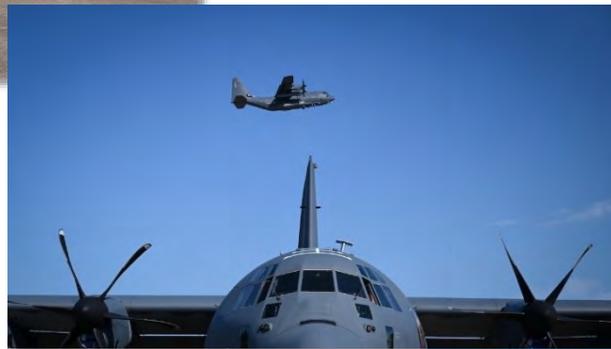


**Final**  
**Environmental Assessment Addressing**  
**the Air Force Special Operations Command**  
**AC-130J Formal Training Unit Relocation**  
**at Kirtland Air Force Base, New Mexico**  
**February 2023**



U.S. Air Force photos by Tommie Horton

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**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**Environmental Assessment**  
**for the**  
**AC-130J Formal Training Unit Relocation**  
**at Kirtland Air Force Base, New Mexico**

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Pursuant to provisions of the National Environmental Policy Act (NEPA), Title 42 United States Code (USC) Sections 4321 to 4347, implemented by Council on Environmental Quality (CEQ) Regulations, Title 40, Code of Federal Regulations (CFR) § 1500–1508, and 32 CFR § 989, Environmental Impact Analysis Process (EIAP), the United States Air Force (USAF) assessed the potential impacts on the natural and human environment associated with the AC-130J Formal Training Unit (FTU) Relocation at Kirtland Air Force Base (AFB), New Mexico.

***Purpose of and Need for Proposed Action***

The USAF proposes to relocate the Air Force Special Operations Command (AFSOC) AC-130J FTU from Hurlburt Field, Florida to Kirtland AFB, New Mexico and organizationally realign the unit under the 58th Special Operations Wing (58 SOW) under Air Education and Training Command (AETC). This relocation would include the repositioning of AC-130J aircraft, personnel, operational and maintenance squadrons, and related construction activities. Currently, AC-130J Initial Qualification Training is conducted under AETC at Kirtland AFB, New Mexico and Mission Qualification Training is conducted under AFSOC at Hurlburt Field, Florida. The purpose of the Proposed Action is to consolidate all AC-130J FTU qualifications (initial and mission) at one active duty AETC location that already has existing MC-130J maintenance and support. In addition, the AC-130J FTU would be combined under one Major Command instead of two, saving operational and instructor resources. This consolidation would allow the command to focus on operational mission execution and streamline training pipeline as well as create an AFSOC C-130J Center of Excellence.

Separation of AC-130J FTU Initial Qualification and Mission Qualification by teaching the syllabi at two separate bases causes inefficiencies in both use of training assets and time to train. Currently, student training from Hurlburt Field utilizes Eglin AFB's Range in Florida to conduct part of its training. However, there is limited capacity at the Eglin AFB Range, constraining student training by forcing longer qualification training periods waiting on range access. The need for the Proposed Action is to provide synergies between the Initial Qualification and Mission Qualification training stages which would maximize efficiency of use of resources including aircraft, instructors, and maintenance personnel, and lower operational and training costs.

***Description of the Preferred Alternative***

Under Alternative 1 (Preferred Alternative), relocation of seven AFSOC AC-130J FTU aircraft from Hurlburt to Kirtland would occur by the second quarter of fiscal year 2025. To accommodate the AC-130J aircraft and FTU operations, the Preferred Alternative would require both new construction and modification of some existing facilities. Thirteen construction or infrastructure improvement projects are proposed with a total of 314,200 square feet (SF) of ground disturbance and 250,500 SF of new impervious surfaces, to include construction of a temporary and permanent new squadron operations facility and parking, addition to Building 957 for classroom and administration services, renovations to Hangar 1002 for AC-130J AMU,

temporary addition to Building 949 for a full motion Weapons Systems Trainer, new electrical equipment room, new simulator complex, addition to Zia Park Dormitory, new administration building, new munitions trailer holding pad, two new earth covered munition storage igloos, new explosive operations building, new small arms storage facility, and renovations to Buildings 737 and 733.

New permanent personnel would include approximately 390 FTU and 22 base operating support personnel stationed year-round at Kirtland AFB. Temporary student personnel for Mission Qualification Programmed Flight Training (PFT) courses would include a total of approximately 162 students (150 training days per year), 18 Pilot Instructor Upgrade PFT students (51 training days per year), and 90 Non-Pilot Instructor Upgrade PFT students (9 training days per year).

Addition of the seven AC-130J aircraft would add approximately three sorties per day (Monday through Friday). This would total approximately 750 sorties per year, each having an average of six airfield operations for a total of 4,500 annual airfield operations. This increase in airfield operations represents a 3.5 percent increase over current total airfield operations (127,359). No new airspace or reconfigurations are needed or proposed to support the Preferred Alternative. The AC-130J would operate within Special Use Airspace (SUA) (both Military Operations Areas and Restricted Areas), and other existing airspace and training areas, including live fire training at Melrose Air Force Range, already designated for C-130 flight operations normally conducted out of Kirtland AFB and Cannon AFB. No changes to ranges would be required or occur under the Preferred Alternative. The type of defensive countermeasures used by the AC-130J, including chaff and flares, would be similar to what is currently used by the MC-130J and HC-130J.

### ***Alternatives Eliminated from Further Consideration***

This Environmental Assessment (EA) has considered all reasonable alternatives under the CEQ regulation, 40 CFR § 1502.14(a), which states that all reasonable alternatives that have been eliminated must be briefly discussed. Four alternatives have been eliminated from further consideration: Alternative 2 – Keesler AFB, Mississippi; Alternative 3 – Maxwell AFB, Alabama; Alternative 4 – Savannah, Georgia; and Alternative 5 – Hurlburt Field, Florida. The Alternative 2 – Keesler AFB, Alternative 3 – Maxwell AFB, and Alternative 4 – Savannah, Georgia each do not meet the purpose and need to consolidate AC-130J FTU qualifications (initial and mission) at one active duty AETC location that already has existing MC-130J maintenance and support and under a single organization with the intent of providing synergies and lower costs. These three alternatives would continue to provide training in a split environment with initial training occurring at a different geographic location. In addition, none of these alternatives have existing MC-130J units. Alternative 5 – Hurlburt Field, Florida would result in continued strain of the Eglin AFB Range capacity resulting in longer qualification training periods and also does not have an existing MC-130J unit. Therefore, only the Preferred Alternative at Kirtland AFB, New Mexico was carried forward for further environmental analysis.

### ***Description of the No Action Alternative***

The CEQ regulation 40 CFR § 1502.14(d) requires the inclusion of a No Action Alternative in the NEPA analysis. Under the No Action Alternative, the USAF would not relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Kirtland AFB, New Mexico and organizationally realign the unit under the 58 SOW (AETC). AC-130J qualifications training would continue to occur in a split environment with Initial Qualification Training occurring at Kirtland AFB and

Mission Qualification Training occurring at Hurlburt Field. Training would continue to strain capacity of the Eglin AFB Range constraining student training by forcing longer qualification training periods waiting on range access. The No Action Alternative would not meet the purpose of and need for the Proposed Action; however, the USAF EIAP (32 CFR Part 989.8[d]) requires consideration of the No Action Alternative. Therefore, this alternative will be carried forward for detailed analysis in the EA.

### ***Summary of Environmental Findings***

The USAF has concluded that the Preferred Alternative would not affect the following resources: Visual Resources and Transportation. Based on the findings in this EA, no significant adverse impacts would result to the following resources: airspace management, noise, land use, air quality, geology and soils, water resources, biological resources, cultural resources, infrastructure, hazardous materials and wastes, safety, socioeconomics, and environmental justice. No significant adverse cumulative impacts would result from activities associated with the Preferred Alternative when considered with past, present, or reasonably foreseeable future projects.

Based on my review of the facts and analyses contained in the attached EA, conducted under the provisions of NEPA, CEQ Regulations, and 32 CFR § 989, I conclude that the Preferred Alternative for the AC-130J Formal Training Unit Relocation at Kirtland AFB, New Mexico would not have a significant environmental impact, either by itself or cumulatively with other known projects. Accordingly, an Environmental Impact Statement is not required. This analysis fulfills the requirements of NEPA, the President's CEQ 40 CFR §§ 1500–1508 and the Air Force EIAP regulations 32 CFR § 989. The signing of this Finding of No Significant Impact completes the EIAP.

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JASON F. VATTIONI, Colonel, USAF  
Commander

23 February 2023

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Date

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## ACRONYMS AND ABBREVIATIONS

377 ABW	377th Air Base Wing	CO <sub>2</sub> e	carbon dioxide equivalent
377 MSG/CEIEC	377th Mission Support Group/ Civil Engineering Installation Environmental Compliance	COMAFSOC	Commander, Air Force Special Operations Command
58 OG	58th Operating Group	CY	Calendar Year
58 SOW	58th Special Operations Wing	dB	decibel
ABCWUA	Albuquerque-Bernalillo County Water Utility Authority	dBA	A-weighted decibel
ACAM	Air Conformity Applicability Model	DNL	Day-Night Average Sound Level
ACM	asbestos-containing material	DOE	Department of Energy
AEHD-AQD	Albuquerque Environmental Health Department Air Quality Division	DoD	Department of Defense
AETC	Air Education and Training Command	EA	Environmental Assessment
AFB	Air Force Base	EIS	Environmental Impact Statement
AFGSC	Air Force Global Strike Command	EMS	Environmental Management System
AFI	Air Force Instruction	EO	Executive Order
AFR	Air Force Range	ER	Environmental Restoration
AFSOC	Air Force Special Operations Command	ERP	Environmental Restoration Program
AGL	Above Ground Level	FAA	Federal Aviation Administration
AMU	Aircraft Maintenance Unit	FTU	Formal Training Unit
APE	Area of Potential Effects	FY	Fiscal Year
AT/FP	Anti-Terrorism/Force Protection	GAO	Government Accountability Office
ATC	Air Traffic Control	GHG	greenhouse gas
BAI	Backup Aircraft Inventory	HWMP	Hazardous Waste Management Plan
BASH	Bird/Wildlife Aircraft Strike Hazard	ICRMP	Integrated Cultural Resources Management Plan
BLM	Bureau of Land Management	IFR	Instrument Flight Rules
BMP	best management practice	INRMP	Integrated Natural Resources Management Plan
BOS	Base Operating Support	L <sub>max</sub>	maximum sound level
CEQ	Council on Environmental Quality	LBP	lead-based paint
CFR	Code of Federal Regulations	MEC	Munitions and Explosives of Concern
CGP	Construction General Permit	mgd	million gallons per day
CNEL	Community Noise Equivalent Level	MMRP	Military Munitions Response Program
CO	carbon monoxide	MOA	Military Operations Area
CO <sub>2</sub>	carbon dioxide	MPPEH	Material Potentially Presenting an Explosive Hazard

MSA	Munitions Storage Area	RCRA	Resource Conservation and Recovery Act
MSL	Mean Sea Level		
NAS	National Airspace System	ROI	Region of Influence
NEPA	National Environmental Policy Act	SEL	Sound Exposure Level
		SF	Square Feet
NHPA	National Historic Preservation Act	SHPO	State Historic Preservation Office(r)
NMAC	New Mexico Administrative Code	SO <sub>2</sub>	sulfur dioxide
		SPCC	Spill Prevention, Control, and Countermeasures
NMDGF	New Mexico Department of Game and Fish		Special Use Airspace
NMED	New Mexico Environment Department	SUA	Stormwater Pollution Prevention Plan
NOA	Notice of Availability	SWPPP	Training Aircraft Inventory
NO <sub>x</sub>	nitrogen oxides	TAI	tons per year
NPDES	National Pollutant Discharge Elimination System	tpy	United States
		U.S.	United States Air Force
NPS	National Park Service	USAF	United States Bureau of Labor Statistics
NRHP	National Register of Historic Places	USBLS	United States Census Bureau
PCB	polychlorinated biphenyls	USCB	United States Department of Agriculture-Natural Resources Conservation Service
PFT	Programmed Flight Training	USDA-NRCS	United States Environmental Protection Agency
PM <sub>2.5</sub>	particulate matter less than or equal to 2.5 microns in diameter		United States Fish and Wildlife Service
		USEPA	United States Geological Survey
PM <sub>10</sub>	particulate matter less than equal to 10 microns in diameter	USFWS	Visual Flight Rules
		USGS	
POI	Point of Interest	VFR	
PTAI	Primary Training Aircraft Inventory		
Q-D	Quantity-Distance		

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## **1 PURPOSE AND NEED FOR ACTION**

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### **1.1 INTRODUCTION**

Kirtland Air Force Base (AFB), located southeast of the city of Albuquerque in New Mexico (**Figure 1-1**), is home to the 377th Air Base Wing (377 ABW) of the Air Force Global Strike Command (AFGSC). The installation is a center for research, development, and testing of nonconventional weapons, space and missile technology, and laser warfare. The 377 ABW ensures readiness and training of airmen for worldwide duty, operates the airfield for present and future United States (U.S.) Air Force (USAF) operations, and prepares personnel to deploy worldwide on a moment's notice. The installation encompasses 51,585 acres, of which 44,052 acres are under USAF control.

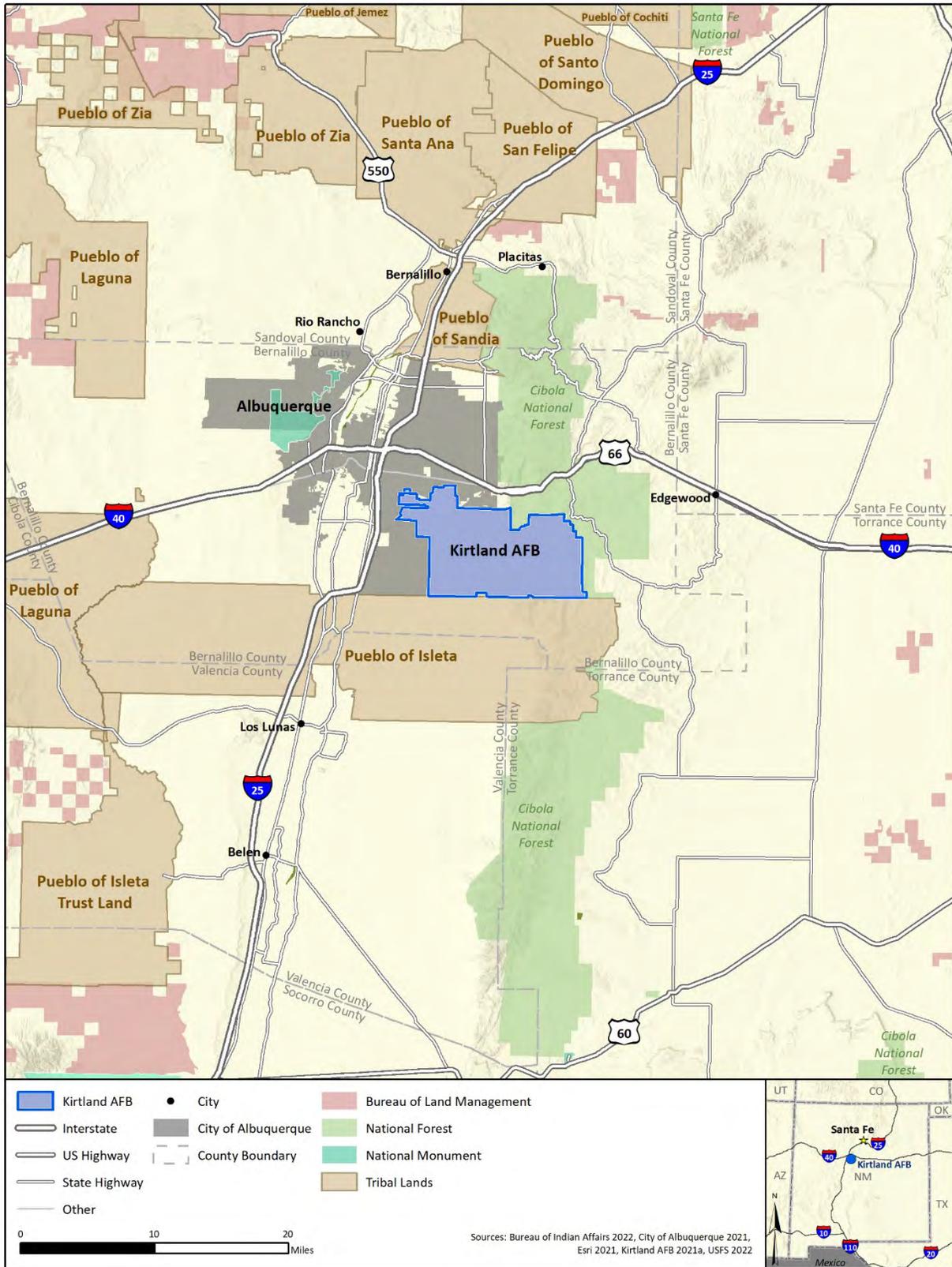
The USAF proposes to relocate the Air Force Special Operations Command (AFSOC) AC-130J Formal Training Unit (FTU) from Hurlburt Field, Florida to Kirtland AFB, New Mexico and organizationally realign the unit under the 58th Special Operations Wing (58 SOW) (Air Education and Training Command [AETC]), which is a tenant organization currently located at Kirtland AFB. This relocation would occur by fiscal year (FY) 2025 second quarter and would include the repositioning of AC-130J aircraft, personnel, operations squadron, and maintenance squadrons, and related construction activities.

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

Currently, AC-130J Initial Qualification Training is conducted under AETC at Kirtland AFB and Mission Qualification Training conducted under AFSOC at Hurlburt Field. The purpose of the Proposed Action is to consolidate all AC-130J FTU qualifications (initial and mission) at one active duty AETC location that already has existing MC-130J maintenance and support. In addition, the AC-130J FTU would be combined under one Major Command instead of two, saving operational and instructor resources. This consolidation would allow the command to focus on operational mission execution and streamline training pipeline as well as create an AFSOC C-130J Center of Excellence.

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

Separation of AC-130J FTU Initial Qualification and Mission Qualification by teaching the syllabi at two separate bases causes inefficiencies in both use of training assets and time to train. Currently student training from Hurlburt Field utilizes Eglin AFB's Range in Florida to conduct part of its Mission Qualification training. However, there is limited capacity at the Eglin AFB Range, constraining student training by forcing longer qualification training periods waiting on range access. The need for the Proposed Action is to provide synergies between the Initial Qualification and Mission Qualification Training stages which would maximize efficiency of use of resources including aircraft, instructors, and maintenance personnel, and lower operational and training costs.



**Figure 1-1 Location of Kirtland AFB**

## **1.4 INTERGOVERNMENTAL COORDINATION/CONSULTATIONS**

### **1.4.1 Interagency and Intergovernmental Coordination and Consultations**

Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, as amended by EO 12416, requires federal agencies to provide opportunities for consultation by elected officials of state and local governments that would be directly affected by a federal proposal. In compliance with the National Environmental Policy Act (NEPA), Kirtland AFB will notify relevant stakeholders about the Proposed Action and alternatives. The notification process will provide these stakeholders the opportunity to cooperate with Kirtland AFB and provide comments on the Proposed Action and alternatives.

Per the requirements of Section 106 of the National Historic Preservation Act and implementing regulations (36 Code of Federal Regulations [CFR] Part 800), and Section 7 of the Endangered Species Act and implementing regulations (50 CFR Part 17), including the Migratory Bird Treaty Act, findings of effect and a request for concurrence were transmitted to the State Historic Preservation Officer (SHPO) and the U.S. Fish and Wildlife Service (USFWS). A brief summary of comments received is shown below.

### **1.4.2 Government to Government Coordination and Consultations**

Section 106 of the National Historic Preservation Act requires federal agencies to take into account effects of their undertakings on historic properties. To comply with legal mandates, federally recognized tribes that are historically affiliated with the geographic region were invited to consult on all proposed undertakings that have a potential to affect properties of cultural, historical, or religious significance to the tribes (see **Appendix A** for all tribal coordination materials).

Scoping letters were provided to Native American tribes whose ancestors were historically affiliated with the land underlying Kirtland AFB and the proposed airspace that would be used, inviting them to consult on the proposed undertakings outlined within this Environmental Assessment (EA).

## **1.5 PUBLIC AND AGENCY REVIEW OF DRAFT EA**

The USAF solicited public and agency comments during a scoping period from August 24 through September 22, 2022. Comments received during the scoping period were considered in preparing the Draft EA. A Notice of Availability (NOA) for the Draft EA was published in *The Albuquerque Journal* announcing the availability of the Draft EA beginning on November 20, 2022. Letters were provided to relevant federal, state, and local agencies and Native American tribal governments informing them that the Draft EA was available for review. The publication of the NOA initiated a 30-day comment period from November 20 through December 20, 2022. A copy of the Draft EA was made available for review at the San Pedro Public Library at 5600 Trumbull Avenue SE, Albuquerque, New Mexico 87108. A copy of the Draft EA was also made available for review online at <http://www.kirtland.af.mil> under the Environment Information tab. At the closing of the public review period, applicable comments from the general public and interagency and intergovernmental coordination/consultation were incorporated into the analysis of potential environmental impacts performed as part of the EA, where applicable.

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## **2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

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### **2.1 SELECTION STANDARDS**

Selection standards were developed to assist Kirtland AFB in determining reasonable alternatives and the basis for eliminating any of them. The following selection standards were used to determine the feasibility of each alternative and to determine which of the alternatives would be the best fit to meet the needs of the project:

- The site should consolidate AC-130J training in a single location under a single organization.
- The site should be an Active Duty AETC location with MC-130J maintenance and support.
- The site must have adequate munitions storage capability or the space and ability to add this capability without impacting the current operations.
- The site must have a runway of sufficient length to support increased take-off distances driven by increased weight of AC-130J airframe.
- The site should have access to a nearby live fire training range.
- The site should have Base Operating Support (BOS) to support active duty assigned personnel and students.

In accordance with 32 CFR Part 989.8(c), alternatives that failed to meet the majority of the selection standards listed above were removed from further consideration.

### **2.2 PROPOSED ACTION**

The USAF is proposing to relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Kirtland AFB, New Mexico and organizationally realign the unit under the 58 SOW (AETC). The Proposed Action also includes personnel needed to operate and maintain the AFSOC AC-130J, and construction of new and/or modification of existing facilities on the installation to support the relocation. Students operating the AC-130J aircraft would conduct training from the installation and in existing Special Use Airspace (SUA) (both military operations area [MOAs] and Restricted Areas) and would conduct live fire training at Melrose Air Force Range (AFR), New Mexico. No new SUA or reconfiguration of existing SUA is proposed or would be required to support the relocation of the AC-130J FTU.

### **2.3 SCREENING OF ALTERNATIVES**

In general, the USAF uses the strategic basing process outlined in Air Force Instruction (AFI) 10-503 (2020) to identify potential locations to beddown missions. The process begins by determining an enterprise definition from which potential installations could be identified. This enterprise of installations is then evaluated using objective criteria to screen the top alternative installations. Site surveys are then conducted at each alternative location to determine if the installation could reasonably support the mission in question. The Strategic Basing Executive Steering Group oversees the process and reports findings directly to the Secretary of the Air Force and Chief of Staff of the Air Force. This process was mandated by the Secretary of the Air Force to ensure basing decisions were made using a standardized, repeatable, transparent process.

The following potential alternatives were considered. Although not part of the strategic basing process, locations other than Kirtland AFB were considered, as they may meet the purpose and need.

Alternative 1 (Preferred Alternative) – Kirtland AFB – Under this alternative, the USAF would relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Kirtland AFB, New Mexico and organizationally realign the unit under the 58 SOW (AETC). This relocation would include relocation of AC-130J aircraft, personnel, operations squadron, maintenance squadrons, and related construction activities.

Alternative 2 – Keesler AFB, 403rd Airlift Wing – Under this alternative, the USAF would relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Keesler AFB, Biloxi, Mississippi.

Alternative 3 – Maxwell AFB, 908th Airlift Wing – Under this alternative, the USAF would relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Maxwell AFB, Montgomery, Alabama.

Alternative 4 – Savannah, Georgia, 165th Airlift Wing – Under this alternative, the USAF would relocate the AFSOC AC-130J FTU from Hurlburt Field, Florida to Savannah, Georgia.

Alternative 5 – Hurlburt Field, Florida – Under this alternative, the 58 SOW would move to Hurlburt Field, Florida.

**Table 2-1** provides an overview of the potential alternatives that were considered that may meet the purpose and need and weighed against the selection standards described under **Section 2.1**.

As shown in **Table 2-1**, Alternative 1 best meets the purpose and need and adheres to all of the selection standards. The selection standards of critical importance are the standards that reduce maintenance and disturbance to the local communities and provide more flexibility for minimizing disturbance to current aircraft operations such as parking and taxiing.

Alternatives 2, 3, 4, and 5 would not meet the purpose and need and do not adhere to the majority and most significant selection standards. Therefore, Alternatives 2, 3, 4, and 5 were not carried forward for detailed analysis in this EA (see **Section 2.5**).

**Table 2-1 Screening of the Alternatives**

Alternative Descriptions	SELECTION STANDARDS					
	Consolidate AC-130J Training into one Location	Active Duty AETC Location with MC-130J Maintenance and Support	Adequate Munitions Storage Capability	Runway of Sufficient Length	Access to Nearby Firing Range	Base Operating Support
Alternative 1 – Kirtland AFB, NM	Y	Y	Y	Y	Y	Y
Alternative 2 – Keesler AFB, MS	N	N	N	N	Y	Y
Alternative 3 – Maxwell AFB, AL	N	N	Y	Y	N	Y
Alternative 4 – Savannah, GA	N	N	N	Y	Y	N
Alternative 5 – Hurlburt Field, FL	Y	N	Y	Y	N	Y

## 2.4 DESCRIPTION OF THE ALTERNATIVE(S)

### 2.4.1 Alternative 1 (Preferred Alternative)

#### 2.4.1.1 Relocation of the AFSOC AC-130J FTU to Kirtland AFB

The relocation of the AFSOC AC-130J FTU is planned to occur by the second quarter of FY 2025. The proposed force structure would include a total of seven AC-130J Training Aircraft Inventory (TAI) which includes six Primary Training Aircraft Inventory (PTAI) and one Backup Aircraft Inventory (BAI).

The AC-130J (nicknamed “Ghost rider”) is the modern replacement for an aging fleet of C-130 gunships, most recently the AC-130U/W aircraft. It is an air-to-ground (attack) aircraft with many missions to support combat troops on the ground. Its primary mission sets are called “close air support,” “air interdiction,” and “armed reconnaissance.” The AC-130J provides ground forces an expeditionary, direct-fire platform that is persistent, ideally suited for urban operations, and delivers precision low-yield munitions against ground targets.



Example of an AC-130 aircraft  
(U.S. Air Force photo by Tommie Horton)

Under current basing conditions, a pilot new to the AC-130 completes his/her FTU-level training in two places. First, the Initial Qualification phase of training occurs at Kirtland AFB. Then, the Mission Qualification phase of training occurs at Hurlburt Field. Under the Proposed Action, both of these phases of the FTU syllabus would be consolidated in one place, Kirtland AFB, to gain efficiency in training. Meeting this additional training requirement local to Kirtland AFB is the reason for the proposed move of the seven AC-130J aircraft from Hurlburt to Kirtland.

#### 2.4.1.2 Construction and Modification of Facilities

To accommodate the AC-130J aircraft and FTU operations, the Proposed Action would require both new construction and modification of some existing facilities. All construction would be located within the Kirtland AFB boundaries. Thirteen construction or infrastructure improvement projects are proposed (see **Figure 2-1**). **Table 2-2** and **Figures 2-2a through 2-2i** summarize the proposed construction and modification projects.

#### 2.4.1.3 Personnel Changes

**Table 2-3** summarizes estimated personnel changes under the Proposed Action, which includes some new permanent personnel at Kirtland AFB as well as some transient personnel assigned temporarily at Kirtland AFB for training, as indicated in the table.

New permanent personnel would include approximately 390 FTU personnel stationed year-round at Kirtland AFB as a result of the proposed AFSOC AC-130J FTU relocation. This would include 28 officers, 324 enlisted, and 38 contractors. Furthermore, an additional approximately 22 BOS personnel would be based at Kirtland AFB year-round as a result of the Proposed Action.

**Table 2-2 List of Proposed Projects**

EA Project #	Project Name	Description	Year of Implementation	Approximate Total Area of New Ground Disturbance (SF)	Approximate New Impervious Surface (SF)
1	Temporary New Squadron Operations Facility	<ul style="list-style-type: none"> <li>• Install five modular trailers comprised of administrative offices that include squadron command section, AFE work center, AFE storage, restrooms, kitchen area, and rooms for briefing, mission planning, and conferences.</li> <li>• Construct an approximately 48,000 SF gravel parking area on open, undeveloped land (if needed).</li> <li>• Construct approximately 2,900 SF of paved walkways between trailers and parking area (if constructed).</li> </ul> <p><i>Estimated project total of 75,900 SF. Includes five 5,000-SF modular trailers (25,000 SF total), approximately 48,000 SF of additional gravel parking (if needed), and approximately 2,900 SF of paved walkways (see <b>Figure 2-2a</b>).</i></p>	FY 2023	75,900	27,900
2	Permanent New Squadron Operations Facility and Parking	<ul style="list-style-type: none"> <li>• Construct a new 20,000 SF facility comprised of administrative offices that include squadron command section, AFE work center, AFE storage, restrooms, kitchen area, and rooms for briefing, mission planning, and conferences.</li> <li>• Construct a 4,500 SF entrance/egress from the existing parking lot onto Randolph Avenue. The entrance/egress would be constructed on an area that is primarily landscaped with an existing sidewalk.</li> <li>• Construct 46 new paved parking spaces with driving aisles and landscaping for a total of 9,300 SF on open, undeveloped land.</li> <li>• Construct a new 20,000 SF paved storage area for the Air Force Research Laboratory to replace the area used for the construction of the new Squadron Operations Facility. The new area would be constructed on open, undeveloped land.</li> </ul> <p><i>Estimated project total of 53,800 SF. Includes 20,000 SF for new facility construction, 4,500 SF for the new entrance/egress, and 9,300 SF for the new paved parking</i></p>	FY 2028	53,800	53,800

EA Project #	Project Name	Description	Year of Implementation	Approximate Total Area of New Ground Disturbance (SF)	Approximate New Impervious Surface (SF)
		<i>area. There will also be a new 20,000 SF paved storage area for the Air Force Research Laboratory (see <b>Figure 2-2b</b>).</i>			
3	Addition to Building 957 for Classroom and Administration	<ul style="list-style-type: none"> <li>Construct a 5,000 SF addition to the east side of Building 957 for classroom and administrative space. The new addition would be constructed on open, undeveloped land.</li> </ul> <i>Estimated project total of 5,000 SF for new addition construction (see <b>Figure 2-2c</b>).</i>	FY 2026	5,000	5,000
4	Renovate Hangar 1002 (Island B) for AC-130J AMU	<ul style="list-style-type: none"> <li>Renovate Island B in Hangar 1002 to include removal of existing ACM, lead paint, and PCBs; replace HVAC and elevator; upgrade fire protection and electrical systems; construct a fire protected egress from island to exterior of hangar; and install telephone, NIPR, and Wi-Fi (see <b>Figure 2-2d</b>).</li> </ul>	FY 2024	None	None
5	Temporary Addition to Building 949 for WST	<ul style="list-style-type: none"> <li>Install an approximately 3,600 SF temporary structure to the east side of Building 949 to house a full motion WST. The temporary structure would be installed on an area that is an existing concrete hardstand; however, there would be some trenching (approximately 50 SF) for utilities. In addition, a permanent 144 SF electrical equipment room (12 x 12 ft) would be constructed on the existing concrete hardstand on the north side of Building 949 to house electrical transformer(s) and switching in support of the simulators and training devices. The total estimated area of ground disturbance would be approximately 3,800 SF (see <b>Figure 2-2e</b>).</li> </ul>	FY 2024	3,800	None

EA Project #	Project Name	Description	Year of Implementation	Approximate Total Area of New Ground Disturbance (SF)	Approximate New Impervious Surface (SF)
6	New Simulator Complex	<ul style="list-style-type: none"> <li>Construct an AC-130J simulator facility (45,000 SF) to house two full motion AC-130J WSTs, two ACTs, a FuT, and a GTR.</li> <li>Construct a covered paved walkway (900 SF<sup>1</sup>) to Building 950 and an additional parking area (58,500 SF, location to be determined).</li> </ul> <p><i>Estimated project total of 104,400 SF. Includes 45,000 SF for new facility construction, 900 SF for the new covered walkway (maximum), and 58,500 SF for a new paved parking area (location to be determined) (see <b>Figure 2-2f</b>).</i></p>	FY 2025	104,400	103,700 <sup>1</sup>
7	Addition to Zia Park Dormitory	<ul style="list-style-type: none"> <li>Construct an addition to the dormitory already proposed to be built in Zia Park (EA in process). The dormitory design would be increased by 80 rooms to support the AC-130J relocation, increasing the total number of rooms to 432 (178,089 SF or approximately 412 SF per room).</li> </ul> <p><i>Estimated project total of 33,000 SF for the additional 80 rooms (see <b>Figure 2-2g</b>).</i></p>	FY 2024	None <sup>2</sup>	None <sup>2</sup>
8	New Administration Building east of MSA Parking Lot	<ul style="list-style-type: none"> <li>Construct an administration building to hold the additional manning to support the AC-130J mission move east of the MSA.</li> </ul> <p><i>Estimated project total of 10,000 SF for new facility construction (see <b>Figure 2-2h</b>).</i></p>	FY 2025	10,000	10,000
9	New Munitions Trailer Holding Pad	<ul style="list-style-type: none"> <li>Construct a 100 x 100 ft (10,000 SF) holding pad south of Building 733 for munition trailers awaiting loading and loaded trailers awaiting transport to the flight line.</li> </ul> <p><i>Estimated project total of 10,000 SF for the new paved holding pad (see <b>Figures 2-2h</b> and <b>2-2i</b>).</i></p>	FY 2023	10,000	10,000

EA Project #	Project Name	Description	Year of Implementation	Approximate Total Area of New Ground Disturbance (SF)	Approximate New Impervious Surface (SF)
10	Construct Two New Earth Covered Munition Storage Igloos	<ul style="list-style-type: none"> <li>Construct two new 25 x 80 ft (2,000 SF) Hayman Earth Covered Munitions Storage Igloos in MSA. An additional 7,000 SF would be included for the aprons and road accessing the igloos.</li> <li>Construct an unpaved 3,500 SF stormwater drainage system for each igloo.</li> </ul> <p><i>Estimated project total of 11,000 SF. Includes 4,000 SF for new construction of the igloos, 7,000 SF for the paved aprons and access road, and an additional 7,000 SF of ground disturbance for the stormwater drainage systems (see <b>Figure 2-2i</b>).</i></p>	FY 2023	18,000	11,000
11	New Explosive Operations Building	<ul style="list-style-type: none"> <li>Construct an Explosive Operations Building (6,000 SF) to house munitions builds/teardown and expenditure operations supporting the AC-130J mission.</li> <li>Construct a 5,400 SF paved access road, a total of 3,700 SF for paved parking areas on the west and east sides of the building, and paved aprons (2,000 SF each) on the north and south sides of the building.</li> </ul> <p><i>Estimated project total of 19,100 SF. Includes 6,000 SF for new facility construction, 5,400 SF for the new paved access road, 3,700 SF for the new paved parking areas, and 4,000 SF for the new paved aprons (see <b>Figure 2-2i</b>).</i></p>	FY 2025	19,100	19,100
12	Construct Small Arms Storage Facility	<ul style="list-style-type: none"> <li>Construct a small arms storage facility (also called a Butler Building) (100 x 100 ft [10,000 SF]).</li> </ul> <p><i>Estimated project total of 10,000 SF for new facility construction (see <b>Figure 2-2h</b>).</i></p>	FY 2026	10,000	10,000

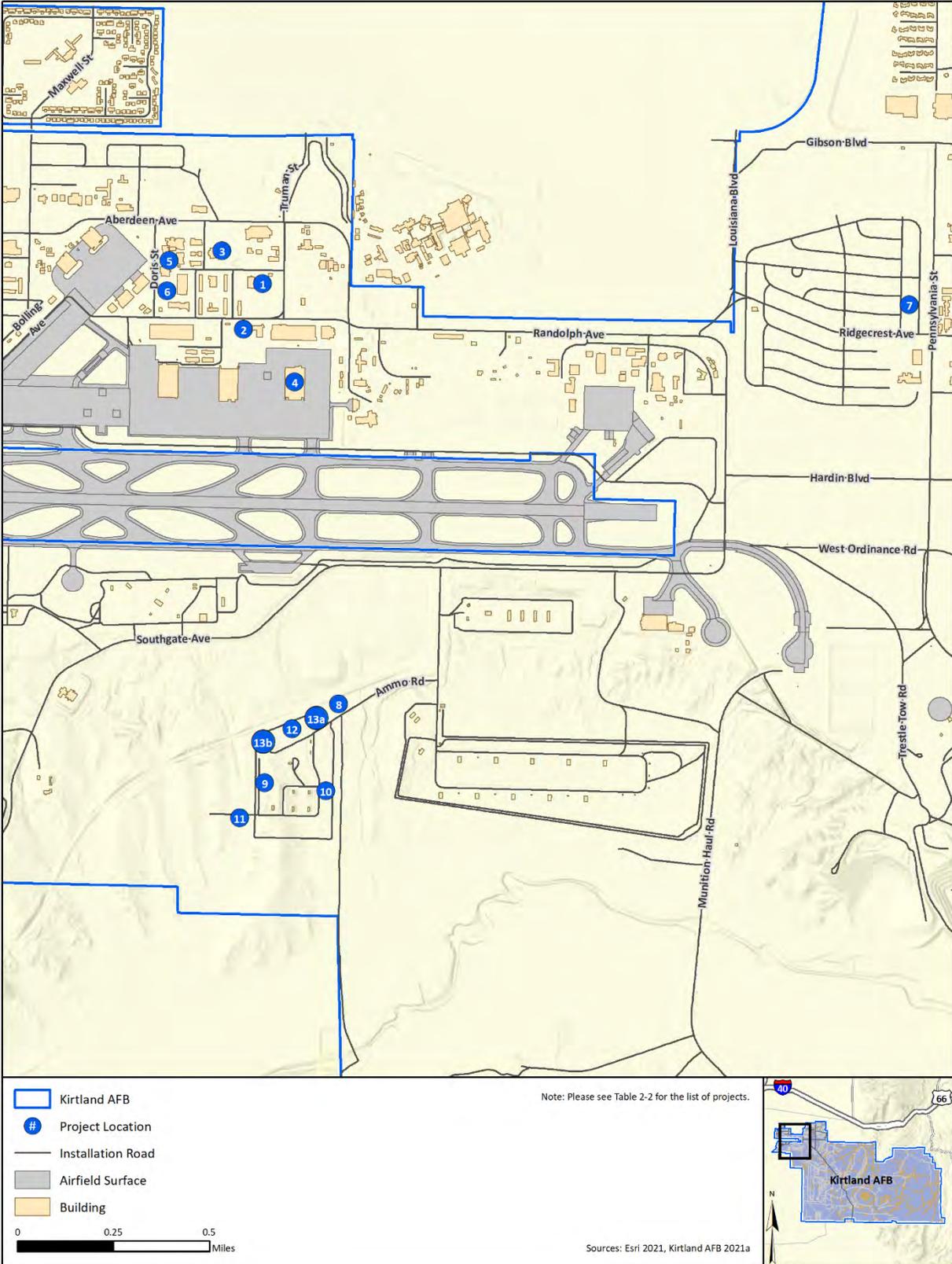
EA Project #	Project Name	Description	Year of Implementation	Approximate Total Area of New Ground Disturbance (SF)	Approximate New Impervious Surface (SF)
13a and 13b	Renovate Buildings 737 and 733	<ul style="list-style-type: none"> <li>Renovate the interior of Building 737 and Building 733 (Munitions Maintenance Shops).</li> <li>Renovations to Building 737 include the removal and replacement of the double-walled oil/water separator located below ground to the southwest of the building (approximately 4,200 SF of disturbance) (see <b>Figure 2-2h</b>).</li> </ul> <p><i>Estimated project total of 4,200 SF of ground disturbance for the replacement of the oil/water separator.</i></p>	FY 2023	4,200 SF	None
<b>Total</b>				<b>314,200 SF</b>	<b>250,500 SF</b>

**Notes:** <sup>1</sup>The longest proposed covered walkway from the new facility to Building 950 is estimated to be a maximum of 900 SF (4 feet wide by 225 feet long). The majority of the proposed walkway is paved but uncovered so only 200 SF is estimated to be a new impervious surface. Although the location of the new parking area has not been determined, for the purposes of the EA, it is assumed to be on an undeveloped area.

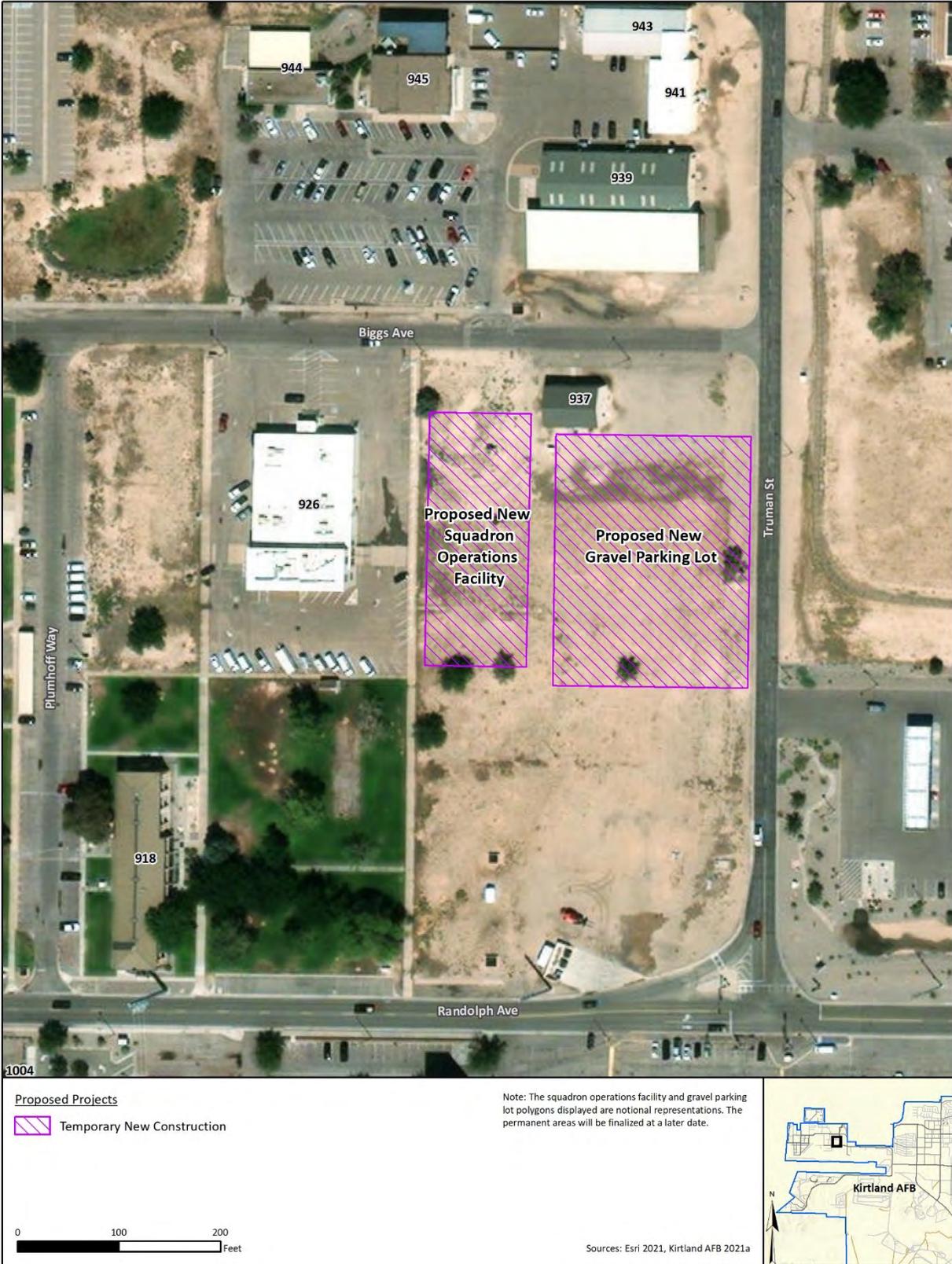
<sup>2</sup>The additional 80 rooms would be added to the existing footprint.

ACM = asbestos containing material; ACT = Aircraft Cabin Trainer; AFE = Aircrew Flight Equipment; AMU = Aircraft Maintenance Unit; EA = Environmental Assessment; ft = foot/ft; FuT = Fuselage Trainer; FY = Fiscal Year; GTR = Gun Trainer; HVAC = Heating, Ventilation, and Air Conditioning; MSA = Munitions Storage Area; NIPR = Non-Secure Internet Protocol Router; PCB = polychlorinated biphenyl; SF = square foot/feet; WST = Weapons Systems Trainer.

**Sources:** Kirtland AFB, 2021b–2021o; 2022a–2022e.



**Figure 2-1 Overview of Proposed Project Locations**



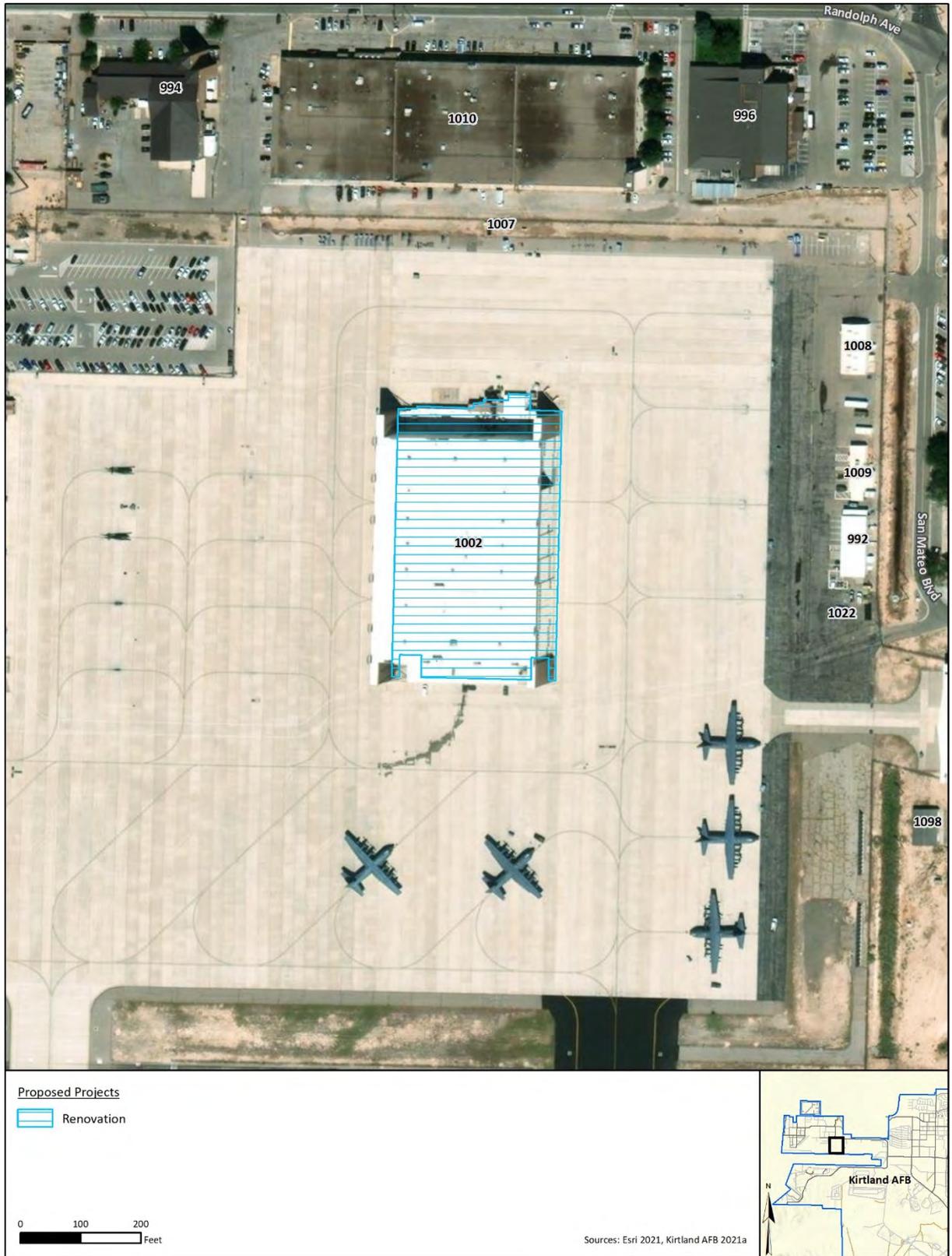
**Figure 2-2a Project 1 – Temporary New Squadron Operations Facility**



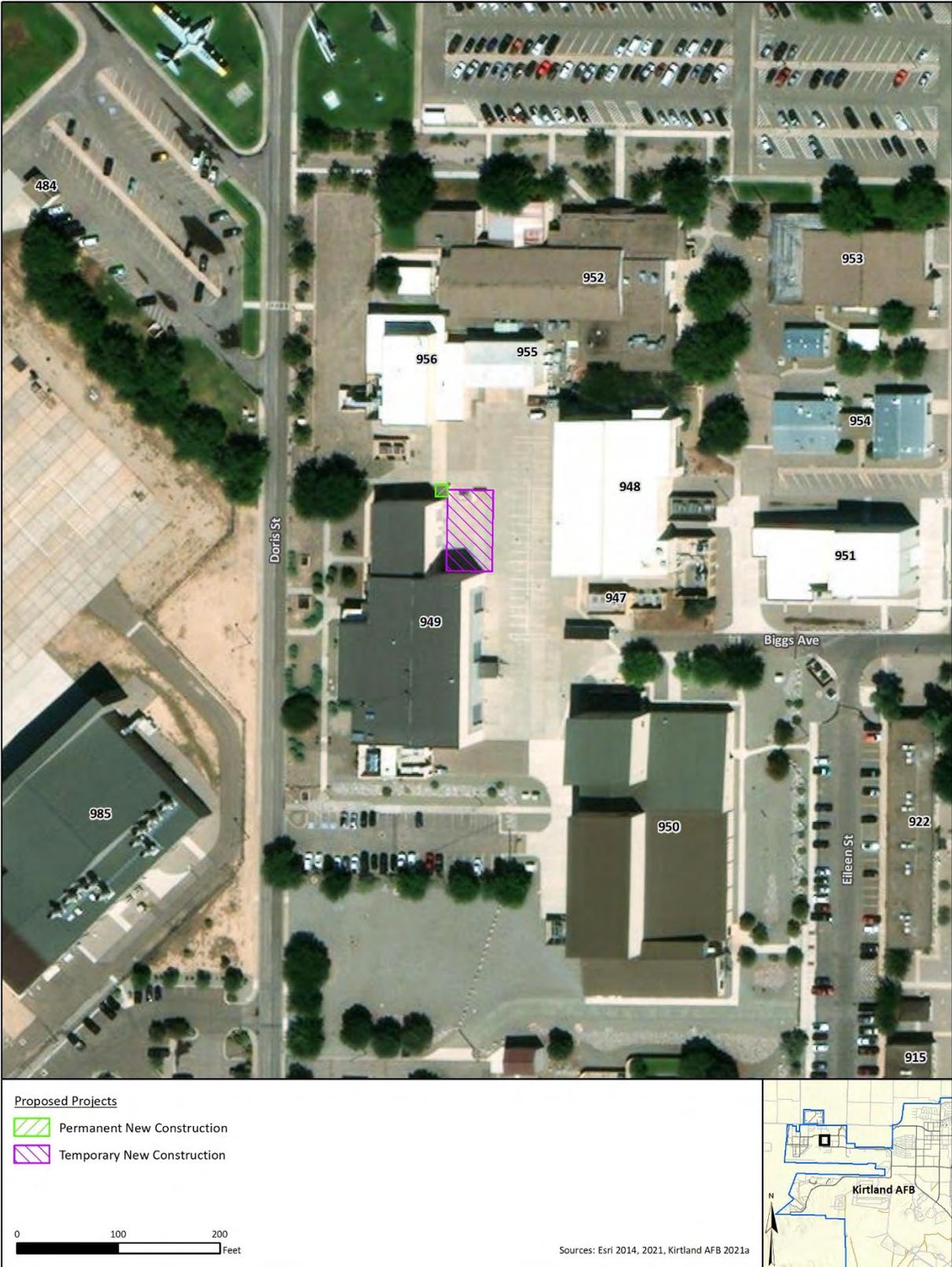
**Figure 2-2b Project 2 – Permanent New Squadron Operations Facility and Parking**



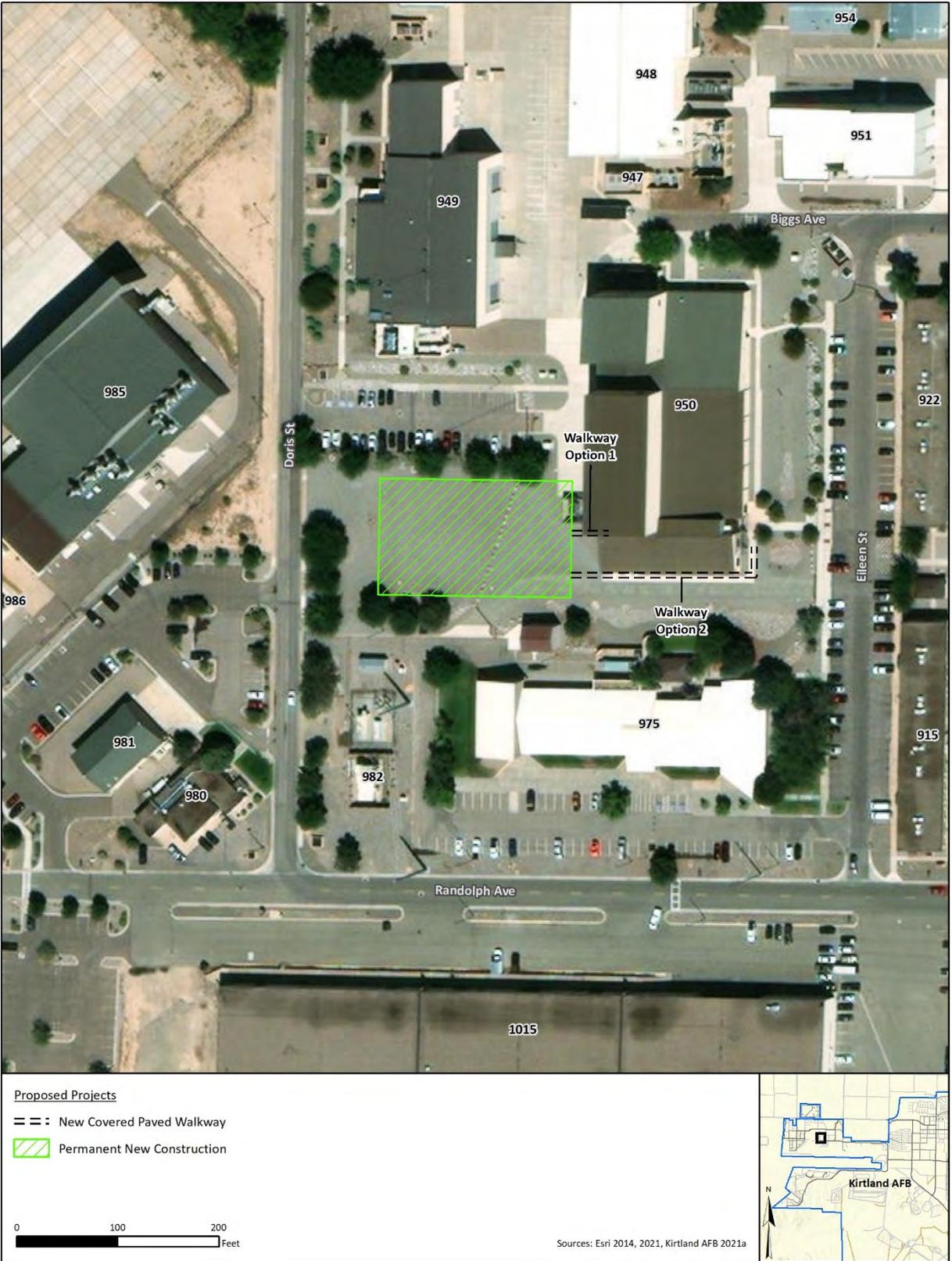
**Figure 2-2c Project 3 – Addition to Building 957 for Classroom and Administration**



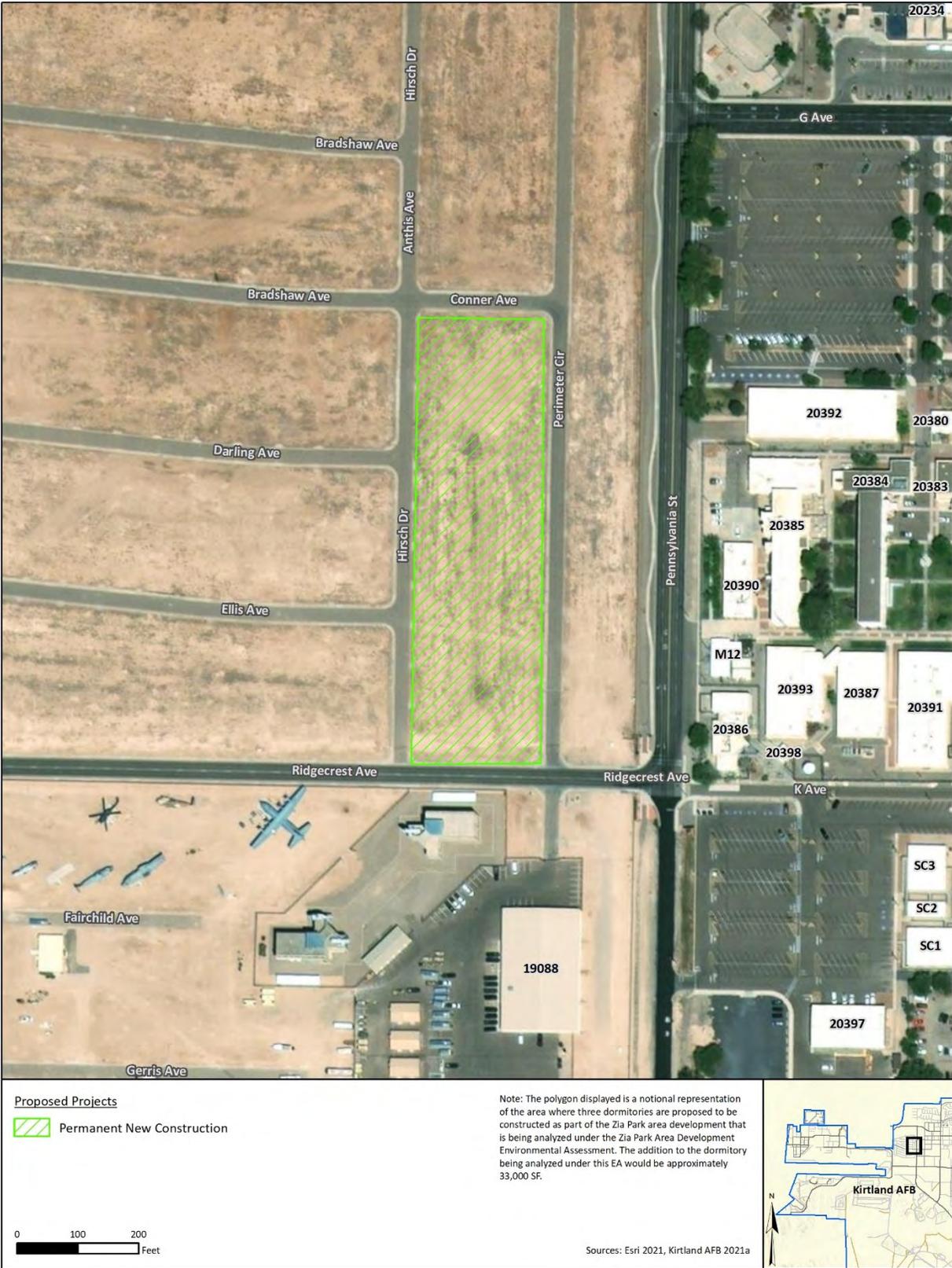
**Figure 2-2d Project 4 – Renovate Hangar 1002 (Island B) for AC-130J AMU**



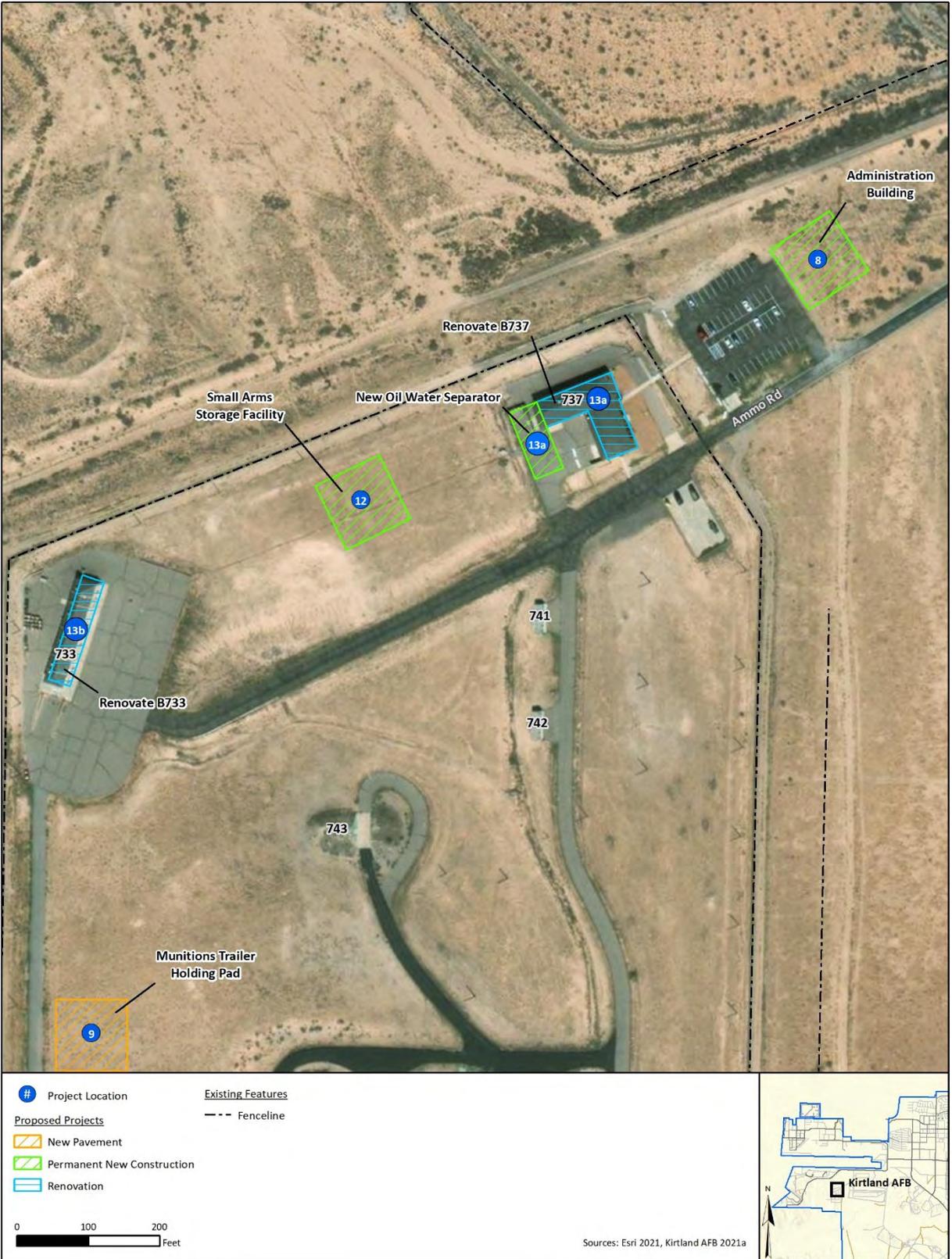
**Figure 2-2e Project 5 – Addition to Building 949 for Weapons Systems Trainer**



**Figure 2-2f Project 6 – New Simulator Complex**



**Figure 2-2g Project 7 – Addition to Zia Park Dormitory**



**Figure 2-2h MSA North Projects (Projects 8, 9, 12, and 13)**



**Figure 2-2i MSA South Projects (Projects 9, 10, 11, and 13)**

**Table 2-3 Proposed Estimated Manpower under the Proposed Action**

Manpower	Number of Personnel	Training Days per Year
FTU	390	N/A – Based at Kirtland Year-Round
BOS	22	N/A – Based at Kirtland Year-Round
Mission Qualification PFT Students	162	150
Pilot Instructor Upgrade PFT students	18	51
Non-Pilot Instructor Upgrade PFT students	90	9

Notes: BOS = Base Operating Support; FTU = Formal Training Unit; N/A = Not Applicable; PFT = Programmed Flight Training.

Source: Kirtland AFB, 2020a.

New transient personnel assigned temporarily for training would include the following:

- Additional student and instructor personnel visiting Kirtland AFB during training periods. Throughout the year, Mission Qualification Programmed Flight Training (PFT) courses and Instructor Upgrade PFT courses would occur. Mission Qualification PFT courses would occur up to 150 training days (approximately 30 calendar weeks) a year. The 150 training days would be spread out throughout the year. Student personnel for Mission Qualification PFT courses would include a total of approximately 162 students per year (72 officers and 90 enlisted), or 18 crews of 9 individuals. Up to 50 percent of the 162 students are in residence at any one time.
- Instructor Upgrade PFT courses would occur for both pilot instructors and non-pilot instructors. Pilot instructor upgrade training would occur up to 51 training days a year for 18 total students (all officers). Non-pilot instructor upgrade training would occur up to 9 training days (approximately 2 calendar weeks) per year for a total of approximately 90 students (36 officers and 54 enlisted).

#### **2.4.1.4 Airfield Operations**

To provide the training needed to ensure combat readiness, AC-130J aircrews would conduct operations in two types of areas: (1) the installation airfield, and (2) training ranges and SUA. Additionally, pilots would use simulators extensively. Simulator training includes all facets of flight operations and comprehensive emergency procedures.

This EA uses three terms to describe different components of aircraft flying activities: *sortie*, *operation*, and *event*. Each has a distinct meaning and commonly applies to a specific set of activities in a particular airspace environment or unit. These terms also provide a means to quantify activities for the purposes of analysis.

A *sortie* consists of a single military aircraft from a take-off through a landing. For this EA, the term *sortie* is commonly used when summarizing the amount of flight activities from an installation. A *sortie* can include more than one operation.

The term *operation* can apply to both airfield and airspace activities, and represents the primary analytic and descriptive quantifier of aircraft flight activities presented in this EA. At an airfield, an operation comprises one action such as a landing or a take-off. For airspace and ranges, an operation comprises the use of one airspace unit (e.g., MOA, Restricted Area) by one aircraft. Each time a single aircraft flies in a different airspace unit, one operation is counted for the unit.

Thus, different installations could support the same number of sorties for the same aircraft type but generate different numbers of operations in the airspace due to the configuration of airspace units.

As a subset of operations, the term *event* is used to define specific training elements (e.g., a defensive countermeasure or ordnance delivery event). More than one event may be performed during the use of an airspace unit. During a single sortie, an aircraft could fly in several airspace units, conducting a number of operations and events. For these reasons, the number of operations and events may exceed total sorties and are not additive to one another.

AC-130J flight operations in and around Kirtland AFB would be very similar to those performed by the MC-130J and HC-130J aircraft currently based there. Typical training events for the MC-130J and HC-130J involve an aircraft taking off from Kirtland AFB, going to a training area elsewhere, then returning later for recovery at Kirtland AFB. Pilot proficiency requirements also necessitate practice of some additional landings, often accomplished by landing to a “touch-and-go,” then flying a closed pattern to another landing. This allows multiple landing practices. During a normal sortie, one or both of the pilots may need extra landings or instrument approaches. This type of activity will be nearly identical for the AC-130J and will likely be indistinguishable to the average observer.

Current M/HC-130J aircraft based at Kirtland AFB fly about five sorties per day, five days per week (about 1,250 sorties per year). Each of these sorties has at least a takeoff and landing, and there are about 2,500 closed patterns conducted per year as well (with two airfield operations each). Addition of the new AC-130J aircraft would add approximately three more sorties per day and would primarily occur Monday through Friday. This would total approximately 750 sorties per year each having an average of six airfield operations for a total of 4,500 annual airfield operations. **Table 2-4** shows the current operations at Kirtland AFB/Albuquerque International Sunport, hereafter referred to as the Sunport, using civil aircraft data from 2019 as representative of status quo annual operations prior to COVID-19. The proposal to increase the USAF activity with AC-130J aircraft conducting 4,500 annual flight operations represents an increase of about 3.5 percent over the representative current operations.

**Table 2-4 Current and Proposed Annual Airfield Operations at Kirtland AFB/Albuquerque International Sunport**

	Total Current Operations	Proposed AC-130J Operations
Current Military Aircraft	17,596	N/A
Proposed AC-130J Aircraft	N/A	4,500
Other Aircraft	109,763	N/A
Total Airfield Operations	127,359	131,859
Percent Change at Airfield	N/A	3.5%

Source: Cardno, 2022.

Current M/HC-130J aircraft stationed at Kirtland AFB fly sorties both day and night to meet training requirements for combat missions that will occur at all times of day. For flight training purposes, “after dark” is considered to be the time period from 1 hour after sunset to 1 hour before sunrise. The time of day flown in the dark varies between the units because of their geographic location, and also varies seasonally. “After dark” training is different from “environmental night,” which is used to predict changes to the noise environment. “Environmental night” is considered to be after

10:00 p.m. and before 7:00 a.m. and is used in the noise analysis to account for the added intrusiveness of aircraft operations during this time period. The proposed AC-130J sorties would also occur both during the day and night, with generally two sorties per day occurring during the night (10:00 p.m. to 7:00 a.m.) and one sortie per day occurring during the day (7:00 a.m. to 10:00 p.m.).

Airspace management and noise are analyzed for proposed airfield operations in **Sections 3.2.2.1 and 3.3.2.1**.

#### **2.4.1.5 Training Airspace and Range Operations**

##### **2.4.1.5.1 Airspace Use**

The relocated AFSOC AC-130J would operate within existing SUA (both MOAs and Restricted Areas), and other existing airspace and training areas, including live fire training at Melrose AFR, which includes the Pecos and Taiban MOAs, R-5104, and R-5105, near Clovis, New Mexico, proximate to Cannon AFB (**Figure 2-3**). The Melrose AFR is already designated for C-130 flight operations normally conducted out of Kirtland AFB and Cannon AFB. The majority of the flights from Kirtland AFB airfield to this SUA would occur above 10,000 feet mean sea level (MSL).

The AC-130J operations resulting from the Proposed Action are low in number. A review of the recent sortie counts for the Melrose AFR and other associated airspace determined that the area is being utilized well under the operations numbers analyzed in NEPA documentation for the establishment of the range and airspace. Specifically, environmental impacts to the airspace and range were evaluated in the *AFSOC Assets Beddown at Cannon Air Force Base, New Mexico Environmental Impact Statement* (EIS) (USAF, 2007). **Table 2-5** includes the annual aircraft operations for Melrose AFR, Restricted Areas, and MOAs that were analyzed in the previously mentioned EIS. **Table 2-6** compares existing operations with those proposed under this Proposed Action and those analyzed in the 2007 EIS. As shown, while the relocation of the AC-130J from Hurlburt would create new sorties originating from Kirtland that would utilize the Melrose AFR, the total number of sorties analyzed in previous noise analysis for range use would not be exceeded. The AC-130J aircraft is not a novel aircraft and the way the aircraft would use the range and airspace would be the same as the AC-130 aircraft analyzed in previous environmental analysis. Because the range and airspace have ample capacity to absorb the minor number of sorties from the Proposed Action and no aspect of the Proposed Action, detailed noise analysis of the Melrose AFR and associated airspace was not undertaken in this EA.

##### **2.4.1.5.2 Ordnance Use and Defensive Countermeasures**

Approximately 80 percent of the proposed training sorties would include weapons training at Melrose AFR. Normal live fire operations would include munition upload at Kirtland AFB; the weapons would not be chambered or armed until over the impact range. No changes to the range would be required or occur under the Proposed Action.