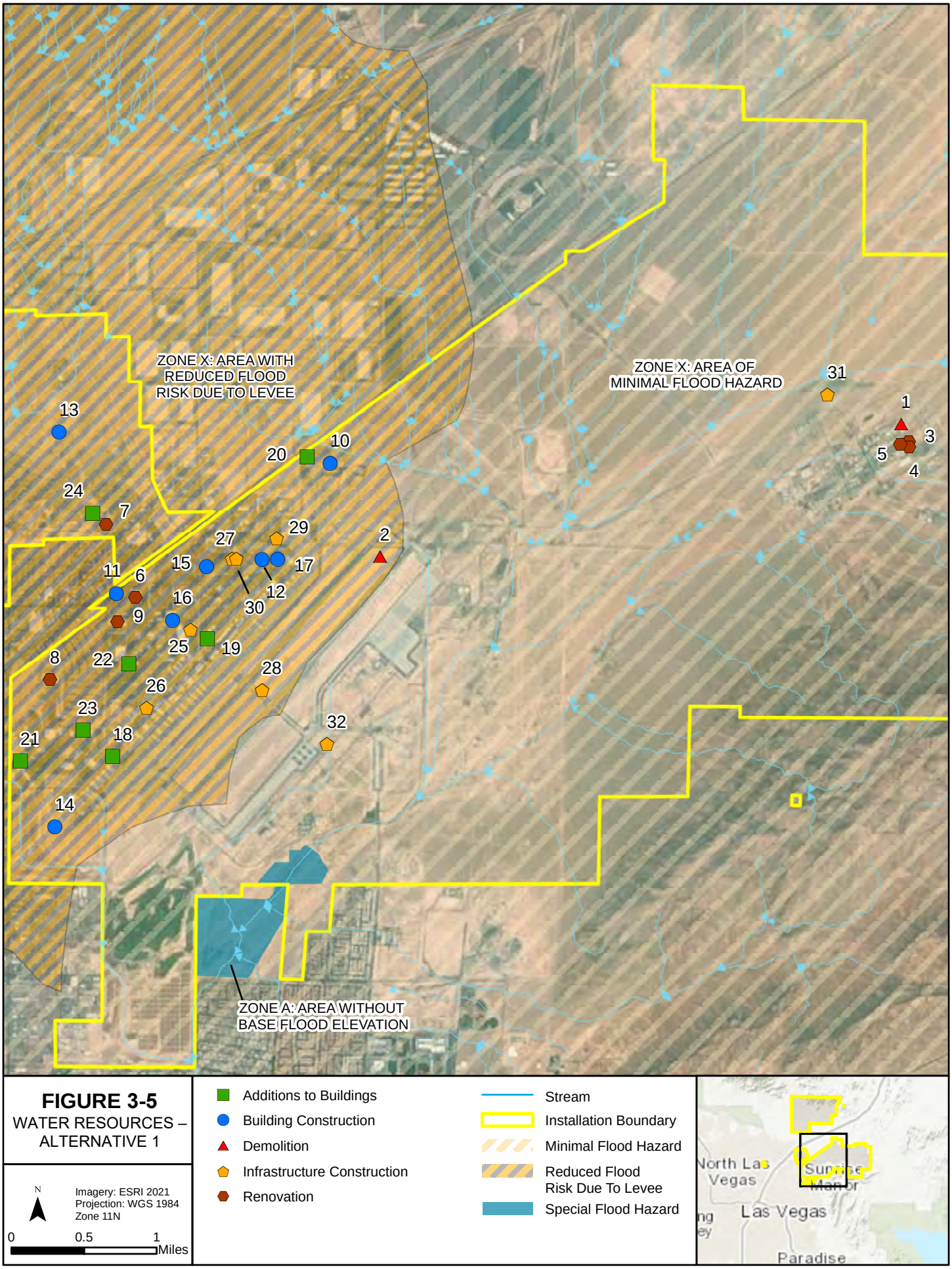


FIGURE 3-5
WATER RESOURCES – ALTERNATIVE 1

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, 2024). 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 1-1**.

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 **Figures 3-6** and **3-7**). 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).

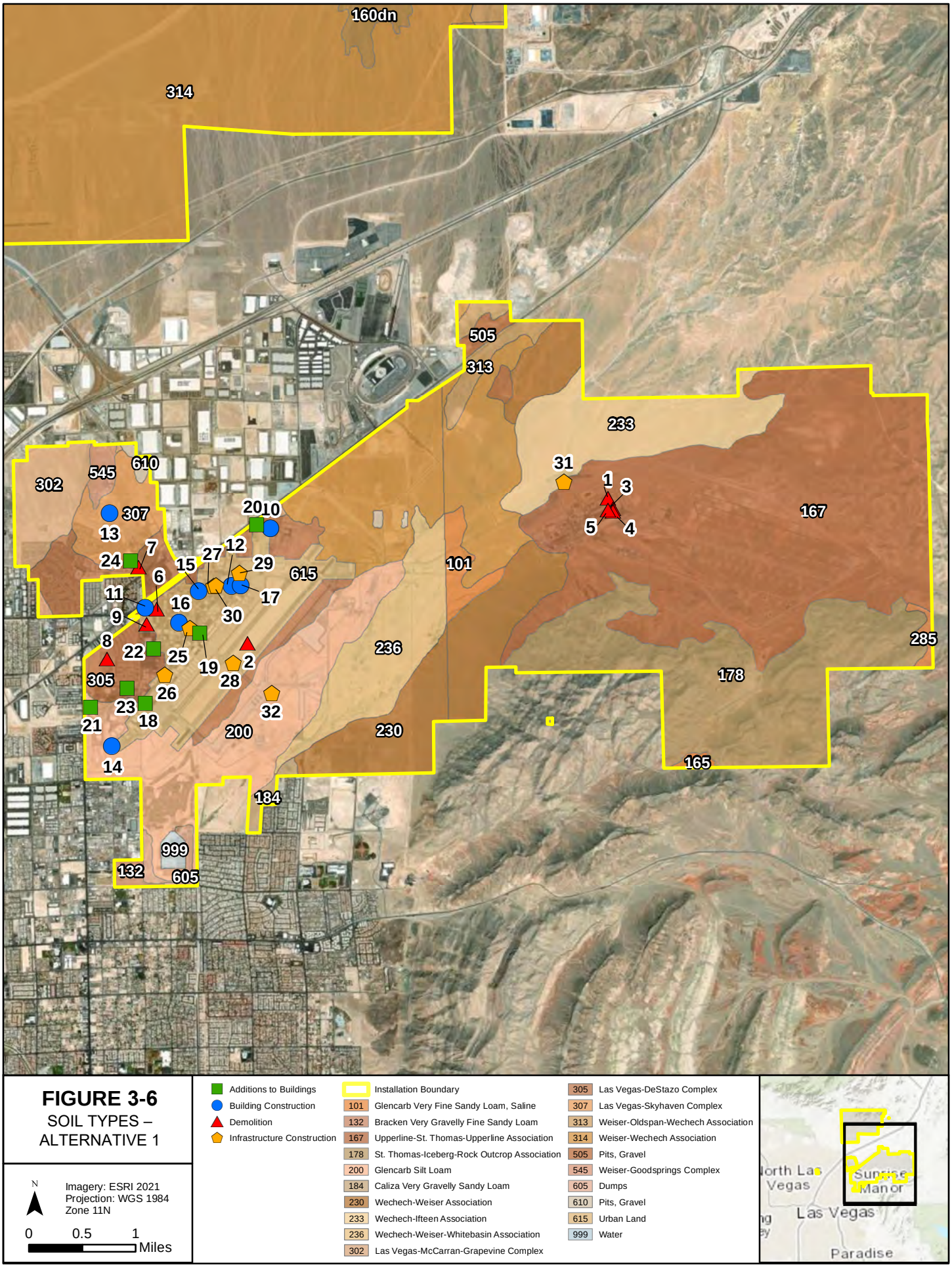


FIGURE 3-6
SOIL TYPES –
ALTERNATIVE 1

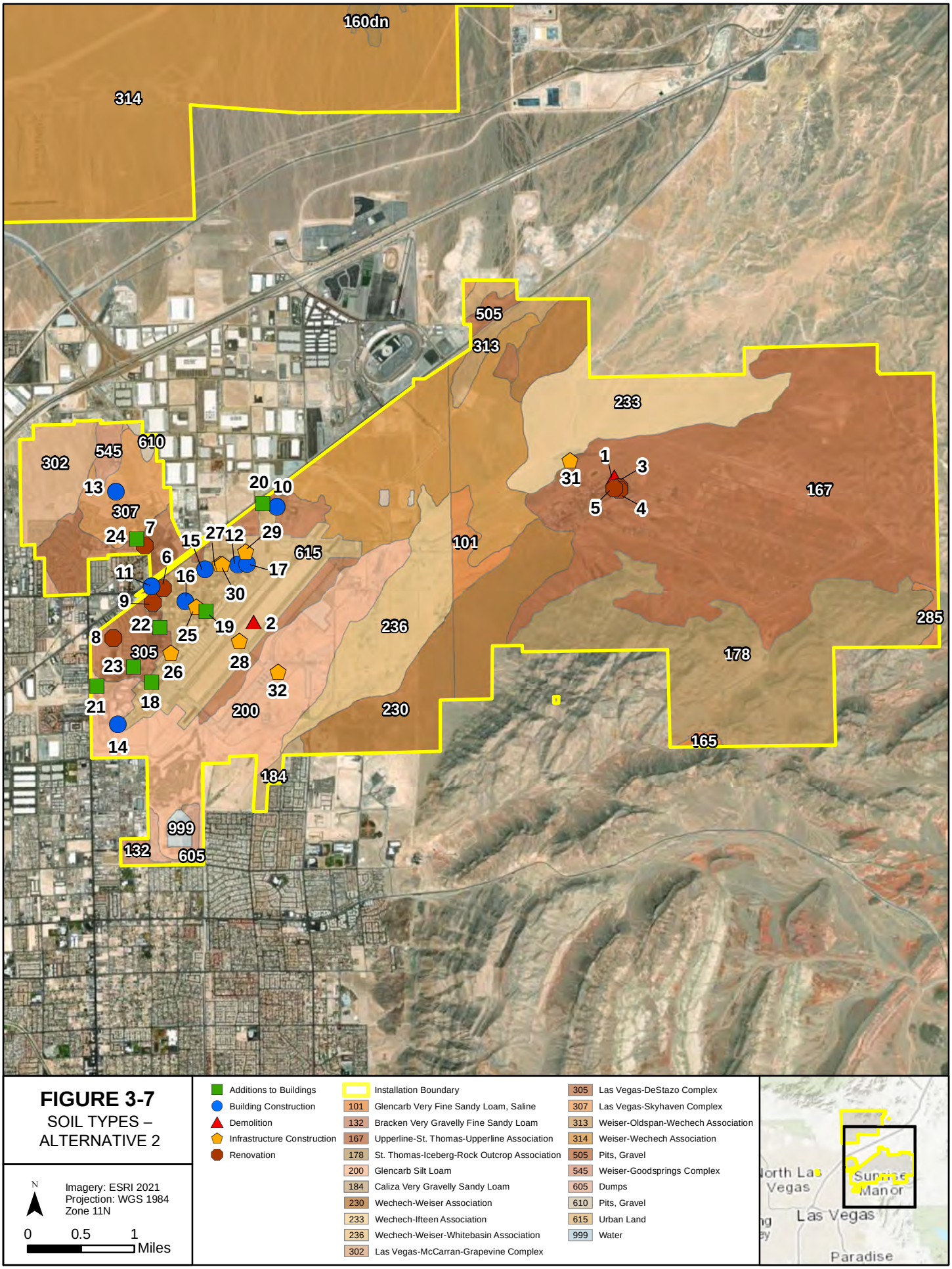


FIGURE 3-7
SOIL TYPES –
ALTERNATIVE 2

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 1-1**.

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 **Figures 3-8** and **3-9**.

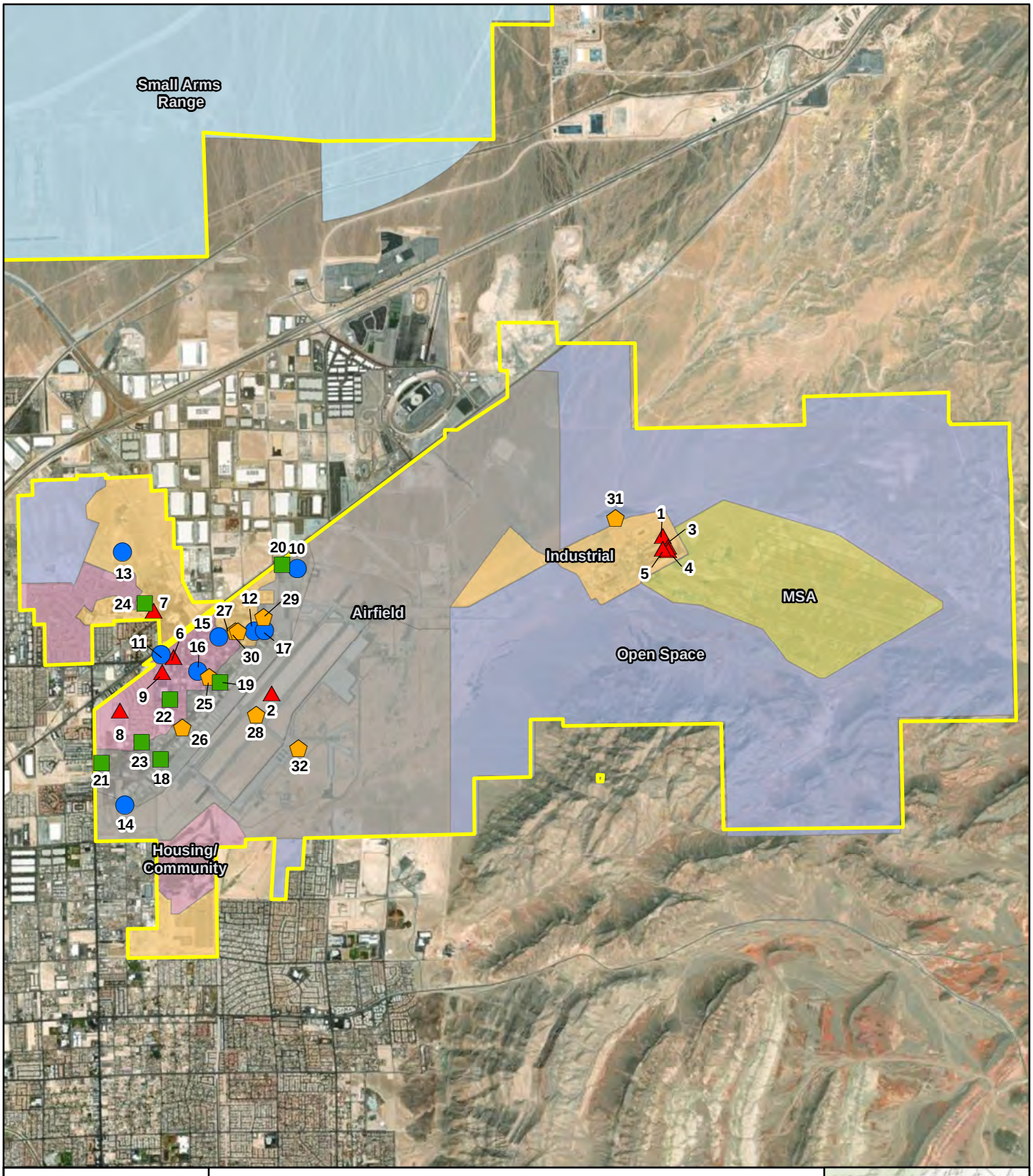


FIGURE 3-8
LAND USE – ALTERNATIVE 1

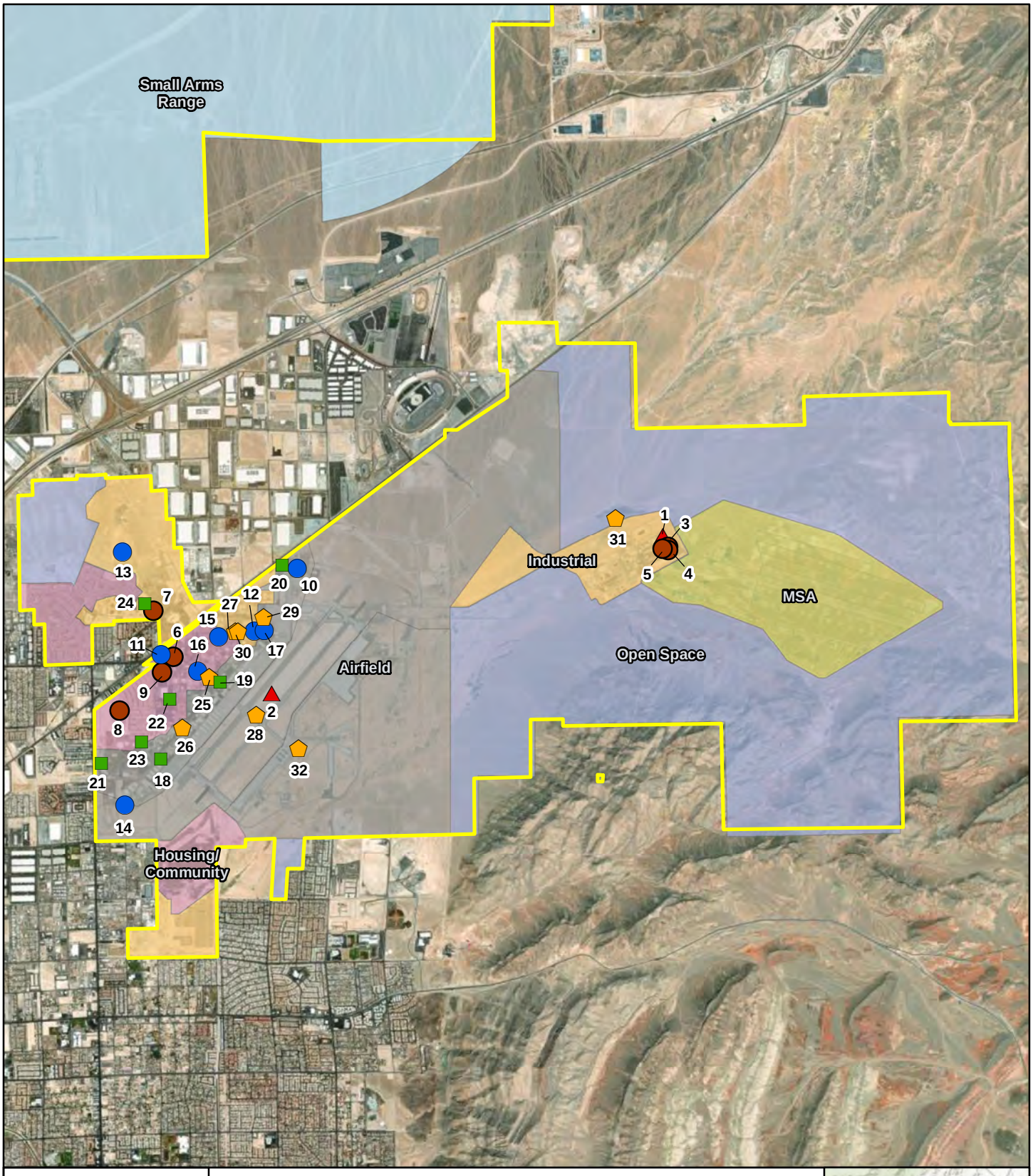


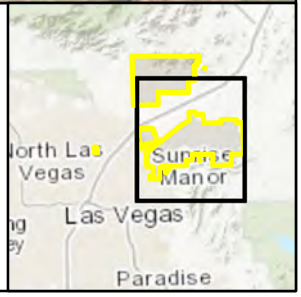
FIGURE 3-9
LAND USE – ALTERNATIVE 2

N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 0.5 1 Miles

- Additions to Buildings
- Building Construction
- Demolition
- Infrastructure Construction
- Renovation
- Installation Boundary
- Airfield
- Housing/Community
- Industrial
- MSA
- Open Space
- Small Arms Range



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 (%)	2019	Average Annual Growth Rate 2010–2010 (%))	Total Growth 2000–2019 (%)
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
Total	**6,162**	**36,031**	**42,193**

Sources: Nellis AFB, 2017b
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[a]	1.9%	2.2%	2.0%	1.6%
Rental Vacancy Rate[b]	6.7%	8.9%	7.9%	6.0%
Median Value[c]	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, 2019a). There are also more than 100 private schools and 20 public

charter schools nearby as alternatives to the on-Base schools (Nellis AFB, 2019a; 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[a]	Percent below Poverty	Percent Youth[b]	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.
Notes:
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 APE for this study includes the footprint of physical disturbance (50-meter [0.03-mile] radius) and an 800-meter (0.5-mile) radius around each project location to account for visual, auditory, atmospheric, and cumulative effects.

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[2]])
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).

[2] 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.

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 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.

A total of 18 archaeological sites are located within the APE for the proposed projects, but are not within the footprint of physical disturbance. Fifteen of these sites either were determined not eligible for inclusion in the NRHP (with SHPO concurrence) or were determined eligible, but were later mitigated. Three sites do not have a formal eligibility determination with SHPO concurrence and are treated as eligible for the purposes of this undertaking.

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).

A total of 41 buildings either would be renovated or demolished under the Proposed Action (**Table 3-8**). Of these 41 structures, 24 buildings are older than 50 years. Four of the buildings older than 50 years are contributing elements to the Lomie Gray Heard School District, and nine additional buildings are NRHP eligible but covered under Program Comments and mitigated by documentation at the national level. The remaining 11 buildings that are older than 50 years have been determined not eligible for listing in the NRHP (see SHPO letter dated 12 July 2024 in **Appendix A**).

An additional nine buildings within the APE but outside of the footprint of physical disturbance are NRHP eligible or potentially eligible (**Figures 3-10–3-15**). Furthermore, six unevaluated, potentially historic structures are within the APE. However, Nellis AFB determined that there would be no adverse effects to these buildings and structures, with SHPO concurrence.

Table 3-8.
Buildings to be Renovated or Demolished under the Proposed Action

SHPO Resource Number	Building Number	Date Constructed	Individual Eligibility Status	SHPO Concurrence Date
B15141	1781	1953	Contributing element to historic district	July 18, 2018; Sept. 12, 2022
B15142	1782	Ukn (1956–62)	Contributing element to historic district	July 18, 2018; Sept. 12, 2022
B15143	1783	1953	Contributing element to historic district	July 18, 2018; Sept. 12, 2022
B15144	1784	1953	Contributing element to historic district	July 18, 2018; Sept. 12, 2022
B15145	1785	1956	Contributing element to historic district	July 18, 2018
B15146	1786	1967	Contributing element to historic district	July 18, 2018
	1787	1990	Not eligible	July 18, 2018
B15147	1788	1956	Contributing element to historic district	July 18, 2018; Sept. 12, 2022
B15148	1789	1953	Contributing element to historic district	July 18, 2018
B15149	1790	1953	Contributing element to historic district	July 18, 2018
	10206	1954	Eligible: mitigated via program alternative	2006; July12, 2024
S3453	10238 (baseball field)	1954	Not eligible	June 6, 2023; July 12, 2024
B19271	10235	1955	Not eligible	June 6, 2023; July 12, 2024
-	6441	1957	Eligible: mitigated via program alternative	2004
-	6451	1957	Eligible: mitigated via program alternative	2004
-	6461	1957	Eligible: mitigated via program alternative	2004
-	6471	1957	Eligible: mitigated via program alternative	2004
-	6481	1957	Eligible: mitigated via program alternative	2004
-	6501	1957	Eligible: mitigated via program	2004

SHPO Resource Number	Building Number	Date Constructed	Individual Eligibility Status	SHPO Concurrence Date
			alternative	
-	6541	1957	Eligible: mitigated via program alternative	2004
-	6551	1957	Eligible: mitigated via program alternative	2004
B13736	604	1964	Not eligible	June 19, 2020; Sept. 12, 2022: June 6, 2023
B16001	625	1965	Not eligible	June 19, 2020; Sept. 12, 2022; May 4, 2023; June 6, 2023
B15937	230	1970	Not eligible	June 19, 2020; Sept. 12, 2022; June 6, 2023
-	2364	1990	Not eligible	June 6, 2023
B16078	2935	1986	Not eligible	June 19, 2020; July 12, 2024
B16079	2940	1986	Not eligible	June 19, 2020; July 12, 2024
B16080	2945	1986	Not eligible	June 19, 2020; July 12, 2024
B16081	2950	1986	Not eligible	June 19, 2020; July 12, 2024
B16082	2955	1986	Not eligible	June 19, 2020; July 12, 2024
B16083	2960	1986	Not eligible	June 19, 2020; July 12, 2024
B16084	2965	1986	Not eligible	June 19, 2020; July 12, 2024
B16085	2970	1986	Not eligible	June 19, 2020; July 12, 2024
B16086	2975	1986	Not eligible	June 19, 2020; July 12, 2024
-	61663	1994	Not evaluated: not of historic age	NA
B19272	10236	1969	Not eligible	June 6, 2023; July 12, 2024
B15925	118	1966	Not eligible	June 19, 2020
-	204	2010	Not evaluated: not of historic age	NA
-	1730	2010	Not evaluated: not of historic age	NA
-	2966	2011	Not evaluated: not of historic age	NA
-	2967	2011	Not evaluated: not of historic age	NA

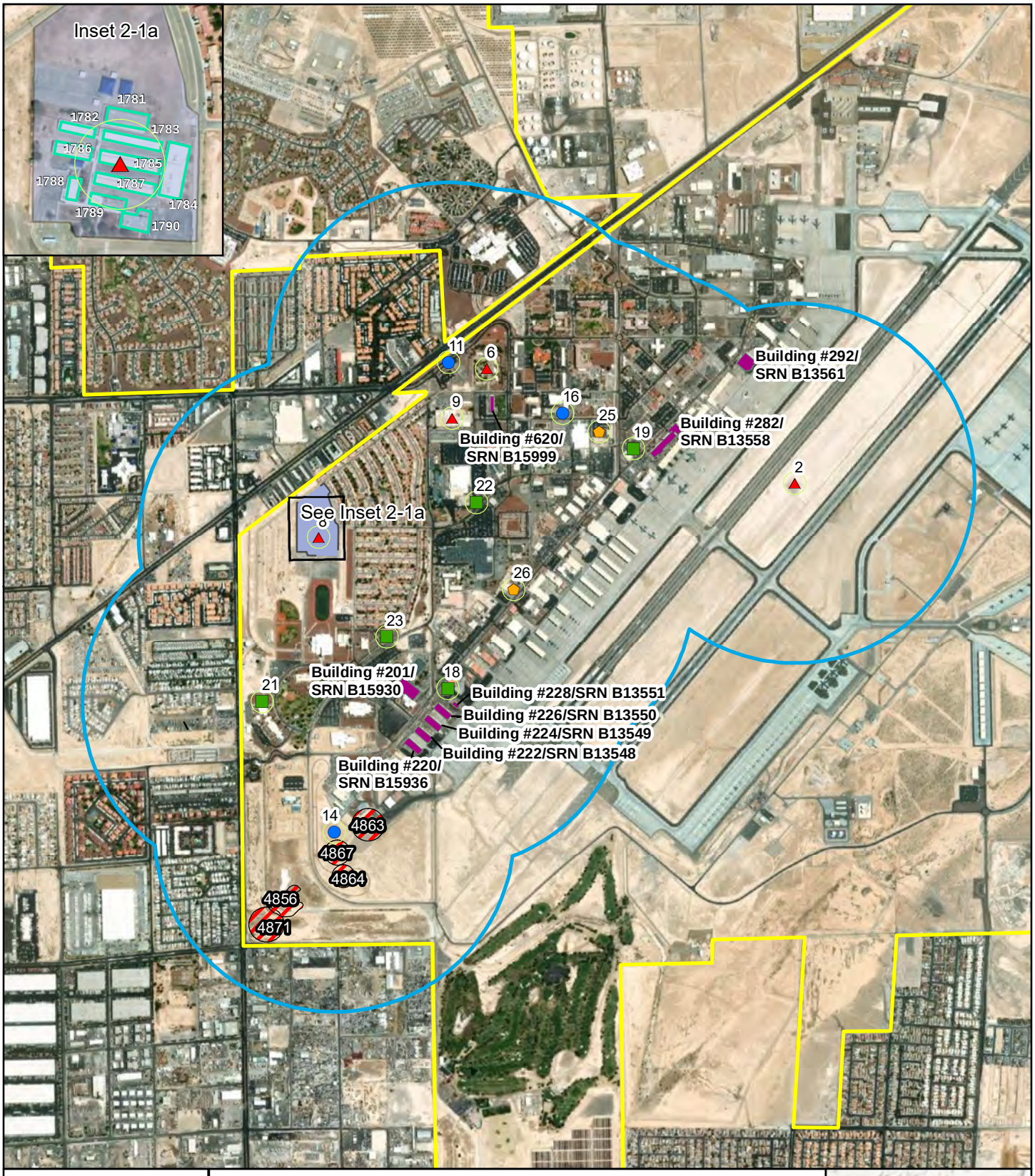


FIGURE 3-10
AREA OF POTENTIAL EFFECT – ALTERNATIVE 1

N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 1,000 2,000 Feet

Scale 1:24,000

- Additions to Buildings
- Building Construction
- Demolition
- Infrastructure Construction
- Archaeological Sites
- Building Demolition Footprint Project
- Direct Area of Potential Effects (50 m)
- Indirect Area of Potential Effects (800 m)
- Installation Boundary
- Historic District
- NRHP-Eligible Buildings within 800 m of APE

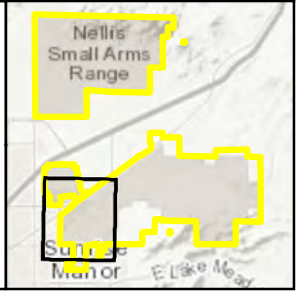


FIGURE 3-11
AREA OF POTENTIAL EFFECT – ALTERNATIVE 1

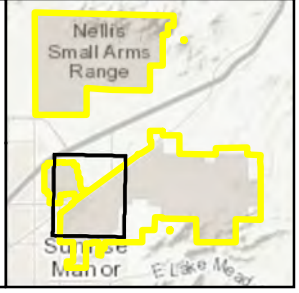
N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 1,000 2,000 Feet

Scale 1:24,000

- Additions to Buildings
- Building Construction
- Demolition
- Infrastructure Construction
- Archaeological Sites
- Building Demolition Footprint Project
- Direct Area of Potential Effects (50 m) Indirect
- Area of Potential Effects (800 m) Installation
- Boundary
- Historic District
- NRHP-Eligible Buildings within 800 m of APE



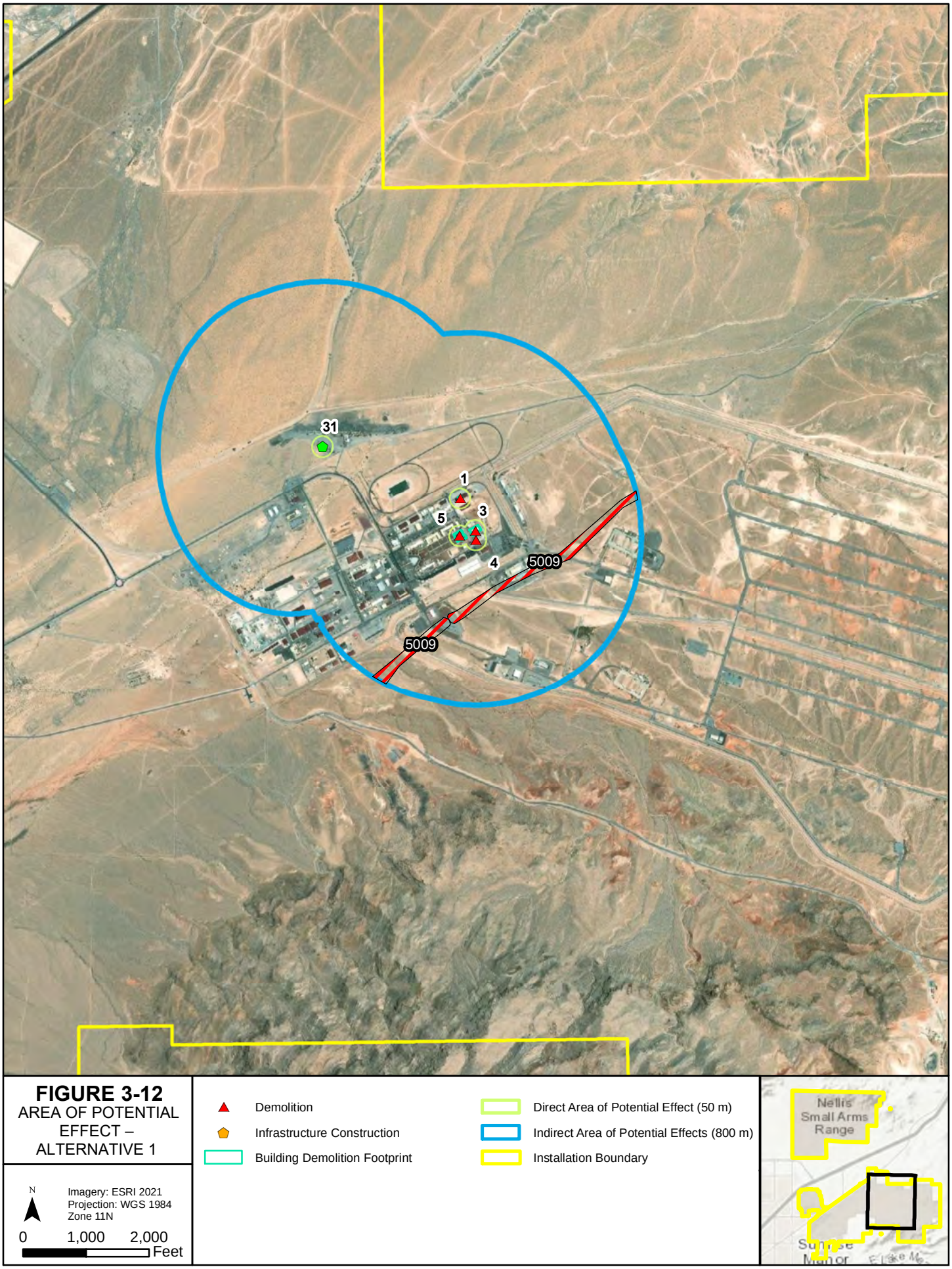


FIGURE 3-12
AREA OF POTENTIAL EFFECT – ALTERNATIVE 1

FIGURE 3-13
AREA OF POTENTIAL EFFECT – ALTERNATIVE 2

N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 1,000 2,000 Feet

Scale 1:24,000

- Additions to Buildings
- Building Construction
- Infrastructure Construction
- Renovation
- Archaeological Sites
- Building Demolition Footprint Project
- Direct Area of Potential Effects (50 m)
- Indirect Area of Potential Effects (800 m)
- Installation Boundary
- Historic District
- NRHP-Eligible Buildings within 800 m of APE

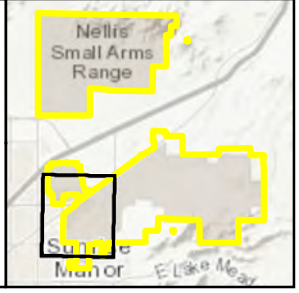


FIGURE 3-14
AREA OF POTENTIAL EFFECT – ALTERNATIVE 2

N

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 1,000 2,000 Feet

Scale 1:24,000

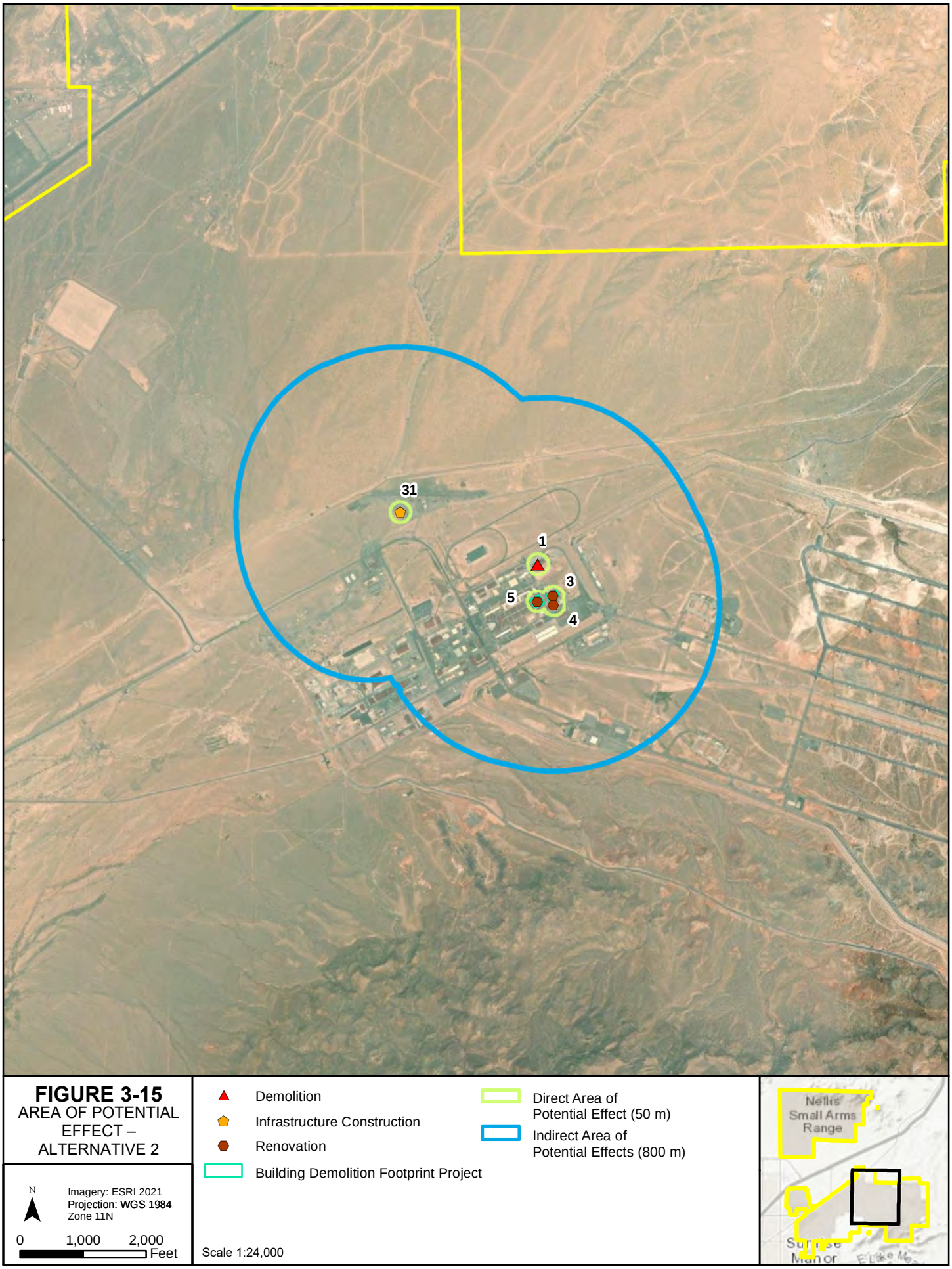


FIGURE 3-15
AREA OF POTENTIAL EFFECT – ALTERNATIVE 2

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 **Figures 3-16** and **3-17**, 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.

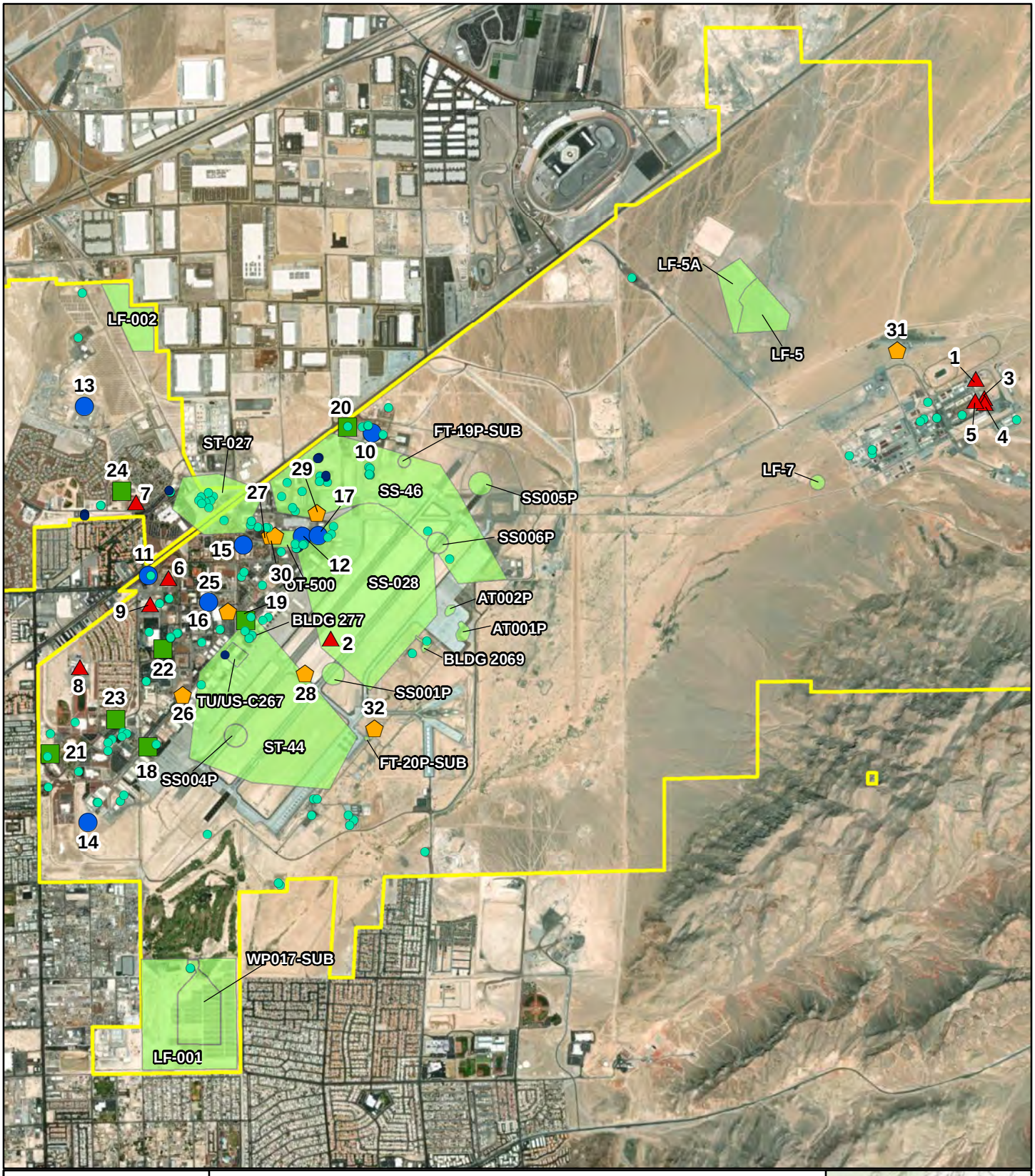


FIGURE 3-16
HAZMAT – ALTERNATIVE 1

AST = aboveground storage tank; ERP = Environmental Restoration Program; UST = underground storage tank.

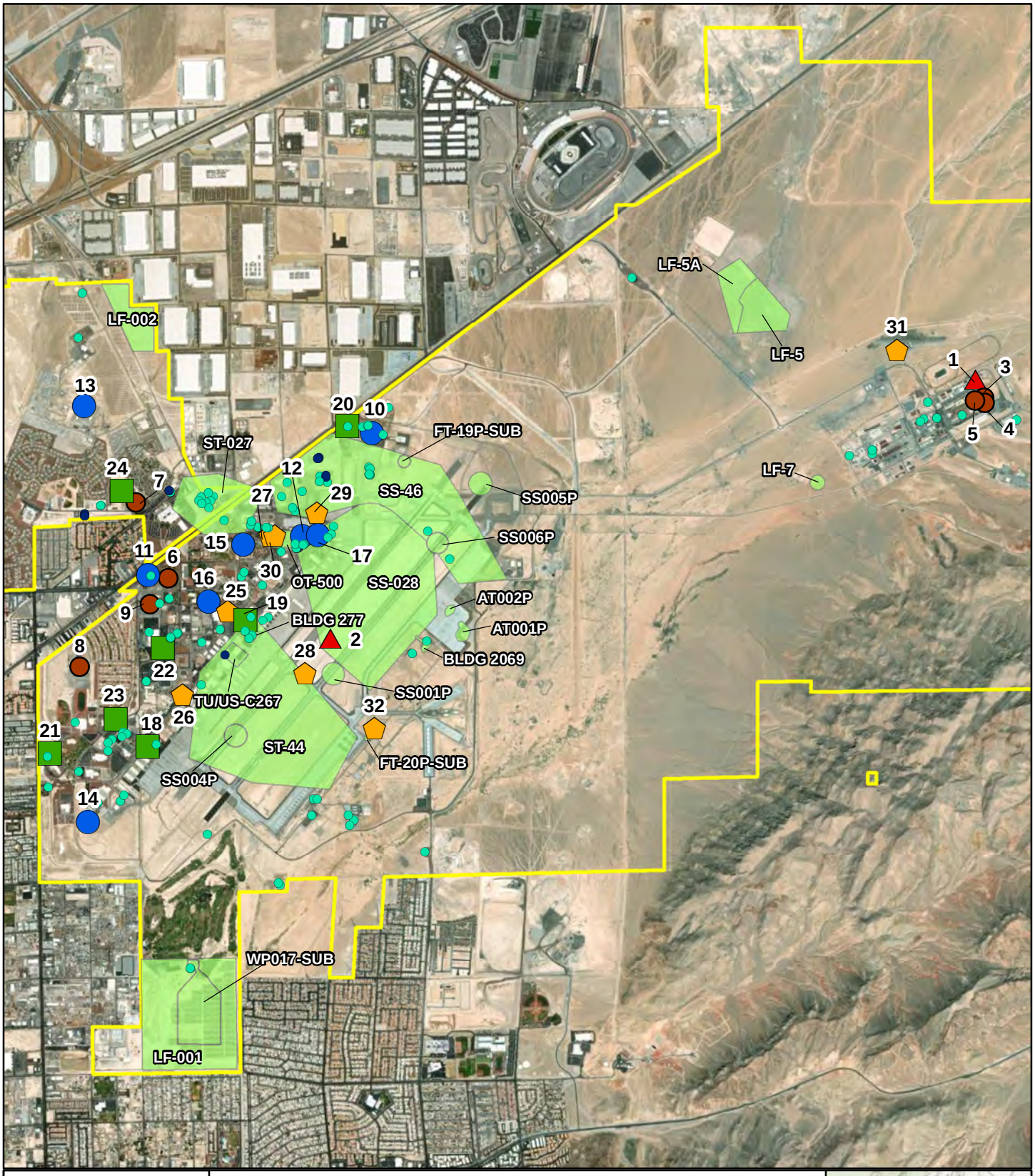
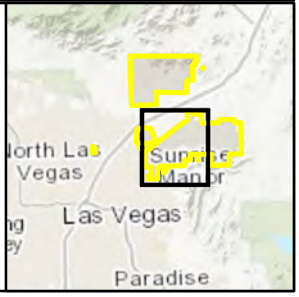


FIGURE 3-17
HAZMAT – ALTERNATIVE 2

Imagery: ESRI 2021
Projection: WGS 1984
Zone 11N

0 0.25 0.5 Miles

- Additions to Buildings
- AST
- Building Construction
- Demolition
- Infrastructure Construction
- Renovation
- UST
- ERP Site
- Installation Boundary



AST = aboveground storage tank; ERP = Environmental Restoration Program; UST = underground storage tank.

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)

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

3.11.2.4 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).

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 man-made, 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 15,400 vehicles for Las Vegas Boulevard North at the Range Road Gate, 21,100 vehicles for East Craig Road at the Salmon Drive Gate, and 24,000 vehicles for North Nellis Boulevard near Las Vegas Boulevard (Nevada Department of Transportation, 2023).

There are five gates that provide access to Nellis AFB east of Las Vegas Boulevard North: Main Gate, Beale South Gate, Simons Gate, Area II Gate, and the closed Hollywood Gate. **Table 3-10** lists the peak hour counts at each gate.

Table 3-10.
Existing Traffic Counts at Nellis AFB Access Gates (2023)

Gate	A.M. Peak Hour		P.M. Peak Hour	
	Entry	Exit	Entry	Exit
Main Gate	728	238	454	815
Simons Gate	398	51	44	344
Beale Gate	728	187	262	815
Area II Gate	625	26	58	310

Source: Nellis AFB, 2023
A.M. = morning; P.M. = evening

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.

3.12.2.2 Electricity and Natural Gas

NV Energy provides approximately 45 percent of Nellis AFB's power requirement from the electric grid. Nellis AFB also receives approximately 12 percent of its electricity via hydropower from the Western Area Power Administration's power stations on the Colorado River. In addition, Nellis AFB receives

approximately 43 percent of its electricity from two solar arrays stationed on Base. The first was completed in 2007 and the second was completed in 2015. The two systems encompass approximately 240 acres and contain approximately 115,000 panels. The production of the solar arrays equaled 51.925 gigawatts-hours.

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, 2024). 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, 2019b). 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.

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
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 SIPs 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_{10}, and $PM_{2.5}$, and the O_3 precursors VOC and NOx, 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 warm-up 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 2-1**.

Table 4-2 provides estimated air emissions of criteria pollutants SO_2 and $PM_{2.5}$, 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_2 and $PM_{2.5}$ Emission Estimates for Alternative 1 Proposed Demolition/Renovation/Construction at Nellis AFB

Activity	Total Annual Emissions in Tons	
	SO_2	$PM_{2.5}$
2025		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.041
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2026		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.057
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2027		
Proposed Nellis AFB Construction/Renovation Activities	0.005	0.063
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2028		
Proposed Nellis AFB Construction/Renovation Activities	0.007	0.084
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2029		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.037
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2030		
Proposed Nellis AFB Construction/Renovation Activities	0.002	0.019
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**

Note: Years presented are fiscal years
SO_2 = sulfur dioxide; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns

SO_2 and $PM_{2.5}$ 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_3 and a maintenance area for CO and PM_{10}. For the General Conformity Applicability Analysis of CO, PM_{10}, and the O_3 precursors VOC and NO_x, 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_x	PM_{10}
2025				
Proposed Nellis AFB Construction/Renovation Activities	0.379	1.191	1.018	0.243
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2026				
Proposed Nellis AFB Construction/Renovation Activities	0.420	1.901	1.387	3.672
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2027				
Proposed Nellis AFB Construction/Renovation Activities	0.281	2.148	1.757	2.101
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2028				
Proposed Nellis AFB Construction/Renovation Activities	1.487	3.206	2.227	0.839
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2029				
Proposed Nellis AFB Construction/Renovation Activities	0.467	1.608	1.088	0.081
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2030				
Proposed Nellis AFB Construction/Renovation Activities	0.101	0.853	0.571	0.019
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**

Note: Years presented are fiscal years.
CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = 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, NOx, CO, and PM_{10} 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) (**Appendix C**). 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 2-2**.

Table 4-4 provides estimated air emissions of criteria pollutants SO_2 and $PM_{2.5}$, 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_2 and $PM_{2.5}$ Emission Estimates for Alternative 2
ProposedDemolition/Renovation/Construction at Nellis AFB

Activity	Total Annual Emissions in Tons	
	SO_2	$PM_{2.5}$
2025		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.041
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2026		
Proposed Nellis AFB Construction/Renovation Activities	0.003	0.044
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2027		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.052
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2028		
Proposed Nellis AFB Construction/Renovation Activities	0.006	0.074
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2029		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.037
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**
2030		
Proposed Nellis AFB Construction/Renovation Activities	0.004	0.032
Initial Indicator of Significance	250	250
Exceed Initial Indicator of Significance?	**No**	**No**

Note: Years presented are fiscal years.
SO_2 = sulfur dioxide; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns

SO_2 and $PM_{2.5}$ 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_3 and a maintenance area for CO and PM_{10}. For the General Conformity Applicability Analysis of CO, PM_{10}, and the O_3 precursors VOC and NOx, 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_x	PM_{10}
2025				
Proposed Nellis AFB Construction/Renovation Activities	0.379	1.191	1.018	0.243
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2026				
Proposed Nellis AFB Construction/Renovation Activities	1.472	1.459	1.089	2.738
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2027				
Proposed Nellis AFB Construction/Renovation Activities	2.591	1.893	1.386	0.228
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2028				
Proposed Nellis AFB Construction/Renovation Activities	0.868	2.860	1.976	0.731
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2029				
Proposed Nellis AFB Construction/Renovation Activities	0.467	1.608	1.088	0.081
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**
2030				
Proposed Nellis AFB Construction/Renovation Activities	0.354	1.559	0.969	0.036
Initial Indicator of Significance	100	100	100	100
Exceed Initial Indicator of Significance?	**No**	**No**	**No**	**No**

Notes: Years presented are fiscal years
CO = carbon monoxide; NO_x = nitrogen oxides; PM_{10} = 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, NOx, CO, and PM_{10} 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 (**Appendix C**). 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_3, which can exacerbate the existing issues with attainment of the O_3 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_2e	**Alternative 2 CO_2e**
2025	281.1	281.1
2026	416.4	322.6
2027	519.4	400.1
2028	683.7	615.7
2029	343.0	343.0
2030	178.3	343.3

CO_2e = 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_2e 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 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, 2024). 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 nonnative 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 ft² of new construction would occur with 29,300 ft^2 of building additions, 75,600 ft^2 of new roads, and 285,091 ft² of new impervious surfaces.

Inversely, the demolition of 457,457 ft² 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^2. 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^2 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^2 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^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 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^2 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 disproportionally 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, 22 of which are more than 50 years old. A total of 41 buildings would either be renovated or demolished under Alternative 1 (*see* **Table 3-8, Figures 3-10–3-12**). Of these 41, structures, 25 buildings are older than 50 years. Nine of the buildings older than 50 years are associated with the Lomie Gray Heard School Historic District.

Nellis AFB has determined that there would be an adverse effect to the Lomie Gray Heard School District and the buildings covered under the 2004 *Advisory Council on Historic Preservation Program Comment for Capehart and Wherry Era Housing and Associated Structures and Landscape Features (1949–1962)* and the 2006 *Advisory Council on Historic Preservation Program Comment for Cold War Era Unaccompanied Personnel Housing (1946–1974)*. Furthermore, Nellis AFB has determined that no further mitigation for the historic district is necessary for this undertaking beyond the *2022 Memorandum of Agreement Between the United States Air Force and the Nevada State Historic Preservation Officer Regarding the Demolition of Lomie Gray Heard School, Located on Nellis Air Force Base, Clark County, Nevada*, and that the other buildings were previously mitigated through documentation at the national level. The SHPO agreed with this finding in a letter dated 15 July 2024 (**Appendix A**).

The remaining seven buildings older than 50 years have been determined to not be eligible for listing on the NRHP by Nellis AFB. In a letter dated 15 July 2024, the SHPO concurred with Nellis AFB that the remaining buildings are not part of a potential historic district. 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, only one proposed demolition project would involve a structure older than 50 years. As of July 2024, the building proposed for demolition under Alternative 2 (Building 10238) was determined not eligible for listing in the NRHP, with SHPO concurrence. The buildings listed in **Table 3-8**, including those associated with the Lomie Grey Heard School Historic District, would be renovated only. As discussed under Alternative 1, the buildings located in the historic district have been previously mitigated. 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 3-16**). 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)

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 onsite 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^2) 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 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 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^2 of debris would be generated for each square foot of construction activity, and approximately 158 lbs/ft^2 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^2) 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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Big Pine Paiute Tribe
P.O. Box 700
Big Pine, CA 93513

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

U.S. Army Corps of Engineers - Los Angeles District
915 Wilshire Boulevard
Suite 1101
Los Angeles, CA 90017

U.S. Army Corps of Engineers – Arizona-Nevada Area Office
3636 N. Central Avenue, Suite 900
Phoenix, AZ 85012

Bruce Peterson
USDA Natural Resource Conservation Service - Nevada State Office
1365 Corporate Boulevard
Reno, NV 89502

Deborah MacNeill
Area Manager
Humboldt-Toiyabe National Forest
4701 North Torrey Pines Drive,
Las Vegas, NV 89130

Jarrod Edmunds, Special Projects Office Leader
USDA NRCS - Las Vegas Service Center
Parc Place Professional Complex, 5820 South Pecos Road, Building A, Suite 400
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Douglas Furtado, District Manager
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George Tsukamoto
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Nevada Department of Wildlife – Southern Region - Henderson Office
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Marilyn Kirkpatrick
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Jacob Snow
Regional Transportation Commission of Southern Nevada
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City of North Las Vegas - Community Development, Planning, & Zoning Division
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Las Vegas, NV 89030

Jennifer Olsen
Southern Nevada Regional Planning Coalition
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John Mendoza, Senior Planner
Clark County Dept of Air Quality and Env Mgt.
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Elise Anne Boeke
USDA Natural Resource Conservation Service - Utah State Office
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Salt Lake City, UT 84138

Mario Bermudez
Clark County Dept. of Comprehensive Manager
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Andre Emme
Nevada State Clearinghouse
Nevada Division of State Lands
901 S Stewart St., STE 5003
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Al Leskys, Senior Air Quality Specialist
Clark County Department of Air Quality & Environmental Management
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Bradley Crowell, Director
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901 S. Stewart St.m STE 1003
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Carolyn Edwards
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Nevada State Clearinghouse, Dept of Admin, Division of Budget and Planning
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Nevada State Historic Preservation Office
901 S. Stewart St., Suite 5004
Carson City, NV 89701

Rebecca Palmer
Nevada State Historic Preservation Office
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Nevada Fish and Wildlife Office
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Reno, NV 89502

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

Michael Senn
U.S. Fish and Wildlife Service - Desert National Wildlife Refuge Complex
4701 North Torrey Pines Drive
Las Vegas, NV 89130

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

Bruce Peterson
State Conservationist
USDA Natural Resource Conservation Service - Nevada State Office
1365 Corporate Boulevard
Reno, NV 89502

Dear Mr. Peterson,

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 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.CHARLES.W.JR.1073438124

Digitally signed by ROWLAND.CHARLES.W.JR.1073438124
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

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

6 OCTOBER 2021

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

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. Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at 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

6 OCTOBER 2021

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 activites. 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 defininging 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.

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

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.

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 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 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.CHARLES.W.JR.1073438124

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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

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

Notes:
ft^2 = 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^2 and one (1) baseball field totaling 174,240 ft^2 . 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^2 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^2 of new construction in the form of additions to existing buildings and 32,014 ft^2 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^2 of new construction, 27,040 LF of new fencing, and 75,600 ft^2 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)
Demolition					
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^2	-174,240 ft^2	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways.	2022	300 ft^2	-300 ft^2	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^2	-14,448 ft^2	3
RKMF130136 DEMO B10235	Gate 2B, 1,800 ft^2. Demolish B10235 to include foundation and utilities. Install 4" of rock mulch over ground.	2022	1,800 ft^2	-1,800 ft^2	4
RKMF200044 DEMO AREA 2 DINING FAC B10206	Demolish B10206, 30,288 ft^2 dining facility Area II to include footing and service lines. Install 4" of rock mulch over ground.	2023	30,288 ft^2	-30,288 ft^2	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^2	-14,904 ft^2	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^2 B2935 - 2,400 ft^2 B2940 - 2,800 ft^2 B2945 - 5,773 ft^2 B2950 - 2,400 ft^2 B2955 - 5,773 ft^2 B2960 - 2,800 ft^2 B2965 - 2,800 ft^2 B2970 - 5,773 ft^2 B2975 - 2,400 ft^2	-32,919 ft^2	7

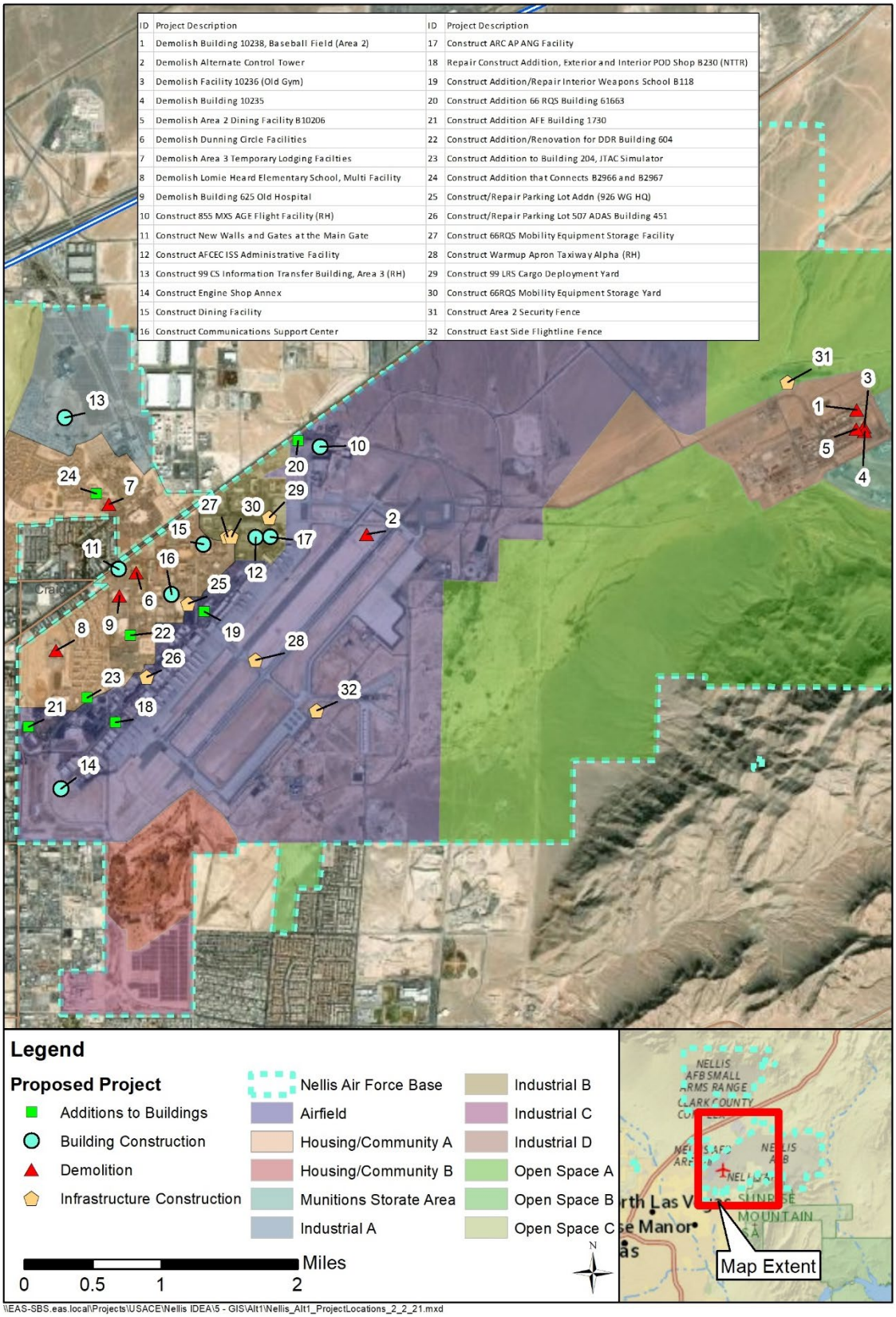
Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-1)
RKMF200021 DEMO LOMIE HEARD ELEMENTARY SCHOOL, MULTI FAC	Demolition includes ten dependent school facilities that have been 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^2 B1781 - 4,612 ft^2 B1782 - 6,093 ft^2 B1783 - 7,637 ft^2 B1784 - 6,916 ft^2 B1785 - 6,456 ft^2 B1786 - 12,536 ft^2 B1787 - 7,330 ft^2 B1788 - 3,783 ft^2 B1798 - 7,375 ft^2 B1790 - 3,423 ft^2	-66,161 ft^2	8
RKMF220003 DEMO BLDG 625 OLD HOSPITAL	122,414 ft^2. This was the former base hospital. Demolish facility to include foundation, north parking lot, and utilities back to the mains.	2024	122,414 ft^2	-122,414 ft^2	9
Building Construction					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY	Construct 7,200 ft^2 AGE MX facility by B61685.	2022	7,200 ft^2	+7,200 ft^2	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^2	+3,000 ft^2	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3	Construct 900 ft^2 Information Transfer Building and generator.	2023	900 ft^2	+900 ft^2	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^2	+3,500 ft^2	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^2	+18,201 ft^2	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^2	+34,164 ft^2	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^2	+3,500 ft^2	17
Additions to Buildings					
RKMF130131 REPAIR CONSTRUCT ADDITION, EXTERIOR & INTERIOR POD SHOP B230	Construct a 2,250 ft^2 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^2 renovation 2,250 ft^2 addition	+2,250 ft^2	18
RKMF180086 CONSTRUCT ADDITION / REPAIR INTERIOR WEAPONS SCHOOL B118	Construct 3,500 ft^2 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^2 renovation 3,500 ft^2 addition	+3,500 ft^2	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^2 2,500 ft^2 renovation 7,500 ft^2 addition	+2,500 ft^2	20
RKMF190085 CONSTRUCT ADDITION AFE B1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area - 36,596 ft^2 2,000 ft^2 addition	+2,000 ft^2	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^2 waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft^2 renovation 1,050 ft^2 addition	+1,050 ft^2	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^2 3,000 ft^2 addition 2,500 ft^2 renovation	+2,500 ft^2	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^2 10,000 ft^2 addition 15,000 ft^2 renovation	+10,000 ft^2	24
Infrastructure Construction					
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^2 existing	+30,000 ft^2	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS B451	Reconfigure and expand existing parking lot.	2023	55,732 ft^2 existing	+27,499 ft^2	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^2 new	+12,000 ft^2	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^2 new	+131,570 ft^2	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^2 new	+43,000 ft^2	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^2 new	+9,600 ft^2	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^2). 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^2 (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^2 = 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


ID Project Description
1 Demolish Building 10238, Baseball Field (Area 2)
2 Demolish Alternate Control Tower
3 Demolish Facility 10236 (Old Gym)
4 Demolish Building 10235
5 Demolish Area 2 Dining Facility B10206
6 Demolish Dunning Circle Facilities
7 Demolish Area 3 Temporary Lodging Facilties
8 Demolish Lomie Heard Elementary School, Multi Facility
9 Demolish Building 625 Old Hospital
10 Construct 855 MXS AGE Flight Facility (RH)
11 Construct New Walls and Gates at the Main Gate
12 Construct AFCEC ISS Administrative Facility
13 Construct 99 CS Information Transfer Building, Area 3 (RH)
14 Construct Engine Shop Annex
15 Construct Dining Facility
16 Construct Communications Support Center
ID Project Description
17 Construct ARC AP ANG Facility
18 Repair Construct Addition, Exterior and Interior POD Shop B230 (NTTR)
19 Construct Addition/Repair Interior Weapons School B118
20 Construct Addition 66 RQS Building 61663
21 Construct Addition AFE Building 1730
22 Construct Addition/Renovation for DDR Building 604
23 Construct Addition to Building 204, JTAC Simulator
24 Construct Addition that Connects B2966 and B2967
25 Construct/Repair Parking Lot Addn (926 WG HQ)
26 Construct/Repair Parking Lot 507 ADAS Building 451
27 Construct 66RQS Mobility Equipment Storage Facility
28 Construct Warmup Apron Taxiway Alpha (RH)
29 Construct 99 LRS Cargo Deployment Yard
30 Construct 66RQS Mobility Equipment Storage Yard
31 Construct Area 2 Security Fence
32 Construct East Side Flightline Fence
Legend
Proposed Project
Additions to Buildings
Building Construction
Demolition
Infrastructure Construction
Nellis Air Force Base
Airfield
Housing/Community A
Housing/Community B
Munitions Storate Area
Industrial A
Industrial B
Industrial C
Industrial D
Open Space A
Open Space B
Open Space C
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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^2 and one baseball field totaling 174,240 ft^2. 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^2 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^2 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^2 of renovation activities and 29,300 ft^2 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^2 of new construction, 27,040 LF of new fencing, and 75,600 ft^2 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)
Demolition					
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^2	-174,240 ft^2	1
RKMF210057 DEMO ALT CONTROL TOWER	Demolish small masonry facility located in between the two parallel runways	2022	300 ft^2	-300 ft^2	2
Renovation					
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^2 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^2 renovated	None	4
RKMF200044 REPAIR/RENOVATE AREA 2 DINING FAC B10206	Repair/renovate Building 10206, 30,288 ft^2 dining facility Area II.	2023	30,288 ft^2 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^2 Renovations: B6441 - 2,068 ft^2 B6451 - 2,036 ft^2 B6461 - 2,068 ft^2 B6471 - 2,068 ft^2 B6481 - 2,421 ft^2 B6501 - 3,173 ft^2 B6541 - 470 ft^2 (garage) B6551 – 600 ft^2 (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 ft2 Renovation: B2935 - 2,400 ft^2 B2940 - 2,800 ft^2 B2945 - 5,773 ft^2 B2950 - 2,400 ft^2 B2955 - 5,773 ft^2 B2960 - 2,800 ft^2 B2965 - 2,800 ft^2 B2970 - 5,773 ft^2 B2975 - 2,400 ft^2	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^2 Renovation: B1781- 4,612 ft^2 B1782 - 6,093 ft^2 B1783 - 7,637 ft^2 B1784 - 6,916 ft^2 B1785 - 6,456 ft^2 B1786 - 12,536 ft^2 B1787 - 7,330 ft^2 B1788 - 3,783 ft^2 B1798 - 7,375 ft^2 B1790 - 3,423 ft^2	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^2	None	9
Building Construction					
RKMF170084 CONSTRUCT 855 MXS AGE FLIGHT FACILITY (RH)	Construct 7,200 SF AGE MX facility by 61685.	2022	7,200 ft^2	+7,200 ft^2	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

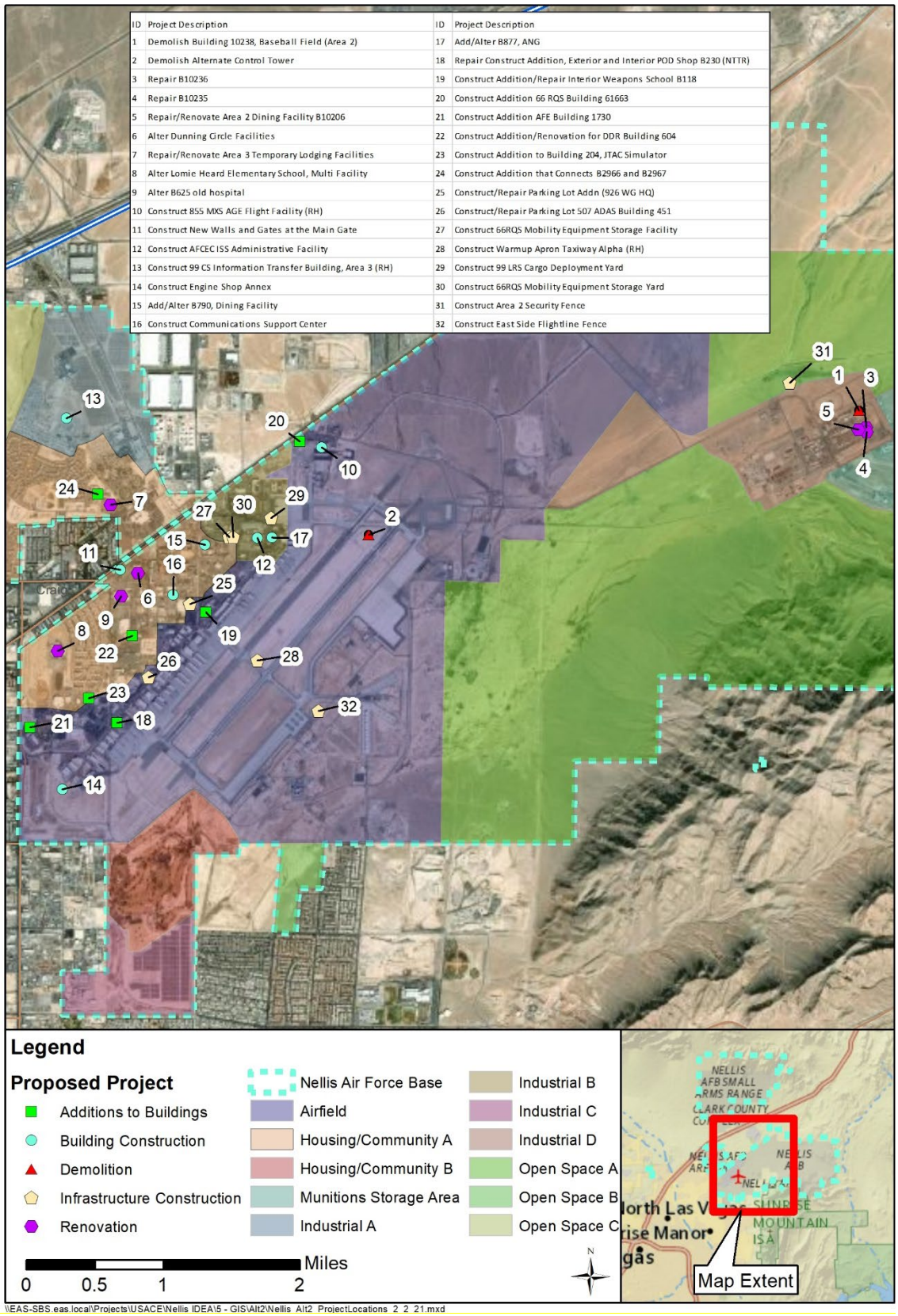
Project Number and Title	Description	Estimated Construction Start (Year)	Estimated Facility or Infrastructure Size	Estimated Change in Facility Footprint	Map Location (Figure 2-2)
RKMF200010 CONSTRUCT AFCEC ISS ADMINISTRATIVE FACILITY	Construct admin facility to include restrooms, networking, telephone, gas, water and any needed power support for usable office space for an executive facility in support of AFCEC.	2025	3,000 ft^2	+3,000 ft^2	12
RKMF210048 CONSTRUCT 99 CS INFORMATION TRANSFER BUILDING, AREA 3 (RH)	Construct 900 SF Information Transfer Building and generator.	2023	900 ft^2	+900 ft^2	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^2	+3,500 ft^2	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^2 to boost the capabilities of the existing facility.	2027	10,700 ft^2 renovation 4,000 ft^2 construction	+4,000 ft^2 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^2	+34,164 ft^2	16
RKMF200043 ADD/ALTER B877, ANG	This project will update the existing facility and provide 3,500 – 4,000 ft^2 of addition space in accordance with facility requirements	2025	6,990 ft^2	+3,500 ft^2	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)
Additions to Buildings					
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^2 renovation 2,250 ft^2 addition	+2,250 ft^2	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^2 renovation 3,500 ft^2 addition	+3,500 ft^2	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^2 2,500 ft^2 renovation 7,500 ft^2 addition	+2,500 ft^2	20
RKMF190085 CONSTRUCT ADDITION AFE BLDG 1730	Expand the aircrew flight equipment work area in B1730.	2026	B1730 Total area - 36,596 ft^2 2,000 ft^2 addition	+2,000 ft^2	21
RKMF190149 CONSTRUCT ADDITION / RENOVATION FOR DDR BLDG 604	Construct a 1050 ft^2 waiting room for 70 people along with bathrooms, secure storage.	2022	1,689 ft^2 renovation 1,050 ft^2 addition	+1,050 ft^2	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^2 3,000 ft^2 addition 2,500 ft^2 renovation	+2,500 ft^2	23
RKMF243003 ADD/ALTER CDC B2966 AND B2967	Building addition that connects CDC 1 & CDC 2.	2025	B2966/2967 Total area - 37,990 ft^2 10,000 ft^2 addition 15,000 ft^2 renovation	+10,000 ft^2	24
Infrastructure Construction					
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^2	+30,000 ft^2	25
RKMF190147 CONSTRUCT ADDITION/ REPAIR PARKING LOT 507 ADAS BLDG 451	Reconfigure and expand existing parking lot	2023	55,732 ft^2	+27,499 ft^2	26
RKMF160064 CONSTRUCT 66 RQS MOBILITY EQUIP STORAGE FACILITY (RH)	Construct a 12,000 ft^2 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^2 new	+12,000 ft^2	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^2 new	+131,570 ft^2	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^2 new	+43,000 ft^2	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^2 new	+9,600 ft^2	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^2 = 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


ID Project Description
1 Demolish Building 10238, Baseball Field (Area 2)
2 Demolish Alternate Control Tower
3 Repair B10236
4 Repair B10235
5 Repair/Renovate Area 2 Dining Facility B10206
6 Alter Dunning Circle Facilities
7 Repair/Renovate Area 3 Temporary Lodging Facilities
8 Alter Lomie Heard Elementary School, Multi Facility
9 Alter B625 old hospital
10 Construct 855 MXS AGE Flight Facility (RH)
11 Construct New Walls and Gates at the Main Gate
12 Construct AFCEC ISS Administrative Facility
13 Construct 99 CS Information Transfer Building, Area 3 (RH)
14 Construct Engine Shop Annex
15 Add/Alter B790, Dining Facility
16 Construct Communications Support Center
ID Project Description
17 Add/Alter B877, ANG
18 Repair Construct Addition, Exterior and Interior POD Shop B230 (NTTR)
19 Construct Addition/Repair Interior Weapons School B118
20 Construct Addition 66 RQS Building 61663
21 Construct Addition AFE Building 1730
22 Construct Addition/Renovation for DDR Building 604
23 Construct Addition to Building 204, JTAC Simulator
24 Construct Addition that Connects B2966 and B2967
25 Construct/Repair Parking Lot Addn (926 WG HQ)
26 Construct/Repair Parking Lot 507 ADAS Building 451
27 Construct 66RQS Mobility Equipment Storage Facility
28 Construct Warmup Apron Taxiway Alpha (RH)
29 Construct 99 LRS Cargo Deployment Yard
30 Construct 66RQS Mobility Equipment Storage Yard
31 Construct Area 2 Security Fence
32 Construct East Side Flightline Fence
Legend
Proposed Project
Additions to Buildings
Building Construction
Demolition
Infrastructure Construction
Renovation
Nellis Air Force Base
Airfield
Housing/Community A
Housing/Community B
Munitions Storage Area
Industrial A
Industrial B
Industrial C
Industrial D
Open Space A
Open Space B
Open Space C
Miles
0 0.5 1 2
N
Map Extent
\\EAS-SBS.eas.local\Projects\USACE\Nellis IDEA\5 - GIS\Alt2\Nellis_Alt2_ProjectLocations_2_2_21.mxd

From: Kallstrom, Corey <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>
Cc: JOHNSON, ANNA M GS-12 USAF ACC 99 CES/CEIEA <anna.johnson.18@us.af.mil>; BAEZ, OLIVIA L GS-12 USAF ACC 99 CES/CEIEA <olivia.baez@us.af.mil>; Berry, Kellie <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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Southern Nevada Fish And Wildlife Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130-2301
Phone: (702) 515-5230 Fax: (702) 515-5231

In Reply Refer To: 08/23/2024 15:27:36 UTC
Project Code: 2022-0041170
Project Name: Nellis AFB Installation Development

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

* Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

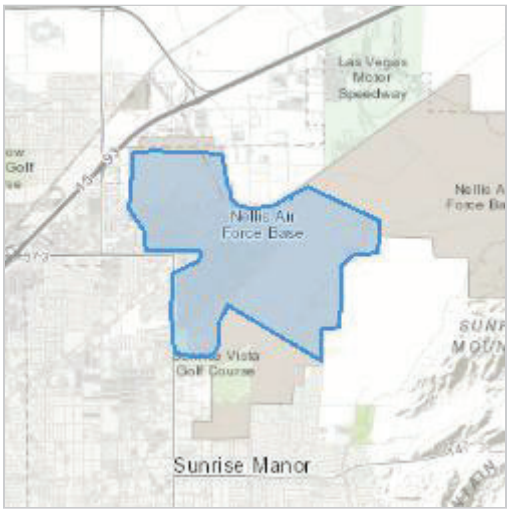
Southern Nevada Fish And Wildlife Office
4701 N. Torrey Pines Drive
Las Vegas, NV 89130-2301
(702) 515-5230

PROJECT SUMMARY

Project Code: 2022-0041170
Project Name: Nellis AFB Installation Development
Project Type: Military Development
Project Description: A Draft Environmental Assessment (EA) and proposed Finding of No Significant Impact (FONSI) have been prepared to analyze the potential impacts associated with construction, renovation, infrastructure, and demolition projects to be implement over a six-year period (fiscal year [FY] 2021-FY 2026). 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. The purpose of the Proposed Action is to support Nellis AFB's future mission and training requirements and the arrival of next-generation aircraft.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.23973895,-115.03711477809946,14z



Counties: Clark County, Nevada

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

BIRDS

NAME	STATUS
Southwestern Willow Flycatcher *Empidonax traillii extimus*	Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	
Yellow-billed Cuckoo *Coccyzus americanus*	Threatened
Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	

REPTILES

NAME	STATUS
Desert Tortoise *Gopherus agassizii*	Threatened
Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4481	

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Environmental Assessment Services
Name: Kevin Groppe
Address: 31410 Park Pine Lane
City: Spring
State: TX
Zip: 77386
Email kevin.groppe@easbio.com
Phone: 2406046869

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Air Force

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

Charles W. Rowland Jr.
Chief, Portfolio Optimization
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

Please find the enclosed copy of the Draft Environmental Assessment (EA) to evaluate the potential environmental impacts, beneficial and adverse, resulting from the proposed Installation Development on Nellis Air Force Base (AFB), Nevada. 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.

The Proposed Action includes facility construction, demolition, renovation, and additions at Nellis AFB. 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.

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.

In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and the USAF NEPA regulations, Nellis AFB is providing an electronic copy of the Draft Environmental Assessment for review and comment. The document can also be found at http://www.nellis.af.mil/About/Environment.aspx. Please provide comments on the Draft EA within 30 days of receipt of this letter to Tod Oppenborn, NEPA Program Manager, at 6020 Beale Ave., Nellis AFB, NV, 89191; or by email or phone at tod.oppenborn@us.af.mil or (702) 652-9366.

Sincerely,

ROWLAND.CHARLES.W.JR.1073438124

Digitally signed by ROWLAND.CHARLES.W.JR.1073438124
Date: 2022.02.07 11:58:15 -08'00'

CHARLES W. ROWLAND JR.
Chief, Portfolio Optimization

Attachment:
1. Draft EA and Proposed Finding of No Significant Impact

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

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

Tilford Denver
Chairperson
Bishop Paiute Tribe
50 Tusu Lane
Bishop CA 93514

Subject: Draft Environmental Assessment for Installation Development at Nellis Air Force Base

Dear Chairperson Denver

A couple of months ago, I sent you a letter, dated 6 October 2021, briefly describing the Air Force's proposal for the improvement of the physical infrastructure and functionality on Nellis Air Force Base (AFB), Nevada. With the issuance of the *Draft Environmental Assessment for Installation Development at Nellis Air Force Base*, I would like to follow up by inviting the Bishop Paiute Tribe to engage in government-to-government consultation with Nellis AFB on the proposal per the National Historic Preservation Act and regulations at 36 Code of Federal Regulations Part 800.

The Proposed Action includes facility construction, demolition, renovation, and additions at Nellis AFB. 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.

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.

The United States Air Force (USAF) has prepared a Draft Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969, Council on Environmental Quality regulations, and USAF NEPA regulations to evaluate the potential environmental impacts, beneficial and adverse, resulting from the Proposed Action. The action would support Nellis AFB's future mission and training requirements and next-generation aircraft arrival by addressing deficiencies in existing facility and infrastructure at Nellis AFB. I understand that, to date, the Bishop Paiute Tribe has not identified any properties of religious and cultural significance in the area of the Proposed Action. We now invite you to identify any such properties that might be affected by our proposed action. Please let us know if any of these properties are present, along with any supporting information on their eligibility for the National Register of Historic Places.

To ensure that we can make full use of any information you provide, it would be helpful to hear back from you 30 days from receipt of this letter. Please provide comments or requests for additional information within 30 days of receipt of this letter to our Tribal Liaison/ Archaeologist, Mr. Michael Chodoronek, 99 CES/CEIEA, at (702) 652-5813 or at michael.chodoronek@us.af.mil. Additionally, you may contact Joseph Green, 99 CES/CEIEA, by email at joseph.green.34@us.af.mil.

Sincerely

April 21, 2022

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

Attachment:
1. Draft Environmental Assessment for Installation Development at Nellis Air Force Base
2. Proposed Finding of No Significant Impact

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

April 21, 2022

Mr. Scott R. Tarbox
Environmental Element Chief
99th Civil Engineer Squadron
6020 Beale Avenue, Building 812
Nellis Air Force Base NV 89191

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

Subject: Draft Environmental Assessment for Installation Development at Nellis Air Force Base

Dear Ms. Palmer

In October, I sent you a letter, dated 6 October 2021, briefly describing the Air Force's proposal for the improvement of the physical infrastructure and functionality on Nellis Air Force Base (AFB), Nevada. The United States Air Force (USAF) subsequently has prepared a *Draft Environmental Assessment (EA) Installation Development Planning on Nellis Air Force Base (AFB), Nevada*. As described in the EA, 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.

In accordance with Section 306108 of the *National Historic Preservation Act* (NHPA) and its implementing regulations at 36 Code of Federal Regulations (CFR) Part 800, the USAF is advising you of a proposed undertaking that has the potential to affect historic properties. The undertaking would require infrastructure, facilities, airfield operations, training activities, and personnel to support the Nellis AFB mission.

The Proposed Action includes facility construction, demolition, renovation, and additions at Nellis AFB. 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.

The Area of Potential Effect (APE) for this undertaking is defined in the following manner:

- On Nellis AFB, the direct APE is defined as the area within 50 meters of the proposed projects. The indirect APE on Nellis AFB is defined as approximately 800 meters around the direct APE. Please refer to Figures A-9 and A-10 in the enclosed Draft EA.

There is one archaeological site within the direct APE and 19 within the indirect APE on Nellis AFB (Figures A-9 and A-10 of the EA). A full description of the cultural resources within the APEs can be found in Section 3.10 of the EA. Nellis AFB has reviewed the Criteria of Adverse Effect and have determined that none of the criteria applies to the activities that would be carried out in this undertaking.

Pursuant to 36 CFR §800.5(b), the USAF has determined that there would be no adverse effect to historic properties by the proposed Installation development projects. Attached for your review are copies of relevant information supporting the USAF's findings and determinations.

We request your comment and/or concurrence on the finding of No Adverse Effect. If we do not receive your comments and/or concurrence within the required 30 days, we will assume concurrence and proceed with the undertaking as described.

If you have a question or wish to provide comments, please contact one of my Cultural Resources Program Managers, Mr. Mike Chodoronek, by calling (702) 652-5813, or emailing michael.chodoronek@us.af.mil, or Mr. Joe Green, by calling (702) 652-1694, or emailing joseph.green.34@us.af.mil. Written comments may be addressed to Mr. Chodoronek or Mr. Green at the address shown at the top of this letter.

Sincerely

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

2 Attachments:
1. Draft Environmental Assessment for Installation Development at Nellis Air Force Base
2. Proposed Finding of No Significant Impact

DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality · desert conservation PROGRAM · sustainability

4701 W. Russell Road 2nd Floor Las Vegas, NV
89118-2231
Phone: (702) 455-5942 • Fax: (702) 383-9994
Marci Henson, Director

May 17, 2022

Mr. Tod Oppenborn
NEPA Program Manager
99 CES/CEA
6020 Beale Avenue
Nellis AFB, NV 89191

Email: tod.oppenborn@us.af.mil

Re: Environmental Assessment for proposed improvement projects at Nellis AFB

Dear Mr. Oppenborn:

The Department of Environment and Sustainability (DES) has completed its review of the draft Environmental Assessment for the proposed Installation Development improvement project on Nellis Air Force Base (AFB). The proposed projects will include construction, renovation, infrastructure, and demolition activities at Nellis AFB to support the Base's training and mission requirements and next-generation aircraft arrival. This letter provides DES's assessment of the project's conformity with Clark County Air Quality Regulations (AQRs).

DES determines that this action should have no significant impact to ambient air quality if the project complies with the AQRs. The proposed projects are located within Hydrographic Area 212 (Las Vegas Valley), which is a maintenance area for carbon monoxide and PM_{10} pollutants. Furthermore, the Las Vegas Valley is designated as a marginal nonattainment area for the 2015 Ozone NAAQS. PM_{10} is the pollutant primarily associated with construction activities and there are several provisions of the AQRs that regulate proposed construction within Clark County. In particular, the following regulatory requirements may apply depending upon the type of activities taking place at the construction site.

Section 94 of the AQRs requires that a dust control permit be obtained prior to any of the following activities: Soil disturbance or construction that impacts 0.25 acres or greater of land; mechanized trenching of 100 feet or greater in length, or mechanical demolition of any structure 1,000 square feet or greater in overall area. Construction activities include, but are not limited to, the following practices: Land clearing; soil and rock excavation, removal, hauling, crushing or screening; initial landscaping; establishing and/or using staging areas, parking areas, material storage areas, or access routes to or from a construction site.

Section 94 also requires that a construction project of ten (10) acres or more in area, trenching activities of one (1) mile or greater in length, or structure demolition using implosive or explosive blasting techniques, shall require a detailed supplement to a Dust Mitigation Plan. This supplement shall be in the form of a written report and shall, at minimum, detail the project description, the area and schedule of the phases of land disturbance, the control measures and the contingency measures to be used for all construction activities. This supplement shall become part of the dust control permit as an enforceable permit condition.

For more detailed information, select the link below to review Section 94 (Permitting and Dust Control for Construction Activities) of the AQRs:

https://www.clarkcountynv.gov/government/departments/environment_and_sustainability/division_of_air_quality/rules___regulations/current_aq_rules.php

For further assistance, please contact me at (702) 455-3206 or the Air Quality Specialist at (702) 455-1524.

Sincerely,

Araceli Pruett

Araceli Pruett, Senior Planner
Air Quality Division

Attachment: Air Quality Environmental Assessment

Impact Categories

ENVIRONMENTAL ASSESSMENT
AIR QUALITY
(Clean Air Act 42 U.S.C. 7400 Section 176 & 171, 40 CFR Parts 6, 51, 93)

1. Is the project in an EPA-designated non-attainment or maintenance area for one or more of the six criteria pollutants regulated under the Clean Air Act?
   a. Ground Level Ozone — XX YES — ___ NO
   b. Particulate Matter — XX YES — ___ NO
   c. Carbon Monoxide — XX YES — ___ NO
   d. Nitrogen Dioxide — ___ YES — XX NO
   e. Lead — ___ YES — XX NO
   f. Sulfur Dioxide — ___ YES — XX NO

2. If yes, what permits, reviews and mitigating conditions are required to ensure conformity with the State Implementation Plan (SIP)? See letter

3. What are the local air pollution control rules or policies regarding generation of dust during construction activities? Attach or reference any County or City ordinances or codes pertaining to dust, odors, and other air nuisances. Section 94 of the air quality rules (AQRs) apply

4. Could the project establish a trend that if continued, could lead to violations of air quality standards in the future?
   ___ YES XX NO

   a. If yes, what mitigation measures are needed to minimize effects considering sources, types, and amounts of air emissions produced by the finished project?

5. Does the project have the potential to produce and emit Noxious Odors or Fumes?
   ___ YES XX NO

   a. If yes, what mitigation measures are required to minimize migration of noxious odors or fumes?

6. RADON: Does the project entail new construction or major rehabilitation to any type of building to be used for residential purposes or long term occupancy of people?
   XX YES ___NO

Note: *Existing Buildings: A radon test must be conducted prior to construction improvements. New Construction: Radon mitigation should be implemented during the project. Radon testing is required after construction is complete.*

The project:

A. Will not have an adverse impact — XX
B. Will have a Potentially Beneficial impact — _____
C. Will have a Potentially Adverse impact — _____
D. Will require Mitigation Measures — _____
E. Will require Project Modification — _____

COMMENTS: None

NEVADA
STATE HISTORIC PRESERVATION OFFICE

STATE OF NEVADA
Department of Conservation and Natural Resources

Joe Lombardo, *Governor*
James A. Settelmeyer, *Director*
Rebecca L. Palmer, *Administrator*

July 12, 2024

Jessica J. Elsik, GS-14, DAF
Deputy Base Civil Engineer
99th Civil Engineer Squadron
6020 Beale Ave.
Nellis AFB, NV 89191

RE: Continuing Consultation for the Demolition of Building 10237 at Nellis Air Force Base, Clark County, Nevada; SHPO UT 2023-7585; 35474

Dear Ms. Elsik:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject documents in accordance with 54 U.S.C. § 306108 commonly known as Section 106 of the National Historic Preservation Act of 1966, as amended.

The United States Department of the Air Force – Nellis Air Force Base (NAFB) has submitted additional information in response to the SHPO's June 6, 2023 letter for this undertaking.

The Nellis Air Force Base (NAFB) determined previously in the agency's May 17, 2024 letter that no historic districts exist in Area II where Building 10237 (SHPO B3453) is located. The SHPO concurred in our June 28, 2024 letter (copy enclosed).

The NAFB states that there are no additional comments or feedback from Tribes or interested parties beyond those detailed in previous agency correspondence to the SHPO.

The NAFB has determined this undertaking will have **No Adverse Effect**. The SHPO **concurs.**

Sincerely,

Robin K. Reed
Deputy State Historic Preservation Officer

enc.

NEVADA
STATE HISTORIC PRESERVATION OFFICE

STATE OF NEVADA
Department of Conservation and Natural Resources

Joe Lombardo, *Governor*
James A. Settelmeyer, *Director*
Rebecca L. Palmer, *Administrator*

July 15, 2024

Jessica J. Elsik, GS-14, DAF
Deputy Base Civil Engineer
99th Civil Engineer Squadron
6020 Beale Ave.
Nellis AFB, NV 89191

RE: Continuing consultation for the Installation Development Plan Environmental Assessment (IDPEA) at Nellis Air Force Base, Clark County, Nevada; SHPO UT 2022-6942; 35475

Dear Ms. Elsik:

The Nevada State Historic Preservation Office (SHPO) has reviewed the subject documents in accordance with 54 U.S.C. § 306108 commonly known as Section 106 of the National Historic Preservation Act of 1966, as amended.

The United States Department of the Air Force – Nellis Air Force Base (NAFB) has submitted additional information in response to the SHPO's June 6, 2023 letter for this undertaking.

For the following 12 resources which were previously determined by the NAFB (with SHPO concurrence) to be individually not eligible, the NAFB also previously determined in the agency's May 17, 2024 letter that no historic districts exist in **Area II** where Buildings #s 10235 (SHPO #B19271), 10236 (SHPO #B19272), and 10238 (SHPO #S3454) are located and in **Area III** where B16078 (NAFB# 2935), B16079 (NAFB# 2940), B16080 (NAFB# 2945), B16081 (NAFB #2950), B16082 (NAFB# 2955), B16083 (NAFB# 2960), B16084 (NAFB# 2965), B16085 (NAFB# 2970), and B16086 (NAFB# 2975) are located. The SHPO concurred in our June 28, 2024 letter (copy enclosed).

The NAFB states that there are no additional comments or feedback from Tribes or interested parties beyond those detailed in previous agency correspondence to the SHPO.

The NAFB has determined that there is an **Adverse Effect** for this undertaking on the Lomie Gray Heard School District (D257) and the buildings covered under the 2002 Advisory Council on Historic Preservation *Program Comment for Capehart and Wherry Era Housing and Associated Structures and Landscape Features (1949–1962).* (Program Comment) The SHPO **concurs**.

Furthermore, the NAFB has determined that no further mitigation is necessary for this undertaking beyond the 2022 *Memorandum of Agreement Between the United States Air Force and the Nevada State Historic Preservation Officer Regarding the Demolition of Lomie Gray Heard School, Located*

on Nellis Air Force Base, Clark County, Nevada and that the buildings under the Program Comment were previously mitigated through documentation at the national level. The SHPO **agrees**.

Sincerely,

Rebecca Lynn Palmer
State Historic Preservation Officer

enc.

APPENDIX B.
PUBLIC NOTICES

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PROOF OF PUBLICATION

STATE OF NEVADA)
COUNTY OF CLARK) SS:

ENVIRONMENTAL ASSESSMENT SERVICES LLC
#112
350 HILLS ST
RICHLAND WA 99354

Account # **188532**

Ad Number **0001192027**

Leslie McCormick, being 1st duly sworn, deposes and says: That she is the Legal Clerk for the Las Vegas Review-Journal and the Las Vegas Sun, daily newspapers regularly issued, published and circulated in the City of Las Vegas, County of Clark, State of Nevada, and that the advertisement, a true copy attached for, was continuously published in said Las Vegas Review-Journal and / or Las Vegas Sun in 2 edition(s) of said newspaper issued from 05/13/2022 to 05/14/2022, on the following days:

05 / 13 / 22
05 / 14 / 22

/S/ _____
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 16th day of May, 2022

Notary _____

MARY A. LEE
Notary Public, State of Nevada
Appointment No. 21-7624-01
My Appt. Expires Dec 15, 2024

PUBLIC NOTICE

NOTICE OF AVAILABILITY
DRAFT ENVIRONMENTAL ASSESSMENT AND
PROPOSED FINDING OF NO SIGNIFICANT IMPACT
FOR INSTALLATION DEVELOPMENT AT NELLIS AIR FORCE BASE, NEVADA

A Draft Environmental Assessment (EA) and proposed Finding of No Significant Impact (FONSI) have been prepared to analyze the potential impacts associated with construction, renovation, infrastructure, and demolition projects to be implement over a six-year period (fiscal year [FY] 2022–FY 2027). The proposed projects were identified as priorities for the improvement of the physical infrastructure and functionality of Nellis Air Force Base (AFB), including current and future mission and facility requirements, development constraints and opportunities, and land use planning. 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 EA, prepared in accordance with the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations, and United States Air Force (Air Force) instructions implementing NEPA, evaluates potential impacts of the alternative actions on the environment including the No-Action Alternative. Based on this analysis, the Air Force has prepared a proposed FONSI.

The Draft EA and proposed FONSI, dated April 2022, are available for review at the following locations: Las Vegas Library and the Nevada State Clearinghouse.

Electronic copies of the documents can also be found on the Nellis AFB website at http://www.nellis.af.mil/About/Environment.aspx. You are encouraged to submit comments through June 14, 2022. Please provide any comments within 30 days of the date of this Notice of Availability. Comments should be provided to Tod Oppenborn, NEPA Program Manager, at 6020 Beale Ave., Nellis AFB, Nevada, 89191; by phone (702) 652-9366; or email tod.oppenborn@us.af.mil

The Air Force is aware of the potential impact of the ongoing coronavirus (COVID-19) pandemic on the usual methods of access to information and ability to communicate, such as the mass closure of local public libraries and challenges with the sufficiency of an increasingly-overburdened internet. The Air Force seeks to implement appropriate additional measures to ensure that the public and all interested stakeholders have the opportunity to participate fully in this Environmental Assessment process. Accordingly, please do not hesitate to contact us directly at the email address or telephone number provided above; we are available to discuss and help resolve issues involving access to the Draft EA and Proposed FONSI, or the ability to comment.

PRIVACY ADVISORY NOTICE

This Draft Environmental Assessment and proposed FONSI are provided for public comment in accordance with the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality NEPA Regulations (40 CFR §1500-1508), and 32 CFR §989, the 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 comment 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 and associated documents. Private addresses will be compiled to develop a mailing list for those requesting copies of the 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.

PUB: May 13, 14, 2022. LV Review-Journal

Desert Lightning News

VOL. 5, NO. 10 *Serving Southern Nevada's military community, including Nellis, Creech and NTTR* MAY 13, 2022

AN AEROTECH NEWS AND REVIEW PUBLICATION • WWW.AEROTECHNEWS.COM

Crosswinds reopens after renovations; offering Food 2.0

by Stuart Ibberson
editor

The Crosswinds Dining Facility at Nellis Air Force Base, Nev., reopened this month after a $6.4 million renovation.

Closed for 2 ½ years, the newly-renovated facility has transitioned to the new feeding platform known as Food 2.0.

Crosswinds is the 27th location to undergo the transition from the Air Force legacy model to the Food 2.0 model since 2008, but only the third in Air Combat Command to make the change.

"In addition to the renovations made to the building, there's a lot of new changes that are exciting for the local base population," said Capt. Anne Herrmann, 99th Sustainment Services Flight Commander. "Anyone who has access to Nellis AFB can now eat at the dining facility."

The facility is open to retirees, all civilians, family members, and anyone with base access. And there is no surcharge for non-military patrons.

Another innovation is campus-style dining. ESM Meal Card holder Airmen can now use their meal cards at all NAF facilities that offer food.

"You can go there and use your CAC card the same as you would at the dining facility," said Herrmann. "That makes it easier for our Airmen to have different meal choices."

Senior Master Sgt. Nikole Glenn, the 99th Force Support Squadron flight chief, is equally excited about the changes.

"Nellis AFB was my first base in 2006, eating in this facility as an ESM airman," she said. "So I know it can get a little monotonous having the same 18-20 day food menu.

"Food 2.0 will open various menu options," she continued. "Many Airmen are on different diets these days and can't rely on dining facility food for that reason. They'll be able to come to the DFAC and have various options every day, and they won't get tired of the food. And they'll be excited to eat here."

Nick Drake is the Sodexo general manager at Crosswinds.

"We are excited to be part of the Food 2.0 program, we are here as a team to help the Airmen with engagement food processes," Drake said. "We're also very excited about our program because it's healthy eating. You'll see that we do different menus monthly — from Middle Eastern, Mediterranean, and we have our noodle kitchen.

"It's just an amazing program with amazing food," he said.

Other new options, according to Drake, include the Fly Food Program that helps Airmen take their culinary experiences to new levels; and there's a rewards program where patrons can earn points, then redeem those points for prizes.

New items at the Crosswinds Dining Facility include cook-to-order items and rotating comfort food specials with various additions such as breakfast quesadillas, chicken cordon bleu wraps and mango coconut overnight oats. Seasonal or limited time only menu items are also available to help increase variety and ensure plenty of options to fuel Airmen and guests.

The Crosswinds Dining Facility is located at 4551 Ellsworth Ave., Bldg. 790. Operating hours are:

Monday-Friday
Breakfast 6-9 a.m.
Lunch 10:30 a.m.-1:30 p.m.
Dinner 4:30-6 p.m.
Midnight Meal 11 p.m.-1 a.m.

Saturday, Sunday and Down Days
Breakfast and Lunch: 7 a.m.-1 p.m.
Dinner: 4:30-6 p.m.
Grab & Go: 1-4:30 p.m.
Midnight Meal: Closed

Grab & Go
9-10:30 a.m., and 1-4:30 p.m.

For more information and menu offerings, visit https://usadining-nellis.catertrax.com/

The Crosswinds Dining Facility at Nellis Air Force Base, Nev., was officially reopened at a ribbon cutting ceremony.

Airmen who work at Crosswinds are excited about the new Food 2.0 program at the newly renovated facility.

Nick Drake, Sodexo general manager at the Crosswinds Dining Facility, Nellis Air Force Base, Nev., cuts the ceremonial cake at the grand reopening of the newly renovated facility.

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APPENDIX C.
AIR QUALITY ANALYSIS RESOURCES, METHODOLOGIES, AND RECORD OF CONFORMITY APPLICABILTY

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): NOT IN A REGULATORY AREA; Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis IDEA

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The proposed action involves installation development projects, which includes 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.

f. Point of Contact:

Name: Lesley Hamilton
Title: Principal-Environment
Organization: Cardno
Email: Lesley.Hamilton@cardno-gs.com
Phone Number:

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

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Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.379		
NOx	1.018		
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Clark Co, NV			
VOC	0.379		
NOx	1.018		
CO	1.191		
SOx	0.003		
PM 10	0.243	100	No
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379	100	No
NOx	1.018	100	No
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379	100	No
NOx	1.018	100	No
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379		
NOx	1.018		
CO	1.191	100	No
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

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2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.472		
NOx	1.089		
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Clark Co, NV			
VOC	1.472		
NOx	1.089		
CO	1.459		
SOx	0.003		
PM 10	2.738	100	No
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472	100	No
NOx	1.089	100	No
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472	100	No
NOx	1.089	100	No
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472		
NOx	1.089		
CO	1.459	100	No
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

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2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.591		
NOx	1.386		
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Clark Co, NV			
VOC	2.591		
NOx	1.386		
CO	1.893		
SOx	0.004		
PM 10	0.228	100	No
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591	100	No
NOx	1.386	100	No
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591	100	No
NOx	1.386	100	No
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591		
NOx	1.386		
CO	1.893	100	No
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.868		
NOx	1.976		
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Clark Co, NV			
VOC	0.868		
NOx	1.976		
CO	2.860		
SOx	0.006		
PM 10	0.731	100	No
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868	100	No
NOx	1.976	100	No
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868	100	No
NOx	1.976	100	No
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868		
NOx	1.976		
CO	2.860	100	No
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.467		
NOx	1.088		
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Clark Co, NV			
VOC	0.467		
NOx	1.088		
CO	1.608		
SOx	0.004		
PM 10	0.081	100	No
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467	100	No
NOx	1.088	100	No
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467	100	No
NOx	1.088	100	No
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467		
NOx	1.088		
CO	1.608	100	No
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		

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Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.354		
NOx	0.969		
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Clark Co, NV			
VOC	0.354		
NOx	0.969		
CO	1.559		
SOx	0.004		
PM 10	0.036	100	No
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354	100	No
NOx	0.969	100	No
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354	100	No
NOx	0.969	100	No
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354		
NOx	0.969		
CO	1.559	100	No
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		

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2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

None of estimated emissions associated with this action are above the conformity threshold values established at 40 CFR 93.153 (b); Therefore, the requirements of the General Conformity Rule are not applicable.

_____ _____

Lesley Hamilton, Principal-Environment DATE

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AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform an analysis to assess the potential air quality impact/s associated with the action in accordance with the Air Force Manual 32-7002, Environmental Compliance and Pollution Prevention; the Environmental Impact Analysis Process (EIAP, 32 CFR 989); and the General Conformity Rule (GCR, 40 CFR 93 Subpart B). This report provides a summary of the ACAM analysis.

a. Action Location:

Base: NELLIS AFB
State: Nevada
County(s): Clark
Regulatory Area(s): NOT IN A REGULATORY AREA; Clark Co, NV; Las Vegas, NV

b. Action Title: Nellis IDEA

c. Project Number/s (if applicable):

d. Projected Action Start Date: 1 / 2022

e. Action Description:

The proposed action involves installation development projects, which includes 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.

f. Point of Contact:

Name: Lesley Hamilton
Title: Principal-Environment
Organization: Cardno
Email: Lesley.Hamilton@cardno-gs.com
Phone Number:

2. Analysis: Total combined direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" and "steady state" (net gain/loss upon action fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

Based on the analysis, the requirements of this rule are: _____ applicable
__X__ not applicable

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

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Conformity Analysis Summary:

2022

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.379		
NOx	1.018		
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Clark Co, NV			
VOC	0.379		
NOx	1.018		
CO	1.191		
SOx	0.003		
PM 10	0.243	100	No
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379	100	No
NOx	1.018	100	No
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379	100	No
NOx	1.018	100	No
CO	1.191		
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		
Las Vegas, NV			
VOC	0.379		
NOx	1.018		
CO	1.191	100	No
SOx	0.003		
PM 10	0.243		
PM 2.5	0.041		
Pb	0.000		
NH3	0.001		
CO2e	281.1		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2023

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	1.472		
NOx	1.089		
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Clark Co, NV			
VOC	1.472		
NOx	1.089		
CO	1.459		
SOx	0.003		
PM 10	2.738	100	No
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472	100	No
NOx	1.089	100	No
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472	100	No
NOx	1.089	100	No
CO	1.459		
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		
Las Vegas, NV			
VOC	1.472		
NOx	1.089		
CO	1.459	100	No
SOx	0.003		
PM 10	2.738		
PM 2.5	0.044		
Pb	0.000		
NH3	0.001		
CO2e	322.6		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2024

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	2.591		
NOx	1.386		
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Clark Co, NV			
VOC	2.591		
NOx	1.386		
CO	1.893		
SOx	0.004		
PM 10	0.228	100	No
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591	100	No
NOx	1.386	100	No
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591	100	No
NOx	1.386	100	No
CO	1.893		
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		
Las Vegas, NV			
VOC	2.591		
NOx	1.386		
CO	1.893	100	No
SOx	0.004		
PM 10	0.228		
PM 2.5	0.052		
Pb	0.000		
NH3	0.002		
CO2e	400.1		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.868		
NOx	1.976		
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Clark Co, NV			
VOC	0.868		
NOx	1.976		
CO	2.860		
SOx	0.006		
PM 10	0.731	100	No
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868	100	No
NOx	1.976	100	No
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868	100	No
NOx	1.976	100	No
CO	2.860		
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		
Las Vegas, NV			
VOC	0.868		
NOx	1.976		
CO	2.860	100	No
SOx	0.006		
PM 10	0.731		
PM 2.5	0.074		
Pb	0.000		
NH3	0.002		
CO2e	615.7		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.467		
NOx	1.088		
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Clark Co, NV			
VOC	0.467		
NOx	1.088		
CO	1.608		
SOx	0.004		
PM 10	0.081	100	No
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467	100	No
NOx	1.088	100	No
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467	100	No
NOx	1.088	100	No
CO	1.608		
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		
Las Vegas, NV			
VOC	0.467		
NOx	1.088		
CO	1.608	100	No
SOx	0.004		
PM 10	0.081		
PM 2.5	0.037		
Pb	0.000		
NH3	0.001		
CO2e	343.0		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2027

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.354		
NOx	0.969		
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Clark Co, NV			
VOC	0.354		
NOx	0.969		
CO	1.559		
SOx	0.004		
PM 10	0.036	100	No
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354	100	No
NOx	0.969	100	No
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354	100	No
NOx	0.969	100	No
CO	1.559		
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		
Las Vegas, NV			
VOC	0.354		
NOx	0.969		
CO	1.559	100	No
SOx	0.004		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.001		
CO2e	343.3		

AIR CONFORMITY APPLICABILITY MODEL REPORT
RECORD OF CONFORMITY ANALYSIS (ROCA)

Note: The years for the ACAM modeling are representative only. The EA assumes the proposed action would occur from 2025-2029.

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Clark Co, NV			
VOC	0.000		
NOx	0.000		
CO	0.000		
SOx	0.000		
PM 10	0.000	100	No
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000	100	No
NOx	0.000	100	No
CO	0.000		
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		
Las Vegas, NV			
VOC	0.000		
NOx	0.000		
CO	0.000	100	No
SOx	0.000		
PM 10	0.000		
PM 2.5	0.000		
Pb	0.000		
NH3	0.000		
CO2e	0.0		