

Notice of Availability

Draft Environmental Assessment and Proposed Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) for the Razorback Range Consolidated Facility Project at Fort Chaffee, AR

The Department of the Air Force (DAF) announces the availability of the Draft Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI)/Finding of No Practicable Alternative (FONPA) for the implementation of the Razorback Range Consolidated Facility Project at Fort Chaffee, AR. The EA has been prepared to analyze the potential impacts of implementing the project.

The 30-day public review period will begin on August 23, 2026 and end on September 22, 2026. The public is invited to review and make comments on the Draft EA and Draft FONSI/FONPA, which are available online at: <https://www.188wg.ang.af.mil/>.

Comments must be received by September 24, 2026 for consideration in the Final EA. The public may submit comments to:

Kristi L. Kucharek, Environmental Planning Lead
ATTN: Razorback Range EA
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

Or by email at NGB.CCA4F.NEPACOMMENTSOrg@us.af.mil with the subject titled as ATTN: Razorback Range EA.

PRIVACY ADVISORY NOTICE

Public comments on this Draft EA are requested pursuant to NEPA, 42 United States Code 4321, et seq. All written comments received during the comment period will be made available to the public and considered during the final EA preparation. Providing private address information with your comment is voluntary and such personal information will be kept confidential unless release is required by law. However, address information will be used to compile the project mailing list and failure to provide it will result in your name not being included on the mailing list.

DRAFT RAZORBACK RANGE CONSOLIDATED FACILITY ENVIRONMENTAL ASSESSMENT

Fort Chaffee Joint Maneuver Training Center, Arkansas



August 2026

This Draft Environmental Assessment (EA) is provided for public comment in accordance with the National Environmental Policy Act (NEPA) as amended (42 USC 4321, et seq) and the Department of War (DoW) NEPA Implementing Procedures, which provides an opportunity for public input on United States Department of the Air Force (DAF) decision-making, allows the public to offer input on alternative ways to accomplish what is being proposed, and solicits comments on the 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. Providing personal information is voluntary. Private addresses will be compiled to develop a mailing list for those requesting copies of EA; however, only the names of the individuals making comments and specific comments will be disclosed. Personal home addresses and phone numbers will not be published in the EA.

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This document has been certified that it does not exceed 75 pages, excluding citations and appendices, in accordance with Paragraph (e)(2) of NEPA (42 USC § 4336a). Generally, a “page” means 500 words and does include maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information.

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ACRONYMS AND ABBREVIATIONS

ABB	American burying beetle
ACAM	Air Conformity Applicability Model
ACM	Asbestos Containing Materials
AGFC	Arkansas Game and Fish Commission
AHPP	Arkansas Historic Preservation Program
ANG	Air National Guard
APE	Area of Potential Effects
AQCR	Air Quality Control Region
AR	Army Regulation
AR ARNG	Arkansas Army National Guard
ARNG	Army National Guard
BMPs	Best Management Practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalents
CWA	Clean Water Act
CY	Cubic Yard
DAF	Department of the Air Force
DAFI	Department of the Air Force Instruction
DoD	Department of Defense
DoDI	Department of Defense Instruction
DoW	Department of War
EA	Environmental Assessment
ESA	Endangered Species Act
FCJMTC	Fort Chaffee Joint Maneuver Training Center
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FMS	Foreign Military Sales
FONSI	Finding of No Significant Impact
GCR	General Conformity Rule
HAZWOPER	Hazardous Waste Operations and Emergency Response
HC&WM	Hazardous Chemical and Waste Management
HUC	hydrologic unit code
ICRMP	Integrated Cultural Resources Management Plan
IN	Inch
IPMP	Integrated Pest Management Plan
ISWMP	Integrated Solid Waste Management Plan
JTAC	Joint Terminal Attack Controller
kVA	Kilovolt-amp
LBP	Lead Based Paint
lf	Linear Feet
MWH	megawatt-hours
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act

NGB	National Guard Bureau
NH ₃	ammonia
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
OSHA	Occupational Safety and Health Administration
OWSMP	Oil/Water Separator Management Plan
OWSs	Oil/water separators
Pb	lead
PCBs	Polychlorinated biphenyls
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
POLs	Petroleum, Oil, and Lubricants
PPE	Personal Protective Equipment
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROW	Right of Way
SCP	Spill Contingency Plan
SF	square feet
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
SOP	Standard Operating Procedure
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load
tpy	Tons per year
UFC	Unified Facilities Criteria
U.S.	United States
USC	United States Code
USCB	U.S. Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UTV	Utility Type Vehicle
V	Volt
VOC	volatile organic compound
WOTUS	Waters of the U.S.
WPA	Works Progress Administration

1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION

The United States Department of the Air Force (DAF) proposes to replace the existing Razorback Range facilities at the Fort Chaffee Joint Maneuver Training Center (FCJMTC) with a new, consolidated range support complex and to upgrade associated utilities along Marietta Church Road in western Arkansas. FCJMTC is located in Sebastian, Franklin, and Crawford Counties, Arkansas, approximately five miles southeast of the City of Fort Smith (**Figure 1-1**).

FCJMTC has operated as a military training site since 1941. The installation supports the training and readiness requirements of Army National Guard (ARNG), Air National Guard (ANG), active duty, reserve component forces, and other federal, state, and local agencies. FCJMTC is designated as one of the nine National Guard Regional Collective Training Capability sites able to support company-level maneuver and platoon level live-fire training, air-to-ground gunnery, urban operations training, and other combined-arms activities. (FCJMTC 2019a).

Razorback Range was established in 1974 to provide non-nuclear Class A air-to-ground gunnery training (GlobalSecurity 2024). Originally encompassing approximately 177 acres, the range has expanded to more than 1,000 acres and currently supports over 60 targets and multiple aircraft platforms (Suleski 2014).

The range currently operates Monday-Thursday from 0730-1630L and on drill weekends, with the flexibility to run from 0700 to 0000L based on scheduled requests. The range is utilized by active-duty DAF, Marines, Foreign Military Sales (FMS), and Close Combat Air Support units operating a variety of carrier, bomber, and fighter aircraft for training purposes and Joint Terminal Attack Controller (JTAC) qualifications. In fiscal year 2025, the range completed approximately 612 bombing and 562 strafe runs, according to the Range Commander. The bombing range is located approximately 2,700 feet northeast of the proposed project area footprint. The administration building, tower, and maintenance space associated with the proposed project supports these range training efforts; however, bombing range activities are not evaluated as part of this proposed action.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 as amended [42 United States Code (USC) 4321, et seq], the Department of War (DoW) NEPA Implementing Procedures (2026), and DAF NEPA Implementing Procedures (2026).

1.2 PURPOSE OF THE PROPOSED ACTION

The purpose of the Proposed Action is to provide adequately sized and compliant facilities at the Razorback Range to support bombing and strafing operations, maintenance, storage, administrative functions, airspace management, and physical readiness activities required to sustain current and projected mission requirements of the 188th Operations Group and supported training units.

Figure 1-1. FCJMTC and Razorback Range Location Map



1.3 NEED FOR THE PROPOSED ACTION

The Proposed Action is needed to address facility deficiencies, space shortfalls, utility limitations, and safety/security compliance issues that currently constrain mission execution at Razorback Range. The existing range control tower was constructed in 1974 with four additional support facilities constructed in 1992. These facilities exhibit ongoing deterioration requiring increased maintenance due to water intrusion through windows and doors, despite resealing efforts and repairs. Fogging and reduced visibility through double-paned windows in the control tower creates operational and aviation safety concerns, as well as the absence of fire sprinkler systems. Non-functional, degraded security alarm systems, non-operational mass notification systems, and aging utility infrastructure are inadequate to support current operational demands. The project is needed because the existing facilities are undersized relative to authorized space requirements. The range facilities are currently deficient of an estimated 10,495 square feet (SF) of required space and lack sufficient utility systems (ANGH 32-1084 *Facility Space Standards* and applicable NGB space criteria).

Personnel levels have increased by approximately 70 percent over the past two years, representing up to 30 additional personnel during peak operations due to increased range use. Current facilities cannot accommodate required staffing during mission briefings and operational periods, necessitating temporary facilities and creating inefficiencies.

There is currently no available space at Ebbing ANG Base in Fort Smith to accommodate and maintain range-assigned vehicles. Conducting maintenance at the main base would require repeated transport of vehicles between the range and base facilities, increasing operational costs and reducing efficiency.

The lack of adequate maintenance space prevents concurrent maintenance and reduces operational readiness. Additionally, insufficient covered storage has resulted in training equipment and vehicles exposed to environmental conditions, accelerating degradation and increasing lifecycle costs. The range area, though not in a floodplain, floods seasonally, compromising the structural integrity of the existing buildings. Recurring interior flooding and mold concerns in the control house and control tower have been documented during health and safety inspections. Additionally, the proximity of the septic system to the potable water supply has resulted in contamination by septic effluent and iron bacteria, rendering the water non-potable. These conditions present documented health and safety risks to personnel occupying the facilities. The deficiencies identified along with resolutions under the scope of the proposed action are presented in detail in subsequent sections.

The existing facilities are operationally inefficient and fail to meet governing regulatory standards. Specifically, they do not comply with the requirements for antiterrorism, force protection, and emergency response outlined in the following Department of Defense (DoD) Instructions (DODI):

- DoDI 2000.12, *DoD Antiterrorism Program*
- DoDI 2000.16, *DoD Antiterrorism Standards*
- DoDI 2000.18, *DoD Installation Chemical, Biological, Radiological, Nuclear and High-Yield Explosive Emergency Response Guidelines*

As a result, these deficiencies inhibit effective training and negatively impact mission readiness.

The Proposed Action would enable the ANG and other authorized users to continue to conduct air-to-ground training and related support operations in accordance with National Guard Bureau

(NGB) mission ready requirements, applicable safety criteria, and force protection requirements while addressing documented deficiencies in the existing facilities in accordance with NGB standards. The range would continue to be utilized by active-duty DAF, Marines, FMS, and Close Combat Air Support units operating a variety of carrier, bomber, and fighter aircraft for training purposes and JTAC qualifications.

1.4 INTERAGENCY AND INTERGOVERNMENTAL COORDINATION AND CONSULTATION

1.4.1 Interagency Coordination and Consultations

The DAF will notify and consult with other federal, state, and local agencies with jurisdiction potentially affected by the alternative actions during the EA development per the Intergovernmental Cooperation Act of 1968 (42 USC 4231(a)) and EO 12372.

The DAF is consulting with the United States Fish and Wildlife Service (USFWS), as the Proposed Action could affect federally listed/proposed threatened/endangered species per Section 7 of the Endangered Species Act of 1973 (ESA) (16 USC 1531 et seq.) and its regulations at 50 CFR 402. The DAF also sent early notification letters to the USFWS, informing them of the Proposed Action and requesting data on applicable protected species.

The DAF is considering the effects of its actions on historic properties and will strive to avoid, minimize, or mitigate adverse effects per the National Historic Preservation Act (NHPA) (54 USC §300101 et seq.) and is consulting with the Arkansas State Historic Preservation Officer (SHPO) per Section 106 of the NHPA and 36 CFR §800.1(a)).

1.4.2 Government-to-Government Consultations

The DAF has engaged in consultation with Tribal Nation officials per EO 13175, *Consultation and Coordination with Indian Tribal Governments*; DoDI 4710.02, *DoD Interactions with Federally Recognized Tribes*, Department of the Air Force Instruction (DAFI) 90-2002, *Air Force Interactions with Federally Recognized Tribes*. Tribal government points of contact, scoping letters, and responses are included in **Appendix A**.

2 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

The Proposed Action consists of demolishing the existing Razorback Range facilities and constructing a new, consolidated range support facility with associated roadway and utility improvements along Marietta Church Road (**Figure 2-1**). The existing facilities, which include a range control tower, range control building, equipment storage shed, and equipment parking shed (**Figure 2-2**), would be dismantled and removed. To improve site drainage, engineered fill would be used to raise the site elevation by approximately two feet or 4,800 cubic yards of fill material (**Figure 2-3**). The new 15,000 SF, two-story consolidated facility would feature a range control tower, four maintenance bays, an equipment storage area, a wash area, and a paved parking lot (**Appendix B**). The new tower would offer improved operational visibility, communications, and life-safety systems, complying with current building safety and anti-terrorism/force protection standards. This permanent structure would be constructed in accordance with DoD Unified Facilities Criteria (UFC) 4-010-01 – *Antiterrorism Standards for Buildings* and 1-200-01 – DoD Building Code, FCJMTTC *General Building Requirements* 210-1, and DAF (DAFMAN 32-1084) design standards.

Equipment permanently stored on site would include but is not limited to construction equipment (i.e., excavator, backhoe, loader), two tractors, two trailers, one 5-ton truck with trailer, two utility terrain vehicles (UTVs), three trucks, various equipment attachments, five trailer-mounted radio frequency threat emitters, three medium-fidelity trailer-mounted targets, and one trailer-mounted welder. Traffic along Marietta Church Road is expected to double due to expanded operations at Razorback Range. This increase is driven equally by two key factors: the need to meet current U.S. military mission standards and expanded training under the FMS program. To manage this higher traffic volume and address existing roadway degradation, Marietta Church Road may be paved by the ARNG in the future; however, the ANG may regrade the road and ditches during associated waterline and utility upgrades associated with the proposed action.

A majority of the increased activity is necessary to align with evolving military readiness standards, which require more frequent and intensive training exercises to ensure U.S. forces are prepared for modern operational demands. ANG pilots seeking Close Combat Air Support and JTAC qualifications would not meet DAF training standards if the proposed improvements are not completed to facilitate this training requirement. In addition, the FMS program, a key component of U.S. foreign policy, involves training allied nations on U.S. defense equipment, aircraft, and tactics. This partnership training increases the operational tempo at U.S. facilities like Razorback Range.

Utility improvements would include installation of a new septic system within the project footprint; upgrade of the existing electrical service from single-phase to three-phase power; and installation of a new water supply line within approximately 25 feet of the Marietta Church Road centerline. The new water line would connect to a constructed above-ground water storage tank located within the project footprint. A stormwater management system would be constructed to convey runoff to a downstream pond that discharges into one of three existing on-site stormwater ponds.

An EA was determined to be the appropriate level of NEPA documentation for this proposed action due to the possible impacts to the floodplain, wetland extent that was not yet determined, and endangered species that could not be thoroughly addressed or evaluated through a categorical exclusion process.

Figure 2-1. Razorback Range Proposed Project Footprint

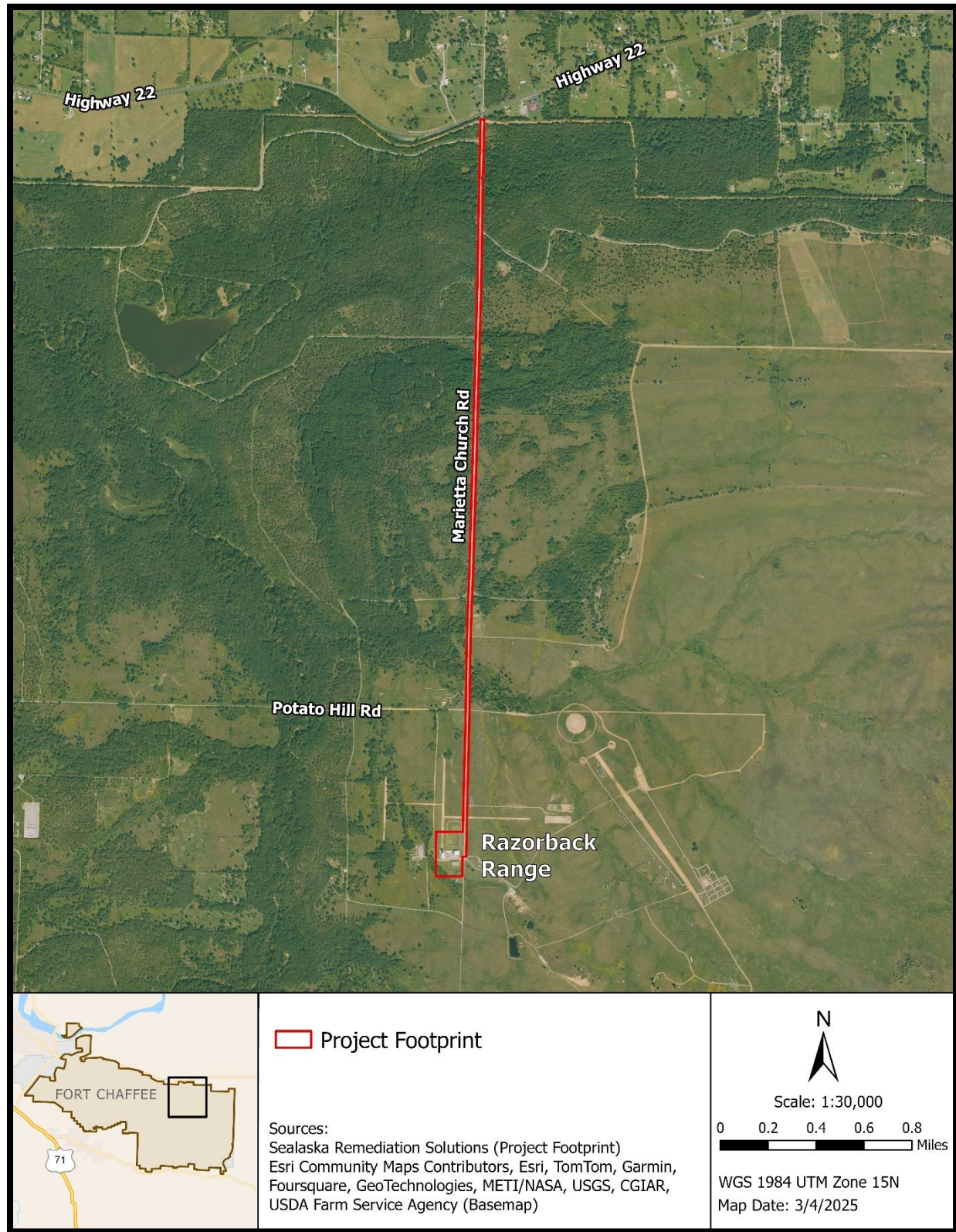


Figure 2-2 Existing Razorback Range Facilities

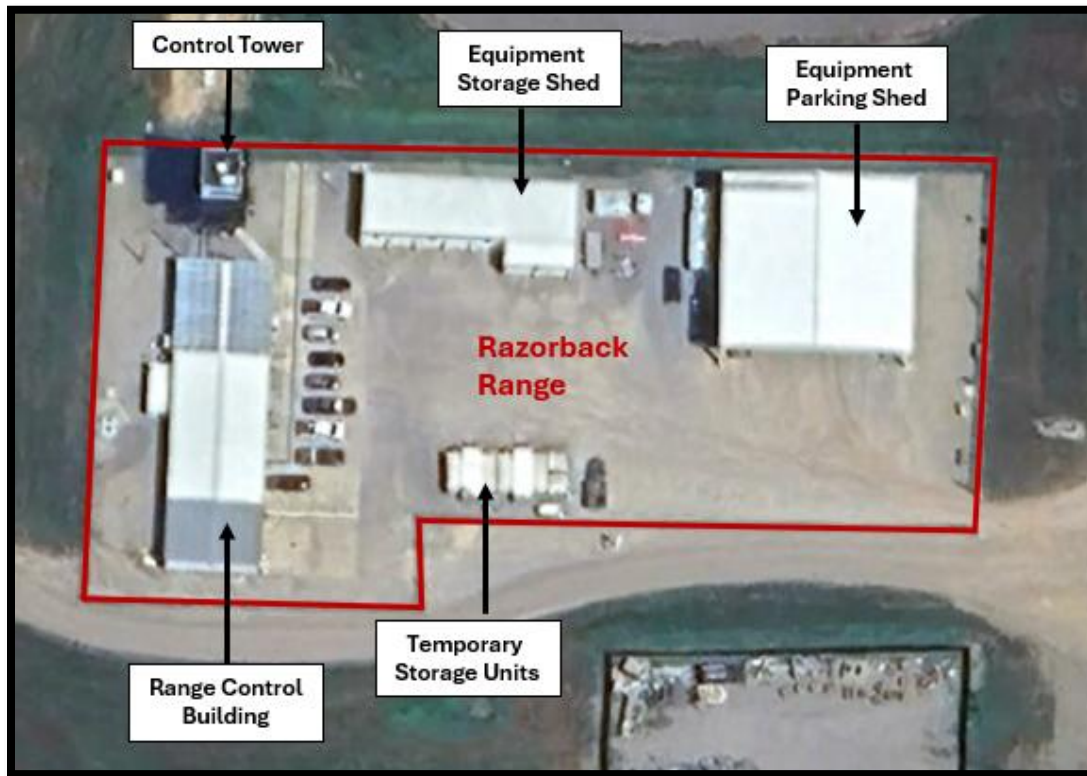
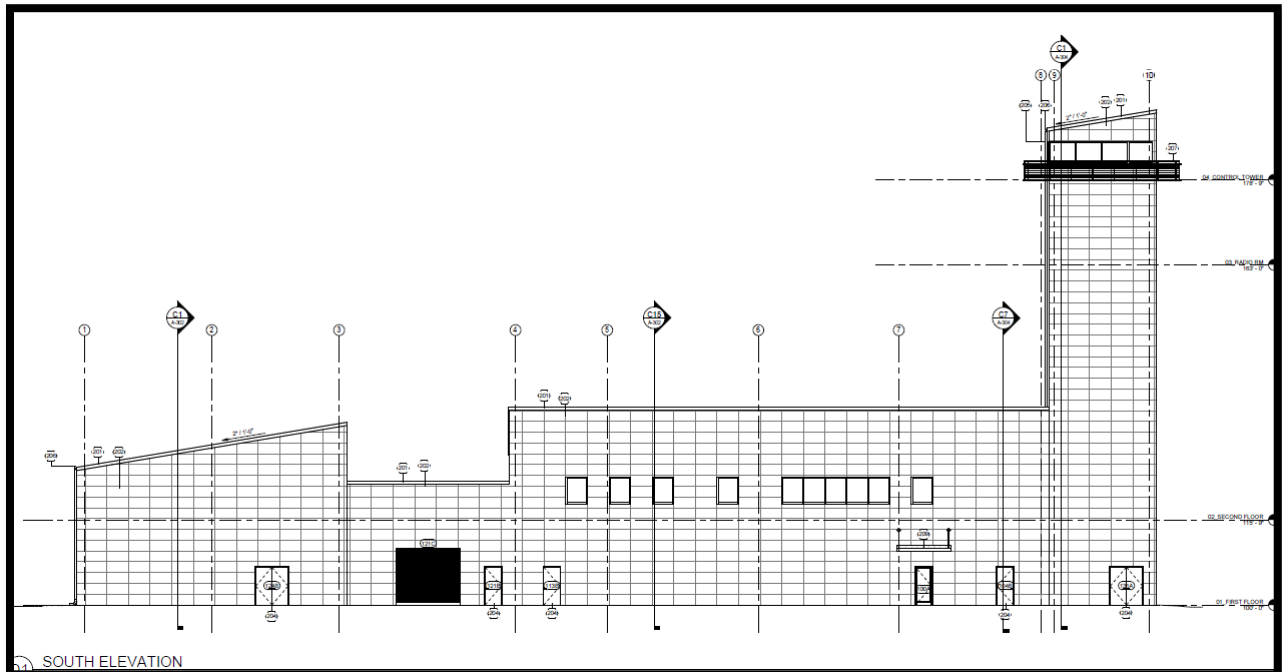


Figure 2-3 Side Elevation of Proposed Building Facing North



The facilities are used by ANG range personnel for scheduling, maintenance, administrative requirements and flight operations for approximately 40 to 65 hours a week, depending on training requirements. Personnel levels are expected to increase by approximately 70 percent as the FMS mission becomes fully operational, which represents up to 30 additional personnel during peak operations due to more frequent range use (DAF 2023). Separate manning studies determined a need for seven additional full-time personnel to support training requirements. The projected increase in range use in correlation to the FMS mission training requirements and an increase in personnel would drive the need for an expansion of operational hours. As a result of the increase in personnel and training, facility usage would increase from the current 40-65 hours per week to approximately 65 hours per week (DAF 2023).

2.1.1 Design Options Considered but Eliminated from Further Analysis

The following design options were considered during project development but eliminated from further consideration.

- **Repair Existing Facilities** - The existing structures have suffered significant degradation due to repeated flooding. This design option would not address underlying drainage and flooding issues, and the facilities would likely continue to deteriorate. Prolonged exposure to moisture could result in mold growth, posing ongoing health risks to personnel.
- **Repair Existing Septic System** - The current septic system is in close proximity to the water supply and is degraded. Frequent filter replacement is required to maintain functionality, indicating limited long-term reliability and non-potable water.
- **Tie into the City of Charleston Sewer System** - Due to municipal sewer system capacity constraints, connection was eliminated as a viable alternative during detailed analysis. The existing system cannot handle additional wastewater from the range. This issue is compounded by the Arkansas Health Department's moratorium on significant new projects until municipalities can increase their wastewater treatment capacity (Grajeda and Hickey, 2025). Furthermore, implementation would require crossing multiple privately-owned properties, potentially forcing those property owners to connect to the system.
- **Use Existing Water Supply Line** - The current system is a three-mile, dead-end water main, which provides inadequate flow to maintain water freshness. Due to insufficient pressure and limited capacity, the system cannot meet the anticipated demand. Similar to the challenges with the sewer system, the existing water supply line would not support the additional capacity required to accommodate the anticipated increase in usage (Grajeda and Hickey, 2025).
- **Use Existing Well with On-site Treatment** - The existing well does not provide sufficient capacity and is subject to recurring issues due to proximity of the aging septic system (see Section 1.2 for additional details). This option would require substantial upgrades to ensure safe and reliable water supply.

2.2 No Action Alternative

Under the No Action Alternative, a new, consolidated range facility and related utilities would not be constructed, and the outdated, inefficient facilities would not be demolished. Flooding issues would persist, continuing to pose safety risks to personnel while training equipment and vehicles would remain inadequately protected leading to ongoing degradation. Additionally, the Razorback Range would remain insufficient to meet ANG's anticipated future training and mission readiness requirements.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

This chapter presents relevant general baseline conditions and the potential environmental consequences of implementing the Proposed Action and No Action Alternatives. Based on the scope of the Proposed Action, resources with minimal or no impacts were identified through a preliminary screening process, which resulted in the following resources not being carried forward for detailed analysis, as described in **Table 3-1**:

Table 3-1. Resources Not Carried Forward for Detailed Analysis

Resource	Summary of Rationale for No Detailed Analysis
Airspace	Under the Proposed Action, the existing airspace would remain unchanged. Since no changes to or use of airspace would occur, the Proposed Action would not affect airspace. Therefore, airspace was not carried forward for detailed analysis.
Land Use	The Proposed Action would not result in changes to land use patterns, land ownership, land management plans, or special use areas and would therefore have no impact on land use. As such, land use was not carried forward for detailed analysis.
Socioeconomics	The Proposed Action would create a negligible, short-term economic benefit from temporary construction jobs and the purchase of materials. Because the action does not change the number of personnel at FCJMTC, it would not cause a long-term increase in the local population or demand for housing and public services like schools or medical care. Therefore, socioeconomics was not carried forward for detailed analysis.
Protection of Children	The Proposed Action would pose no risk to children's health and safety. The project footprint is located within Razorback Range, a remote, fenced facility with controlled entry more than three miles from the nearest home or highway. The range contains no schools, childcare centers, or other facilities where children are typically present. Children would not have access to the site. All activities would comply with DAF safety standards (DAFI 91-202). Therefore, the protection of children was not carried forward for detailed analysis.
Noise	Noise from demolition, construction, and repaving would be temporary and localized. While brief roadwork near the northern boundary might be audible off-site, most activities would occur over two miles inside the installation. Short-term noise is typical of heavy equipment and would not change the existing operational noise profile of the range. Per DoD (2025) guidance, temporary construction noise is not considered a significant impact, as it is intermittent and not at a level to cause sustained annoyance or health effects in surrounding communities. Therefore, noise was not carried forward for detailed analysis.

Unless otherwise stated below, the Region of Influence for the resources analyzed below is the proposed project footprint (**Figure 2-1**).

3.2 Air Quality

Air quality refers to the condition of the atmosphere as it relates to the presence and concentration of pollutants that may affect human health, the environment, and overall air clarity. When evaluating federal actions under NEPA, agencies must assess potential impacts

on air quality, including the effects of emissions of criteria pollutants, and hazardous air pollutants. This assessment ensures the Proposed Action would comply with the Clean Air Act (CAA) and considers regional air quality standards and potential contributions to air quality degradation or improvement. Effects on air quality would be considered significant if the Proposed Action generated emissions that did not meet CAA conformity determination requirements or contributed to a violation of any federal, state, or local air regulation. As a resource, air quality includes air pollution within a region, sources of air emissions, and regulations governing air emissions. Air pollution is the presence of one or more contaminants (e.g., dust, fumes, gas, mist, odor, smoke, or vapor) in the outdoor atmosphere in quantities and duration that could harm human, plant, or animal life or unreasonably interfere with the enjoyment of life and property.

3.2.1 Affected Environment

National Ambient Air Quality Standards and Attainment Status. The CAA assigns the U.S. Environmental Protection Agency (USEPA) the responsibility for establishing the primary and secondary National Ambient Air Quality Standards (NAAQS) (40 Code of Federal Regulation [CFR] Part 50), which specify acceptable concentration levels of six criteria pollutants: particulate matter (measured as both particulate matter less than or equal to 10 microns in diameter [PM_{10}] and particulate matter less than or equal to 2.5 microns in diameter [$PM_{2.5}$]), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead (Pb) (**Appendix C**). Short-term NAAQS (over 1-, 8-, or 24-hour periods) have been established for pollutants contributing to acute health effects, while long-term NAAQS (annual averages) have been established for pollutants contributing to chronic health effects. Each state has the authority to adopt standards stricter than those established under the federal program; however, the State of Arkansas has accepted the federal standards (ADEQ 2022a) (see Table F-1 in **Appendix C**).

Existing Emissions and Permitting. The Razorback Range is located in Sebastian County in the Northwest Arkansas Intrastate Air Quality Control Region (AQCR 17), which also includes Crawford County. Under federal regulations, AQCRs that exceed the NAAQS are designated as nonattainment areas and those with pollutant levels below the NAAQS are designated as attainment areas. Sebastian County is in attainment for all criteria pollutants (USEPA 2025). As a result, the General Conformity Rule (GCR) does not apply. The GCR ensures federal actions do not cause new violations of the CAA in nonattainment areas.

3.2.2 Environmental Consequences

Emissions were estimated using the DAF Air Conformity Applicability Model (ACAM). The estimate was based on total reasonably foreseeable net direct and indirect emissions associated with the action on a calendar year basis, beginning with the start of the action and continuing until “steady-state” emissions are reached, and no net gain or loss occurs, and the action is fully implemented. ACAM is a robust computer model developed and used primarily by the DAF and other DoD agency planners in analyzing environmental impacts. The ACAM model provides a consistent method for evaluating potential emissions. It was assumed that the new facilities would reach a steady state in 2028 for the GCR conformity analysis. A worst-case evaluation conformity analysis was simulated for the Proposed Action.

3.2.2.1 Proposed Action Alternative

Short- and long-term, negligible adverse effects to air quality would be expected from implementing the Proposed Action. Short-term effects would be caused by air emissions generated during construction, and long-term effects would be caused by operational emissions

from implementing the Proposed Action. Operational, long-term emission changes would be attributable to increased personnel commutes, emergency generators, and heating the facility.

The Proposed Action would not generate emissions exceeding the GCR insignificant threshold values and would not contribute to a violation of any federal, state, or local air regulation. None of the estimated annual net emissions from the Proposed Action would exceed insignificance indicators; therefore, the Proposed Action would not cause or contribute to a GCR conformity exceedance.

Construction. Construction emissions were estimated for fugitive dust, on- and off-road diesel equipment and vehicles, worker trips, architectural coatings, and paving off-gases. Criteria air pollutant emissions were estimated using ACAM for the Proposed Action (**Table 3-2**). The ACAM assumptions for site grading were included for each project element to account for air emissions from C&D. According to USEPA, C&D debris is not considered municipal solid waste. It typically includes materials such as steel, wood products, drywall and plaster, brick and clay tile, asphalt shingles, concrete, and asphalt concrete.

Table 3-2 Construction ACAM Inputs (rounded) for the Proposed Action

Proposed Action Components	Quantity*	Notes/Assumptions
Demolition - Building Area	14,000 sf	Building demolition footprint
Demolition - Soil/Material Disposal	10,000 cy	Range of material to be hauled/disposed of
Demolition - Disturbance Area	112,500 sf	Total disturbed surface area
Demolition - Soil Removal (Septic/Utilities)	1,650 sf / 250 cy	Includes septic tank and utility trench removal
Construction - New Covered Area	16,560 sf	Rough order of magnitude estimate
Construction - Imported Soil	8,500 cy	Soil material imported/placed on-site
Construction - Paving	60,000 sf	Includes paved surfaces in project scope
Road Repair - Length	13,500 lf	Based on Google Earth measurement
Road Repair - Widening/Excavation	30 ft width + 16 ft ditches (1 ft deep)	Per UFC 3-201-01, assumes road 30 feet + 16ft ditch each side
Road Repair - Soil Excavation	16,000 cy	Assumes 1 ft excavation depth, soil reused on-site
Road Repair - Impact Area	405,000 sf	Total road disturbance footprint
Road Repair - Gravel Placement	125 loads (2 in gravel)	Gravel cover 2 in. thick across road area

*Notes: cy = cubic yards; in. = inch; lf = linear foot/feet; sf = square foot/feet; UFC = Unified Facilities Criteria. Calculations based on engineering calculations from UFC for cost estimating.

The ACAM model was simulated assuming all Proposed Action elements would happen in a single-year period for cumulative emission rate. Emissions were estimated for C&D, site clearing and grading, and C&D debris estimated to be hauled off-site. ACAM default parameters were assumed except for construction hauling trips, personnel and construction commute distances, and construction vendor trips. Construction hauling and worker commutes were assumed to average 40 miles round trip (20 miles one way). The assumption was based on the average commute times established by the U.S. Census Bureau (USCB) of one-way travel times for Arkansas (USCB 2025).

Table 3-3 presents the estimated air pollutant emissions for the Proposed Action C&D. It includes the least restrictive insignificance thresholds for criteria pollutants to determine the level of effects of the emissions sources. The total emissions would remain below *de minimis*

levels and under the significance thresholds for each of the criteria pollutants. Therefore, the Proposed Action effects to air quality during construction would be short term and less than significant.

Table 3-3 Construction ACAM Results for the Proposed Action

Pollutant*	Insignificance Indicator	Total Emissions for Construction (Proposed Action)	Exceedance (Yes or No)
VOC	250	0.829	No
NO _x	250	5.431	No
CO	250	6.741	No
SO _x	250	0.012	No
PM ₁₀	250	66.445	No
PM _{2.5}	250	0.200	No
Pb	25	0.000	No
NH ₃	250	0.010	No

*Notes: NH₃ = ammonia; NO_x = nitrogen oxides; SO_x = sulfur oxides; tpy = tons per year; VOC = volatile organic compound. Criteria pollutants are reported in tpy unless otherwise noted.

Reasonable precautions would be taken during construction to prevent airborne dust, including the use of water to control dust from building C&D, road grading, and land clearing. Cleared or graded areas would be seeded or vegetated promptly following project activity to minimize fugitive dust. Given the sustained potential for emissions over consecutive years of construction, the ANG would coordinate with construction teams to ensure that best management practices would be effectively implemented.

Operations. Operational, long-term emission changes would be attributable to increased personnel commutes, emergency generators, and heating the facility. Overall, privately owned vehicle emissions would not result in an appreciable increase in air pollutant emissions over preoperational levels when personnel commute to the new consolidated range facility. The estimated, steady-state operations emissions would be below the insignificance indicators; therefore, the level of effects would not be significant (**Table 3-4**). None of the annual net change in estimated emissions associated with the Proposed Action would be above the GCR threshold values established in 40 CFR § 93.153(b); therefore, the Proposed Action would have no significant impact on air quality and a GCR determination would not apply.

Table 3-4 Operational Emissions Total Relative Significance

Pollutant*	Insignificance Indicator	Total Emissions for Construction (Proposed Action)	Exceedance (Yes or No)
VOC	250	0.180	No
NO _x	250	0.176	No
CO	250	2.289	No
SO _x	250	0.006	No
PM ₁₀	250	0.021	No
PM _{2.5}	250	0.013	No
Pb	25	0.000	No
NH ₃	250	0.025	No

*Notes: NH₃ = ammonia; NO_x = nitrogen oxides; SO_x = sulfur oxides; tpy = tons per year; VOC = volatile organic compound. Criteria pollutants are reported in tpy unless otherwise noted.

For all new sources under the Proposed Action that would trigger a permitting threshold, the ANG would be required to file a permit with ADEQ. Under the CAA, new or modified emission

sources may require permits to ensure compliance with the NAAQS. In attainment areas, major sources are subject to Prevention of Significant Deterioration (PSD) permitting, which requires the use of the Best Available Control Technology and an air quality analysis to demonstrate emissions would not cause or contribute to NAAQS exceedances. In nonattainment areas, new sources must obtain a Nonattainment New Source Review permit, which requires the use of the Lowest Achievable Emission Rate and emission offsets. These permitting requirements are intended to prevent significant air quality impacts and are considered as part of the NEPA review process. No exceedances of air quality criteria were identified or anticipated during construction based on the parameters identified. Full ACAM analysis is presented in **Appendix C**.

GHG Emissions Analysis. GHGs produced by fossil fuel combustion are primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of carbon dioxide equivalents (CO₂e). All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and/or *Air Emissions Guide for Air Force Transitory Sources* (AFCEC 2025a, 2025b, 2025c).

The DAF and, therefore, the ANG, has adopted the PSD threshold for GHG of 75,000 tons per year (tpy) of CO₂e as an indicator or “threshold of insignificance” for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant, or *de minimis*. Actions with a net change in GHG CO₂e emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG CO₂e emissions above the insignificance indicator (threshold) are considered only potentially significant and require further assessment to determine if the action poses a significant impact. **Table 3-5** summarizes the Proposed Action-related GHG emissions on a calendar year basis through the projected steady state of the action. The Proposed Action GHG emissions would be below the indicator threshold and would be considered insignificant. Full analysis is presented in **Appendix C**.

Table 3-5 Proposed Action-Related Annual GHG Emissions

Total GHG Relative Significance (tpy)					
		CO ₂	CH ₄	N ₂ O	CO ₂ e ^a
2026–2028	State Total	195,891,637	1,051,107	82,936	247,300,566
	U.S. Total	15,409,362,537	76,880,735	4,502,123	18,755,085,689
	Proposed Action	1,740	0.072287	0.027636	1,750
Percent of State Totals		0.00088839%	0.00000688%	0.00003332%	0.00070775%
Percent of U.S. Totals		0.00001129%	0.00000009%	0.00000061%	0.00000933%

Source: ACAM reports (**Appendix C**); Note: ^a CO₂e accounts for the GWP of each GHG.

3.2.2.2 No Action Alternative

Under the No Action Alternative, no construction, demolition, or renovation would occur and air quality would remain comparable to existing conditions. However, the potential emission reductions from the introduction of more energy-efficient airframes would not be realized. The resulting long-term adverse effect would be negligible and, therefore, not considered significant.

3.3 Biological Resources

Biological resources include native and naturalized plants and animals and the habitats in which they occur. Plant associations are referred to generally as vegetation, and animal species are referred to generally as wildlife. Habitat can be defined as the resources and conditions present in an area that support a plant or animal. Biological resources are integral to ecosystem integrity. The existence and preservation of biological resources are intrinsically valuable to society for aesthetic, recreational, and socioeconomic purposes. A system of legal requirements and best practices exists to protect them for these purposes.

This analysis focuses on species or vegetation types that are important to the functions of ecosystems, are of special societal importance, or are protected under federal or state law or statute. For purposes of this EA, these resources are divided into three major categories: vegetation; wildlife; and threatened, endangered, and sensitive species.

3.3.1 Affected Environment

3.3.1.1 Vegetation

The vegetative communities on the project footprint include developed land, disturbed grassland, and deciduous forest. Periodic prescribed burns help to maintain the range area for training purposes (FCJMTTC 2019a). Vegetation in the developed land areas includes turf, manicured grasses, and ornamental species. The land-use classification is “improved grounds,” which are characterized by impervious surfaces and landscaped areas that require intensive maintenance.

The disturbed grassland areas include grass, scrub, and low woody cover. The vegetation is characteristic of management for range training. Common plant species include annual ragweed (*Ambrosia artemisiifolia*), Bahiagrass (*Paspalum notatum*), Chinese bush clover (*Lespedeza cuneata*) - invasive, perennial ryegrass (*Lolium perenne*), and yarrow (*Achillea millefolium*) (USACE 2025a). The land category for disturbed grasslands is “semi-improved grounds,” which are sparsely developed and require periodic maintenance.

The deciduous forest areas are adjacent to the ephemeral and perennial streams and along the edge of Marietta Church Road, with a typical canopy height of approximately 50 feet (USACE 2025a). Characteristic canopy species include American sycamore (*Platanus occidentalis*), blackjack oak (*Quercus marilandica*), green ash (*Fraxinus pennsylvanica*), loblolly pine (*Pinus taeda*), southern red oak (*Quercus falcata*), water oak (*Quercus nigra*), and winged elm (*Ulmus alata*). Understory species include Allegheny blackberry (*Rubus allegheniensis*), climbing rose (*Rosa setigera*), common persimmon (*Diospyros virginiana*), and winged sumac (*Rhus copallinum*). The land-use category for forests is “unimproved grounds,” which are characterized by undeveloped land requiring low levels of maintenance.

A total of 53 plant species were identified in a 2025 flora and fauna survey of the Razorback Range natural resources survey area (USACE 2025a).

3.3.1.2 Wildlife

A 2025 flora and fauna survey and 2024 bat survey were conducted on, and adjacent to, the project footprint (USACE 2025a, USACE 2025b). During the surveys, 66 avian, ten mammal, one amphibian, one crustacean, one reptile, and six insect species were observed. Streams on the range are unlikely to support fish species because of the limited availability of year-round water.

The following three bat species were detected: big brown bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*) and evening bat (*Nycticeius humeralis*). All three species rely on forests to roost in foliage, tree cavities, or beneath loose tree bark during the day. Maternity roosts for big brown bats may occur on building structures (e.g., under roofing or siding), although no bats or bat signs were observed near the existing range structures.

Mammalian species observed include eastern cottontail (*Sylvilagus floridanus*) and striped skunk, (*Mephitis mephitis*). Evidence of species (tracks, scat, markings) included coyote (*Canis latrans*), Eurasian wild pig (*Sus scrofa*), nine-banded armadillo (*Dasypus novemcinctus*), raccoon (*Procyon lotor*) and white-tailed deer (*Odocoileus virginianus*).

The amphibian and reptile species observed were identified as the Fowler's toad (*Anaxyrus fowleri*), and the three-toed box turtle (*Terrapene Carolina triunguis*).

The only crustacean identified was the crawfish (*Faxonium spp.*). Insects observed included the American bumblebee (*Bombus pensylvanicus*), eastern calligrapher beetle (*Toxomerus geminatus*), Lone Star tick (*Amblyomma americanum*), monarch butterfly (*Danaus plexippus*), nastra skipper (*Nastra lherminier*), shining flower beetle (*Olibrus spp.*), and summer azure (*Celastrina neglecta*).

Other species that may occur in the vicinity of Razorback Range, not specifically identified within the proposed project footprint include American robin, blackbirds, northern bobwhite quail, snakes, turtles, wild turkey, and white-footed mouse (FCJMTC 2019a).

3.3.1.3 Threatened, Endangered, and Sensitive Species

Nine federally protected species have the potential to occur in the vicinity of the project footprint (USFWS 2025a – *Information for Planning and Consultation*). These include two endangered species, the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*); one proposed endangered species, the tricolored bat (*Perimyotis subflavus*); four threatened species, the eastern black rail (*Laterallus jamaicensis ssp. jamaicensis*), piping plover (*Charadrius melodus*), rufa red knot (*Calidris canutus rufa*) and American burying beetle (*Nicrophorus americanus*); and two proposed threatened species, the monarch butterfly (*Danaus plexippus*) and alligator snapping turtle (*Macrochelys temminckii*) (**Appendix D**). Of these, the only species observed during the field surveys was the monarch butterfly (USACE 2025a). No T&E Critical Habitat occurs on or near the project footprint (USFWS 2025a).

The proposed project area is located within the historical range of the American burying beetle (ABB). The species is associated with a wide range of habitats including wet meadows, partially forested loess canyons, oak-hickory forests, shrub land and grasslands, lightly grazed pasture, riparian zones, and forests with an open understory (USFWS 2025b). As a result, there is potential for suitable ABB habitat to occur within the proposed project footprint and consultation with the USFWS will be initiated in accordance with Section 7 of the ESA to include a submittal of a Biological Assessment for review and concurrence by USFWS. This consultation will assess potential impacts to the species and identify appropriate avoidance, minimization, or mitigation measures, as necessary.

Migratory Birds. The Migratory Bird Treaty Act protects migratory birds, and the Bald and Golden Eagle Protection Act protects bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) from illegal take except under permit. The USFWS Information for Planning and Consultation website, highlighted two migratory bird species with potential to occur at Razorback Range, the bald eagle and American kestrel (*Falco sparverius paulus*) (USFWS 2025a). The breeding season for the bald eagle occurs from September through July and for the American kestrel from April through August. Avoiding activity in and near potentially suitable

habitat during those times would reduce potential adverse effects to both species. Although no bald eagles, nest, or suitable habitat are identified within the proposed project footprint, if bald eagle nests are established in the vicinity of proposed construction activities, major disturbances within a 660-foot radius of the nest should be avoided from February 1 to August 15 (USFWS 2025c).

State-Listed Species. The Arkansas Game and Fish Commission (AGFC) maintains endangered species legislation and is the administrative, regulatory, and enforcement agency for state sensitive species. Species listed in the AGFC Code Book are protected under authority of Amendment 35 to the Constitution of the State of Arkansas. Indiana bat, little brown bat (*Myotis lucifugus*), and northern long-eared bat are listed as endangered species under AGFC Code Book (AGFC 2024) and may occur in or near the project footprint.

The little brown bat uses a wide range of habitats including human-made structures for resting and maternity sites. They typically roost in caves and mines in the winter, and they can be found in trees, artificial structures, bat houses, under rocks and in piles of wood in the summer. The range of the little brown bat overlaps the proposed project footprint, which includes potentially suitable habitat for the species (USFWS 2025d). The little brown bat was not detected during the 2024 bat survey (USACE 2025b); however, the species has been documented in Sebastian County, Arkansas (Sasse et al. 2011).

3.3.2 Environmental Consequences

3.3.2.1 Proposed Action Alternative

Effects on biological resources would be considered significant if the Proposed Action reduced the distribution or viability of a species or habitat of concern, including a take of a listed species.

3.3.2.2 Proposed Action

The Proposed Action would have short- and long-term effects on biological resources that would not be considered significant. Short-term minor adverse effects would be caused by site-specific temporary disturbance during construction. Long-term minor adverse effects could result from ongoing activities at the range. Proposed activities would not adversely affect native vegetation or aquatic and terrestrial wildlife resources, including threatened and endangered species. Effects on biological resources would not reduce the distribution or viability of species or habitats of concern or violate biological resources laws or regulations. There would be no significant effects regarding loss, degradation, or fragmentation of wildlife habitat.

ABB (Endangered Species Act). The ABB is the only federally protected species under the ESA known to inhabit the project area through all stages of its life cycle. As a nocturnal insect, essential activities are disturbed by artificial and anthropogenic lights, with the ABB more affected by light than other species of beetle. Specifically, ultraviolet lights are the most attractive to nocturnal beetles, and sodium vapor lights are the least attractive. Lighting required for proposed projects could affect ABB activities in the immediate area, but the potential impacts would be reduced or avoided by adhering to the lighting guidelines presented in the ABB Conservation Plan (USDOE NNSA 2019).

These guidelines include utilizing sodium vapor bulbs with shades for all outdoor lighting on new facilities expected to be utilized during nighttime hours. Lighting guidelines would be considered during final project design for all projects requiring lighting, such as the control tower, parking area lighting, and the building lighting to illuminate entry doors. All indoor and outdoor lights would utilize the lowest wattage possible and be deactivated when unoccupied.

A 2011 Biological Opinion issued by the USFWS regarding military training, forestry, and wildlife management activities at Fort Chaffee determined that such actions could result in the following direct and indirect adverse effects to ABB (USDOE NNSA 2019):

- Direct effects from use of pesticides or herbicides.
- Direct effects from soil disturbance during construction and maintenance activities which could uncover ABBs, exposing them to predation, adverse environmental conditions, or crushing by equipment.
- Direct effects from use of heavy equipment compacting soils and destroying ABB brood chambers, crushing individuals, or prohibiting re-emergence.
- Indirect effects from creation of uniform habitats and subsequent reduction in available suitable carrion; and
- Indirect effects from competition for carrion from species that thrive along edge habitats or are attracted by urban encroachment.

Adverse effects to the ABB from construction and operation of the Proposed Action could occur in undisturbed areas of ABB habitat, similar to the potential adverse effects described above. To avoid adverse effects to the ABB, the ANG would comply with the 2011 Biological Opinion mitigation measures, as well as additional stipulations identified during USFWS Section 7 consultation, which includes development and concurrence of a new Biological Assessment submitted for the proposed project.

This includes compliance with the following:

- Implementation of the ABB Conservation Plan.
- Conduct annual surveys for the ABB.
- When recontouring disturbance areas, set aside topsoil then redistribute across newly level ground to maintain soil integrity.
- Monitor land use trends and habitat conditions on an annual basis to track cumulative effects of land alteration and disturbance.
- Do not change habitat on a wide scale.
- Plan support activities in a manner that limits impacts to the ABB and its habitat.
- Plan expansion of improved facilities for those areas already impacted on the installation.
- Design disturbances and developments to avoid fragmenting native habitat.
- Avoid excessive use of chemicals from mid-May to September.
- Wildlife and forestry management practices should provide habitat that is preferred by the ABB and that provides potential carrion. Areas of hardwoods and native grasslands should be protected and increased whenever possible.

Bald Eagles (Bald and Golden Eagle Protection Act). Should any bald eagle nests be found within the project area, the following guidelines established by the USFWS (USFWS 2025c) would be followed during construction to minimize adverse effects to bald eagles:

- Maintain a buffer between proposed construction activities and active bald eagle nests. If the proposed construction includes the emplacement of linear utilities and the nest is visible from the site, this buffer should be at least 660 feet wide. This buffer should be at least 330 feet wide if the nest is not visible from the site. If a similar activity is currently ongoing within the preferred buffer distance, the proposed construction may maintain a similar buffer as the existing, tolerated activity.
- Should construction occur within the recommended 660- or 330-foot-wide buffer due to the existing presence of a similar activity, all clearing, construction, and landscaping activities would

be limited to outside of the bald eagle nesting season (i.e., such activities should occur between early August and mid-July).

- Maintain an established landscape buffer to screen an active nest from the Proposed Action.

No adverse effects to the bald eagle are anticipated from proposed construction activities if mitigation measures are followed.

Construction. No significant effects on biological resources would result from C&D activities. Instead, effects would be site-specific and temporary. Construction would occur wholly or partially on previously disturbed areas, which would require minimal vegetation removal. Construction activities could displace locally common wildlife species that are adapted to high levels of human activity and disturbance. However, during construction activities, wildlife could temporarily or permanently relocate to similar habitat nearby.

Operations. The nature and overall level of operations at the range would be similar to existing conditions. The efficiencies gained from C&D would reduce the maintenance and operational requirements of facilities within the project footprint. Under the Proposed Action, no significant effects on biological resources are expected. The action would not have additional impacts on vegetation, wildlife, or threatened and endangered species when compared to existing conditions, resulting in negligible long-term effects.

3.3.2.3 No Action Alternative

No effects on biological resources would be expected under the No Action Alternative. The C&D proposed to improve mission capabilities, unit readiness, and the operating environment of the range would not occur. The need to meet current and future mission requirements would be unmet. Existing conditions would persist.

3.4 Cultural Resources

Cultural resources can be broadly defined as pre-contact and contact period sites and districts; structures; artifacts; features that display evidence of human activity; and landscapes and features that play a fundamental role in a specific community's identity, beliefs, or value system. Cultural resources are divided into three major categories: archaeological (pre-contact and post-contact), architectural, and traditional cultural properties and sacred sites.

Archaeological resources are locations where human activity measurably altered the earth or left deposits of physical remains (e.g., tools, projectile points, or bottles). "Pre-contact" refers to resources that predate contact between indigenous and non-indigenous populations or their material culture in a region. These resources can range from a scatter composed of a few artifacts to village sites and rock art. "Post-contact" refers to resources that postdate the arrival of Europeans in the area. Archaeological resources can include campsites, roads, fences, trails, dumps, battlegrounds, mines, and a variety of other features.

Architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Architectural resources generally must be more than 50 years old to be considered for protection under existing cultural resource laws. However, more recent structures, such as Cold War-era military buildings, may warrant protection if they have exceptional characteristics and the potential to be historically significant structures.

Traditional cultural resources can include archaeological resources, buildings, neighborhoods, prominent topographic features, habitats, plants, animals, and minerals that living communities consider essential for the continuance of their cultural beliefs, customs, and practices. As noted

in Executive Order 13007, *Indian Sacred Sites*, sacred sites are “any specific, discrete, narrowly delineated location that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion, provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site”. Traditional cultural places, which are a class of traditional cultural resources, and sacred sites are eligible for inclusion in the National Register of Historic Places (NRHP) because of their association with cultural practices and beliefs of a living community that are (a) rooted in the community’s history and (b) important to maintaining the continuing cultural identity of the community (NPS 1998).

Cultural resources that have been determined eligible for inclusion in the NRHP are historic properties. Historic properties are afforded protection and consideration under the National Historic Preservation Act (NHPA). To be determined eligible for inclusion in the NRHP, a resource must meet at least one of the following criteria, as listed in 36 CFR Section 60.4:

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

Certain kinds of properties, such as cemeteries or religious properties, are not usually considered for listing in the NRHP, unless they meet special requirements known as Criteria Considerations:

- Religious properties (Criterion Consideration A)
- Moved properties (Criterion Consideration B)
- Birthplace of Graves (Criterion Consideration C)
- Cemeteries (Criterion Consideration D)
- Reconstructed properties (Criterion Consideration E)
- Commemorative properties (Criterion Consideration F)
- Properties that have achieved significance within the past 50 years (Criterion Consideration G)

A property must meet one or more of the four Criteria for Evaluation (A through D) and possess integrity of materials and design before it can be considered under the various Criteria Considerations (Military Department of Arkansas, 2015).

Historic properties must also retain aspects of integrity defined in the Secretary of the Interior’s regulations as: location, design, setting, materials, workmanship, feeling, and association. A property will retain several, and usually most, aspects to possess historic integrity. Several federal laws and regulations address cultural resources, including the NHPA, the Archaeological and Historic Preservation Act, American Indian Religious Freedom Act, the Archaeological Resources Protection Act, and Native American Graves Protection and Repatriation Act.

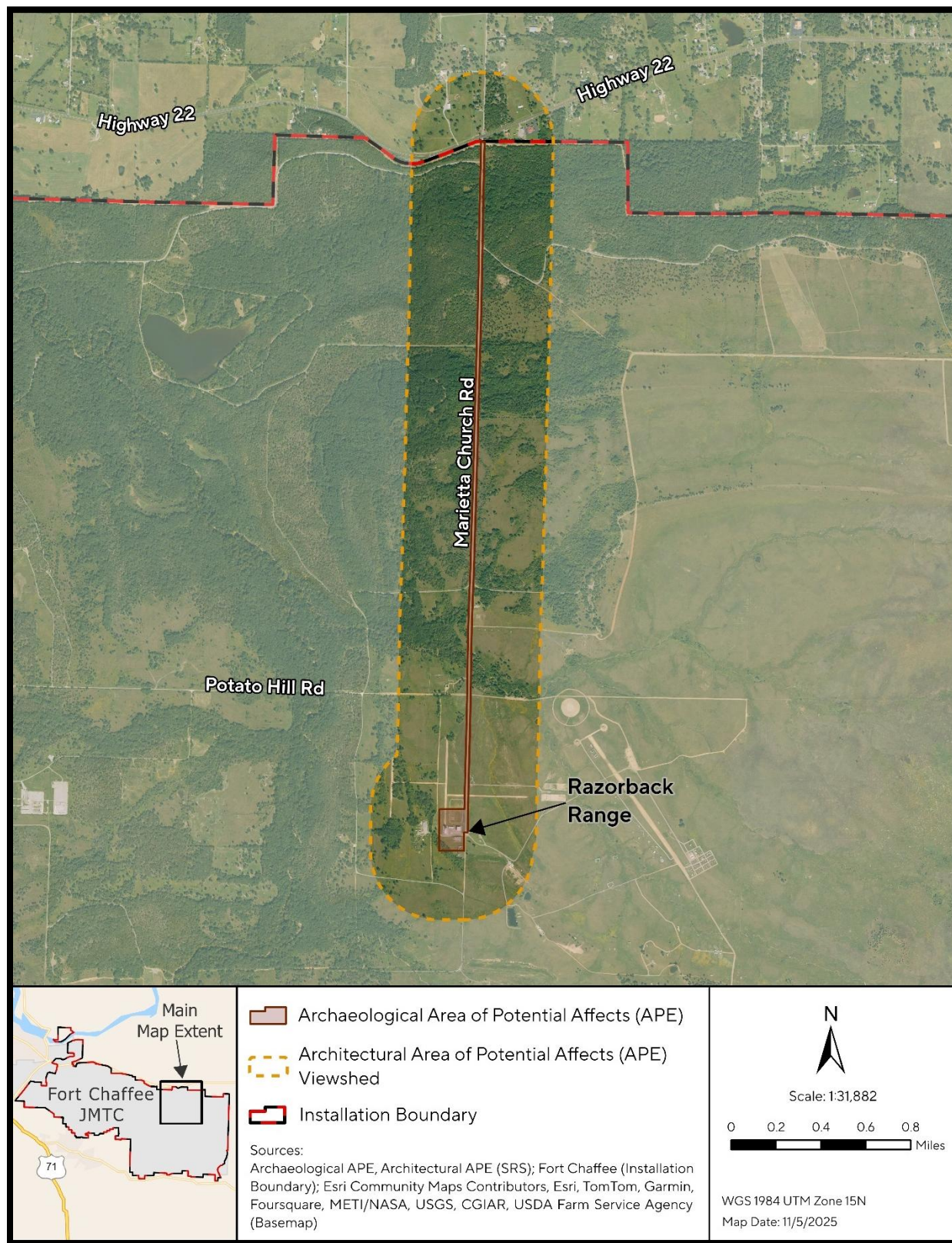
Under Section 106 of the NHPA, federal agencies must consider the effect of their undertakings on historic properties, consult with the State Historic Preservation Office(r) (SHPO) and other consulting parties, and allow the Advisory Council on Historic Preservation a reasonable opportunity to comment. The federal agency evaluates the NRHP eligibility of resources within

the proposed undertaking Area of Potential Effects (APE) and assesses the possible effects of the proposed undertaking's on historic properties in consultation with the SHPO and other parties.

The affected environment for cultural resources is based on the establishment of the APE of an undertaking. An APE is defined in 36 CFR Section 800.16(d) as "the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist." The APE, and therefore the affected environment, for this project is divided into two, based on archaeological and historic resources. The archaeological APE is defined as the 30-acre project tract and the 2.5-mile-long project corridor (the project footprint) (**Figure 3-1**). The architectural APE includes the project footprint and a 0.25-mile radius to encompass the surrounding viewshed (**Figure 3-1**).

The AR ARNG maintains an Integrated Cultural Resources Management Plan (ICRMP) to aid in management of the cultural resources at training installations and sites in Arkansas in accordance with appropriate federal laws and other applicable NGB regulations (Military Department of Arkansas, 2015).

Figure 3-1 Archaeological and Architectural APEs.



3.4.1 Affected Environment

The project footprint is heavily disturbed. It currently contains several buildings, storage containers and equipment, gravel filled areas, and paved parking areas. The archaeological APE along the Marietta Church Road right of way (ROW) is hillier and slopes upwards toward the north as it crosses over Coal Ridge and intersects with several unnamed tributaries of Big Creek. The elevation within the APE ranges from approximately 420 to 560 feet above mean sea level. The Marietta Church Road ROW is somewhat less disturbed and contains wild grassy vegetation with little overstory. Observed disturbances along the 7.5-mile-long corridor include gravel-filled areas, buried utilities, and temporary storage containers.

The architectural APE is primarily occupied by wooded land and grassed fields since at least 1946, with limited development consisting of military training facilities within the FCJMTC and rural residential and commercial development along Highway 22. Since at least 1971, the Razorback Range command area has been constructed and expanded within the southernmost portion of the project footprint (Brockington, 2025). The built environment consists largely of prefabricated late-20th to early-21st century industrial buildings and mid-to-late-20th century to early-21st century residential building stock.

3.4.1.1 Existing Resources Per the ICRMP

According to the ICRMP, 110 cultural resources investigations have been conducted at Fort Chafee since 1980. There are 841 archeological sites at FCJMTC; of which 318 were determined not eligible for listing in the NRHP based on survey results. Further testing is recommended for 448 sites (Military Department of Arkansas, 2015). Phase II evaluation excavations have been conducted for 194 sites (not within the APEs), and it was determined 75 are individually eligible for listing in the NRHP. The remaining 119 sites were determined not eligible for listing in the NRHP based on Phase II evaluation results (Military Department of Arkansas, 2015).

Three buildings at FCJMTC have been recommended as eligible for listing in the NRHP as a result of various inventories; these include two Observation Bunkers (OP5 and OP6) and Building 1000 (Castle Guard House). In addition to these buildings, 15 historic bridges associated with the Works Progress Administration (WPA) and WWII have been recommended as eligible for listing in the NRHP (Military Department of Arkansas, 2015).

FCJMTC includes a large number of stone structures (culverts, bridges, walks, planters, steps, foundations, buildings, walls, signs, lined ditches, abutments, patios, drains, and amphitheaters) and they were recommended as a potential Native Stone Architectural Historic District; although this district lies on lands transferred to the Fort Smith Redevelopment Authority as part of the 1995 Base Realignment and Closure initiative, and therefore is not currently managed by the AR ARNG (Military Department of Arkansas, 2015).

According to the ICRMP, there are no known resources of traditional, religious, or cultural significance that might be part of a larger cultural landscape; however, consultation is ongoing to identify and protect significant tribal resources (Military Department of Arkansas, 2015).

There are 22 cemeteries at Fort Chafee, all of which are dated 1941; however, the cemeteries clearly pre-date the installation. It is unclear to what extent these cemeteries have been documented or evaluated for associations with significant persons or events (Military Department of Arkansas, 2015).

3.4.1.2 Phase I Cultural Resources Survey

In December 2024 a Phase I cultural resources survey was conducted on the project footprint (Brockington, 2025). The investigation consisted of an archaeological and architectural survey of the 30-acre project footprint and a 2.5-mile-long by 70-foot-wide corridor of Marietta Church Road and the surrounding viewshed, the APEs. This survey was conducted in compliance with Section 106 and Section 110 of the NHPA and Department of Defense Instruction 4715.16, Cultural Resource Management.

Archaeological resources identified during the cultural resources survey investigation included six isolated finds, Isolated Finds 1 through 6 (**Figure 3-2**) (Brockington, 2025). Isolated Find 1 was a piece of debitage that was knapped (stricken to make a tool or weapon) from Boone Chert. The remaining isolated finds were knapped from locally available Arkansas River Gravels. One lithic tool, a spokeshave tool, was recovered from Isolated Find 3. Isolated Finds 2 and 6 are flakes knapped from Arkansas River Gravels; Isolated Finds 4 and 5 consist of lithic core fragments (Brockington, 2025).

As shown in **Figure 3-3**, the architectural survey revisited two previously recorded historic resources (SB973 [Observation Tower] and SB974 [WPA Bridge No. 23]) and identified five additional historic resources (Historic Resources 1 through 5) (Brockington, 2025). Resource SB973 is a c. 1983-1994 prefabricated metal observation tower. Resource SP974 is a c. 1940 bridge. Historic Resource 1 is a c. 1971-1976 prefabricated metal observation tower along Marietta Church Road. Historic Resources 2-4 are c. 1940 drainage culverts, also along Marietta Church Road. Historic Resource 5 is a c. 1946-1971 commercial warehouse, located off the installation within the northern limits of the APE (Brockington, 2025).

Figure 3-2 Isolated Finds Within the Archaeological APE

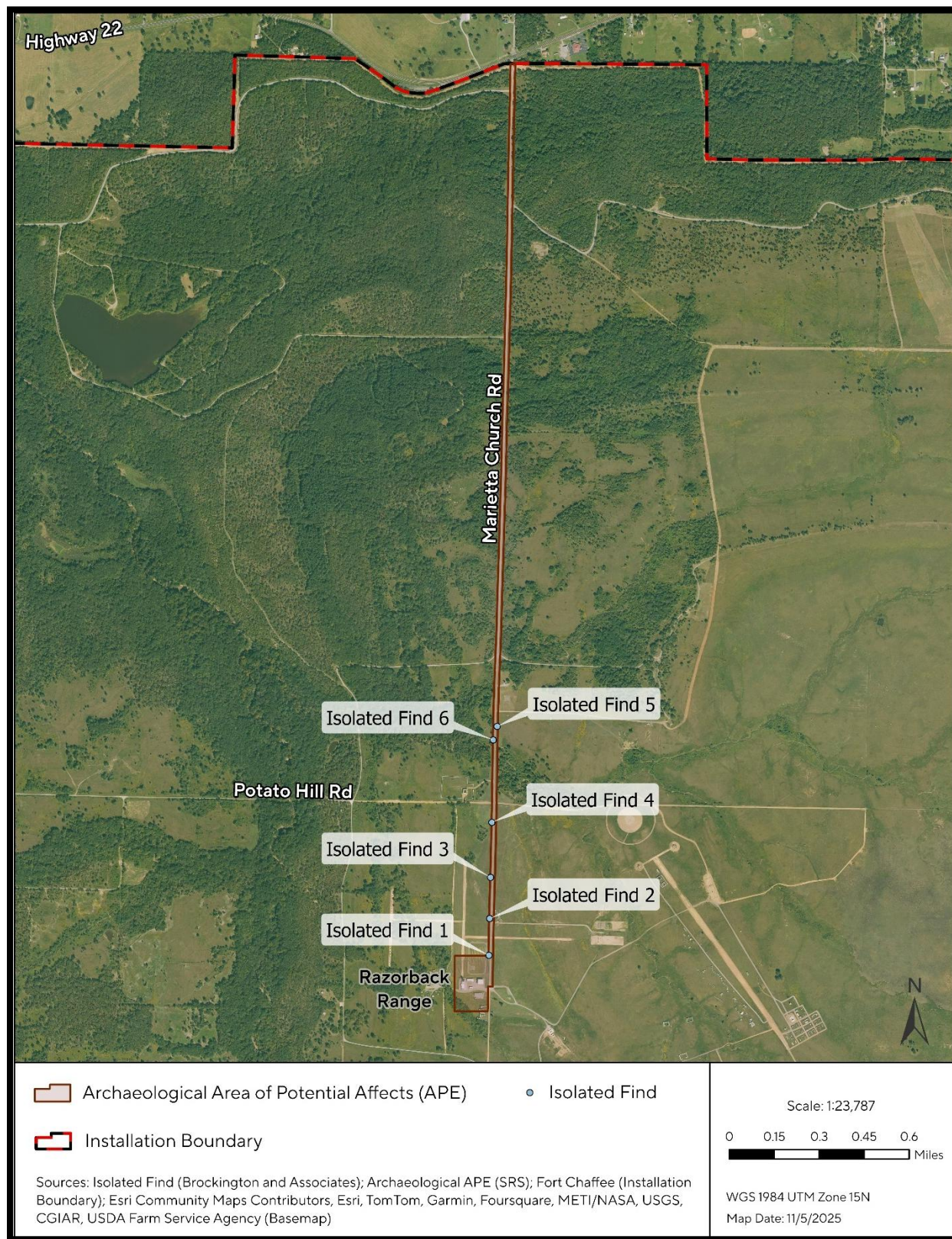
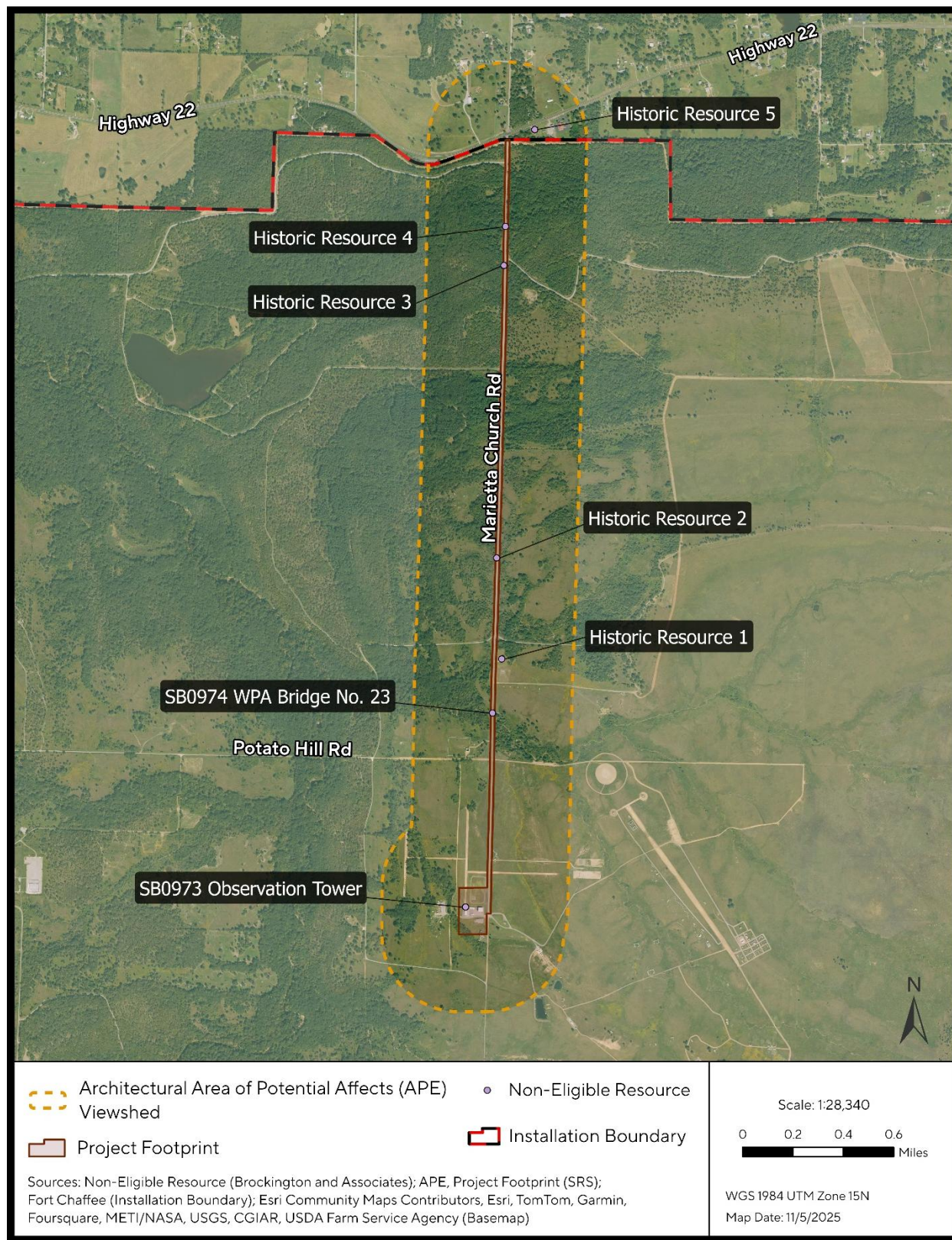


Figure 3-3. Surveyed Architectural Resources within the Architectural APE.



3.4.2 Environmental Consequences

3.4.2.1 Proposed Action

Archaeological Resources. The Phase I survey consisted of 493 shovel test locations placed at 66-foot intervals across the entire archaeological APE. The survey yielded six isolated finds (**Figure 3-2**). All six isolated finds consist of nondiagnostic pre-contact single lithic artifacts. Isolated finds are generally not considered eligible for inclusion on the NRHP and do not warrant any additional management considerations (Brockington, 2025).

In the event that previously unidentified archaeological deposits or human remains are encountered during the construction and ground-disturbing activities, the activity will stop, and the Cultural Resources Manager will be notified. The procedures and guidance outlined in Section 4.2.5, *Inadvertent Discovery of Human Remains or Funerary Objects on Federal Lands – Native American Graves Protection and Repatriation Act*, and Standard Operating Procedure No. 5: *Inadvertent Discovery of Cultural Materials*, in the ICRMP will be followed (Military Department of Arkansas, 2015).

Architectural Resources. The previously recorded historic resource, SB973, is the Control Tower shown in **Figure 3-3**. The resource was evaluated under Criteria A, B, C, D, and G for inclusion in the NRHP during the Phase I survey. However, based on the results of the survey, the original SB973 building was demolished sometime between 1983 and 1994, and the current tower that sits in the Razorback Range area has an effective construction date of c. 1994 (Brockington, 2025). Demolition of the tower as described in the Proposed Action, would have no effect on the resource, as it is not recommended eligible for inclusion in the NRHP.

The previously recorded historic resource, SB974, is a concrete and cut stone bridge carrying Marietta Church Road over Big Creek, approximately 1.9 miles south of Highway 22 within the APE (**Figure 3-3**). Modern signage and non-historic steel safety balusters have been installed adjacent to the northern end of the bridge, in the embankments behind the wingwalls, and modern gravel and stone fragments have been transplanted into the eroded embankment behind the southeastern wingwall (Brockington, 2025). SB974 was evaluated under Criteria A through D for inclusion in the NRHP during the Phase I survey, and it was not recommended eligible for inclusion in the NRHP. Any disturbance or changes to the bridge associated with repaving of Marietta Church Road or regrading of drainage ditches would have no effect on the resource, as it is not recommended eligible for inclusion in the NRHP.

Historic Resources 1 (prefabricated metal observation tower) and 2 through 4 (concrete and cut stone drainage culverts) identified during the Phase I survey are all located along Marietta Church Road where road repaving, drainage ditch regrading, and utilities upgrades are planned as part of the Proposed Action (**Figure 3-3**). All four of the identified historic resources along Marietta Church Road were evaluated under Criteria A through D for inclusion in the NRHP, and all were recommended as not eligible. Any disturbances to the four resources during implementation of the Proposed Action would have no effect on the resources, as they are not recommended eligible for inclusion in the NRHP.

Historic Resource 5 is rectangular, single-story, and side-gabled commercial warehouse building located at 32009 Highway 22, outside of the FCJMTTC boundary, but within the APE. Based on research conducted as part of the Phase I survey, the building was constructed sometime between 1946 and 1971, with extensive external remodeling between 2008 and 2016 (Brockington, 2025). Historic Resource 5 was evaluated under Criteria A through D for inclusion in the NRHP and was recommended as not eligible for inclusion in the NRHP.

The proposed undertaking for the consolidation and replacement of the Razorback Range facilities will have no effect on archaeological resources or historic properties, and additional cultural resources management considerations for this undertaking are not warranted. The NGB has initiated informal Section 106 consultation with the Arkansas Historic Preservation Program (AHPP) (Arkansas SHPO). In a letter to the AHPP dated 16 Jul 2025, the NGB requested concurrence on its determination that the Proposed Action would have no effect on archaeological resources or historic properties. AHPP concurred in a letter dated August 12, 2025. Tribal letters were sent via email on July 23, 2025. No Tribe has expressed concern (See **Appendix A**). Therefore, no impacts to cultural resources would result from implementation of the Proposed Action.

Overall, impacts on cultural resources and paleontological resources would be considered not significant if installations follow existing SOPs for avoiding, minimizing, or mitigating adverse effects as listed in the ICRMP, applicable guidance and instructions, agreement documents (such as Programmatic Agreements), and the Section 106 process.

3.4.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no associated impacts to cultural resources. Cultural resources would be expected to remain as described in Section 3.4.1.

3.5 Hazardous Materials and Waste

3.5.1 Affected Environment

Hazardous materials are defined by 49 CFR §171.8 as hazardous substances, hazardous waste, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (49 CFR §172.101), and materials that meet the defining criteria for hazard classes and divisions in 49 CFR Part 173. Hazardous waste is defined by the Resource Conservation and Recovery Act (RCRA) at 42 USC Section 6903(5), as amended by the Hazardous and Solid Waste Amendments, as “a solid waste, or combination of solid waste, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”

Hazardous materials at the installation include petroleum, oils, and lubricants (POLs) and other materials used throughout the installation for various functions such as cleaning and equipment maintenance. These activities require the use of fuels, oils, lubricants, cleaners, paints, sealants, and solvents. The control of hazardous materials includes reducing the number of types and amounts of hazardous materials used, and controlling its proper distribution, storage, use, and disposal.

The FCJMTTC Hazardous Chemical and Waste Management (HC&WM) SOP prescribes responsibilities, policies, and procedures for storing and managing hazardous chemicals and wastes within the installation (AR ARNG 2025). The SOP ensures the AR ARNG and its tenants maintain compliance with applicable Federal, State, and local environmental laws and regulations.

The installation is regulated as a very small quantity generator of hazardous wastes. The types of waste-generating processes from organizational and maintenance support activities

performed at the installation include equipment and vehicle maintenance, fueling of ground vehicles, and facilities maintenance. Vehicle and equipment maintenance operations include fluid and filter changes; brake repair; lube and grease; body repair; welding; minor painting; and washing. Facilities maintenance include structural maintenance and repairs; painting; chemical treatment (pesticides, fertilizers, and herbicides); mowing; and utility maintenance. Common types of hazardous wastes generated at the installation include batteries, lamps, weapons-cleaning patches, solvents, parts washing fluid, aerosol cans, and paint waste (AR ARNG 2025).

Fort Chaffee AR ARNG maintains an Integrated Pest Management Plan (IPMP) (AR ARNG 2016). According to the IPMP, the installation only uses pest management contractors for the application of pesticides. All contractor pest management personnel are required to be certified as pesticide applicators by the State of Arkansas and by all applicable federal laws and regulations (AR ARNG 2016).

The AR ARNG has developed and implemented a Statewide Integrated Solid Waste Management Plan (ISWMP). The overall purpose of the ISWMP is to provide a comprehensive plan for managing the generation, recycling and disposal of solid wastes at all AR ARNG facilities operating throughout in Arkansas (AR ARNG 2025). The solid wastes addressed in the Statewide ISWMP include the following: general trash and refuse; recyclable materials; universal wastes; used oil; C&D waste; yard waste; and other materials. Most of these solid wastes are already covered under existing AR ARNG source reduction and recycling programs. Solid wastes that are also hazardous wastes are covered under the HC&WM SOP (described above).

The AR ARNG has also developed and implemented a Oil/Water Separator Management Plan (OWSMP) that prescribes the responsibilities, policies, and procedures for the use and maintenance of vehicle and equipment washracks and the associated oil/water separators (OWSs) that are installed, controlled, operated, and/or owned by AR ARNG. The OWSMP identifies and describes the types, methods of operation, and requirements for maintenance of washracks and OWSs that are located at AR ARNG facilities throughout Arkansas (AR ARNG 2025).

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action Alternative

The use of hazardous materials and petroleum products would result in no significant, but short-term measurable impacts that are slight to noticeable. During demolition and dismantling of the existing Razorback Range facilities (control tower, equipment storage shed, equipment parking shed, and the range control building) any hazardous materials, toxic materials such as asbestos containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCBs) or POLs present would be managed in accordance with AR ARNG's HC&WM SOP prior to commencement of construction activities. Existing storage of hazardous materials would be temporarily relocated to installation-approved and regulatory compliant storage areas as necessary and then returned to the new facility after construction is complete.

Construction, demolition, and renovation activities would require the use of certain hazardous materials such as paints, welding gases, solvents, preservatives, sealants, and fuel. It is anticipated that the quantity of hazardous materials used would be minimal and their use would cease upon project completion. Contractors would be responsible for the management of hazardous materials and petroleum products, which would be handled in accordance with federal, state, and AR ARNG regulations. Contractors would report use of hazardous materials to the installations' environmental staff, including pertinent information (e.g., Safety Data

Sheets) to mitigate any potential impacts associated with hazardous materials. Contractors would use environmental protection measures to prevent releases of hazardous materials and ensure any releases do not result in contamination. If releases of hazardous materials do occur during construction, the proper response, reporting, and remediation efforts will occur in accordance with all applicable regulatory standards.

The installations' environmental staff would be consulted for guidance and the necessary authorizations before commencing with any ground-disturbing activities. No federal or state regulated contaminated sites occur within the project footprint (ANG 1994; Donoho 2026), however, there is the potential to encounter unknown contaminated soil and groundwater during earthwork activities. During demolition and construction of the facility structures, septic system, water tank installation, and Marietta Church Road regrading and utility installation ground-disturbing activities may generate surplus soil in addition to groundwater from construction dewatering. The possible surplus of soil and groundwater during construction activities may require offsite disposal if materials cannot be re-used onsite. As a result, soil and groundwater would need to be sampled and characterized following AR ARNG's HC&WM SOP to determine the appropriate management of any surplus soil and groundwater anticipated to be removed from the project location as a result of the proposed action.

The Proposed Action includes construction of new vehicle maintenance bays, an outdoor equipment wash area, and hazardous materials use/storage where operations would also comply with federal, state, and AR ARNG HC&WM, ISWMP, and OWSMP SOPs and regulations.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. Therefore, there would be no impacts to hazardous materials or waste.

3.6 Utility Infrastructure

Utility infrastructure includes basic resources and services required to support the proposed construction and long-term operation of the new consolidated range. For the purposes of this EA, utility infrastructure is defined as electricity, potable water, and wastewater.

3.6.1 Affected Environment

Electricity. Electrical service is provided by the Oklahoma Gas and Electric Company, with an existing single-phase 7,200-volt (V) to 240/120 V, 100 kilovolt-amp (kVA) pad mounted transformer. In 2025, it was estimated that the Razorback Range consumed approximately 146 megawatt-hours (MWH) of the total available energy production (OG&E, 2025).

Potable Water. Potable water has been supplied to the range via an on-site well. However, the existing on-site water well recently collapsed. Therefore, water is currently being trucked to the site while a new temporary well is constructed adjacent to the existing well as a temporary solution to provide potable water in the interim separate from the proposed action. Due to the close proximity of the septic systems and the on-site water well, in addition to frequent flooding, effluent from the septic systems infiltrates the water source and results in non-potable/contaminated water.

Wastewater. There are two existing septic systems on the south side of the site that were not designed to UFC standards resulting in seepage and frequent maintenance issues.

3.6.2 Environmental Consequences

3.6.2.1 Proposed Action Alternative

The Proposed Action would have beneficial effects on utility infrastructure.

Electricity. Recent personnel growth and planned operational expansion are expected to increase electrical demand at the range. Personnel levels are expected to increase by approximately 70 percent as the FMS mission becomes fully operational, which represents up to 30 additional personnel during peak operations due to more frequent range use (DAF 2023). Separate manning studies determined a need for seven additional full-time personnel to support training requirements. The projected increase in range use in correlation to the FMS mission training requirements and an increase in personnel would drive the need for an expansion of operational hours. The range currently operates Monday-Thursday from 0730-1630L and on drill weekends, with the flexibility to run from 0700 to 0000L based on scheduled requests. To support the increased training tempo, normal operating hours would expand, while continuing to flex as required by training requests. As a result of the increase in personnel and training, facility usage would increase from the current 40-65 hours per week to approximately 65 hours per week (DAF 2023). A 70 percent increase over the current demand of 146 MWh would result in a total demand of approximately 248 MWh, which is not significant compared to the system capacity of 6,356 MWh (OG&E, 2025).

Potable Water. Existing water supply facilities would be decommissioned in accordance with the local, state, and federal requirements and water would be supplied via a private 2.5-mile water line extension, tapped from the existing public main located on the north side of Highway 22 to an above-ground water tank. This system would reliably supply potable water to the range and eliminate the potential of contamination from the adjacent septic system.

Wastewater. The new septic system would be designed to handle the expected population increase and new vehicle/equipment wash facility at the consolidated range facility. The proposed septic system would be located on the west side of the new consolidated range facility away from the water supply system.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. Therefore, the existing septic systems would continue to be used which would result in seepage. The septic system would continue to have the potential to contaminate the new temporary drinking water well that is being constructed at the consolidated facility as a temporary solution to provide potable water in the interim separate from the proposed action until the water line can be constructed.

3.7 Safety and Occupational Health

3.7.1 Affected Environment

A safe environment is one in which there is no, or an optimally reduced, potential for serious bodily injury or illness, death, or property damage. Safety addresses the well-being, safety, and health of members of the public, contractors, and ANG personnel during the demolition activities and facilities construction, and during subsequent operations of those facilities.

Safety and accident hazards can often be identified and reduced or eliminated. Necessary elements for an accident-prone situation or environment include the presence of the hazard itself, together with the exposed (and possibly susceptible) population. The degree of exposure

depends primarily on the proximity of the hazard to the population. Hazardous activities can include construction, demolition, and many military activities.

The affected environment are the proposed Razorback Range facilities including the control tower, equipment storage shed, equipment parking shed, and the range control building (ANG, 2025). The interior of the range control building would be demolished, all four buildings would be dismantled, and the parts would be moved off site. The existing septic system would be replaced, and an above ground water storage tank would be constructed. To improve site drainage and reduce the risk of flooding, all concrete pads and foundations would be removed, and fill would be used to increase the elevation of the site by 2 feet. Additionally, the utilities and drainage bordering Marietta Church Road would be updated and Marietta Church Road would be regraded as needed.

Contractors performing construction activities at FCJMTC are responsible for following ANG standards and Occupational Safety and Health Administration (OSHA) regulations, including 29 CFR § 1926 – *Safety and Health Regulations Related to Construction* and activities are required to be conducted in a manner that does not increase risk to workers or the public. OSHA regulations address the health and safety of people at work and cover potential exposure to a wide range of chemical, physical, and biological hazards, and ergonomic stressors. Examples of activities that can be hazardous include transportation, maintenance and repairs, and the creation of extremely noisy environments. The regulations are designed to control these hazards by eliminating exposure to the hazards via administrative or engineering controls, substitution, use of personal protective equipment (PPE), and availability of Safety Data Sheets.

For activities with the potential for construction workers to encounter contamination, it is required that a health and safety plan be prepared in accordance with OSHA requirements prior to commencement of construction activities. Workers performing contaminated media removal activities are required to have OSHA 40-hour hazardous waste operations and emergency response (HAZWOPER) training. In addition to this training, supervisors are required to have an OSHA Site Supervisor certification. Should contamination be encountered, all handling, storage, transportation, and disposal activities would be conducted in accordance with applicable federal, state, and local regulations and ARNG programs and procedures. HAZWOPER regulations that protect workers and the public at or near hazardous waste cleanup sites are discussed in 29 CFR 1910.120 and 29 CFR Part 1926.

Furthermore, occupational health and safety is the responsibility of each employer, as applicable. Employer responsibilities are to review potentially hazardous workplace conditions; monitor exposure to workplace chemical (e.g., asbestos, lead, hazardous substances), physical (e.g., noise propagation, falls), and biological (e.g., infectious waste, wildlife, poisonous plants) agents, and ergonomic stressors; and recommend and evaluate controls (e.g., prevention, administrative, engineering, PPE) to ensure exposure to personnel is eliminated or adequately controlled. Additionally, employers are responsible for ensuring a medical surveillance program is in place to perform occupational health physicals for those workers subject to the use of respiratory protection or engaged in work that involves hazardous waste, asbestos, or lead, or other work requiring medical monitoring.

Razorback Range is a multifaceted target range for air-ground gunnery training where munitions and explosives of concern are used for training purposes and the potential for unexploded ammunition or duds exists (FCJMTC 2019b). The ARARNG protects personnel and the public from risks associated with unexploded ammunition by controlling access to areas of concern, managing removal programs, and maintaining records of expenditures, range clearance operations, explosive ordinance disposal incidents, and areas of known or suspected unexploded ammunition.

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action Alternative

No significant short-term impacts are anticipated but measurable and slight to noticeable impacts on contractor health and safety may occur from implementation of the Proposed Action. The short-term risk associated with work performed by demolition and construction contractors would slightly increase, as C&D activity levels would increase. However, all contractors would be required to follow and implement ARNG and OSHA standards to establish and maintain safety plans and procedures. The Proposed Action would not pose new or unacceptable safety risks to installation personnel or activities at the installation but would enable FCJMTTC to meet future mission objectives at the installation and conduct or meet mission requirements in a safe operating environment. No long-term impacts regarding safety would be expected.

Construction workers may encounter unknown soil or groundwater contamination during ground-disturbing activities. Section 3.2.1 describes recommendations regarding workers and health and safety procedures should contamination be discovered. Additionally, a Dig Permit would be obtained prior to excavating, which is coordinated through the installation's Environmental Branch (FCJMTTC 2019a) as well as a Large Site Construction General Stormwater Permit through the ADEQ (ARR150000).

According to current records, the structures planned for demolition do not contain ACMs, LBP, and PCBs contaminated materials. However, these materials are often contained within building materials and electrical components of older structures and require appropriate characterization, removal, handling, and disposal during demolition activities by qualified personnel. If present, adherence to all federal, state, and local regulations, and the FCJMTTC HC&WM Standard Operating Procedures for managing hazardous chemicals and wastes would result in negligible impacts on safety during implementation of the Proposed Action. Long-term, beneficial impacts to safety would be expected from the removal of ACM, LBP, and PCB-contaminated materials, which would reduce exposure to personnel. All proposed C&D activities would be conducted in accordance with federal, state, and local regulations to minimize safety hazards associated with hazardous materials, waste, and substances.

Munitions and unexploded ammunition are not expected to occur within the project footprint, however, due to the inherent nature of historical range activity, unexploded munitions and ammunition may exist in the surrounding area. All training and construction activities would be coordinated with ARNG safety personnel to avoid potential conflicts until construction is complete and the new facilities are operational.

The Proposed Action would improve mission safety at Razorback Range by providing new facilities that allow for effective training and mission readiness. The new facility would be constructed to prevent seasonal flooding and would be upgraded to comply with DoD regulatory standards. Construction of the new septic system and water supply would prevent effluent leaching into the water supply and protect groundwater quality, and paving Marietta Church Road would improve driving safety to Razorback Range. As a result, the Proposed Action would have a moderate beneficial impact on mission safety.

3.7.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur and there would be no associated impacts to human health or safety. No facility construction, demolition, or renovation would occur. However, without implementation of the Proposed Action, the beneficial impacts to human health and safety previously discussed would not occur.

3.8 SOILS AND GEOLOGICAL RESOURCES

3.8.1 Affected Environment

FCJMTTC exhibits exposed rocks from the Middle Pennsylvanian age in upland areas, which are mostly composed of alternating layers of shale and sandstone of the Atoka, Hartshorne, McAlester, and Savanna formations. Larger creek valleys and areas near the Arkansas River are covered by deep layers of unconsolidated alluvium consisting of gravel, sand, silt, and clay (FCJMTTC 2019a).

The Hartshorne Formation covers nearly 25.5 square miles of the installation to an average depth of about 50 feet and contains sandstone deposits that can be used as crushed stone for surfaced and unsurfaced roads, riprap, flagstone, and building stones. The McAlester Formation is comprised predominantly of shale and yields a quality grade that has been quarried to produce bricks and tiles. FCMTTC training areas have 50 established gas wells. These include 121,643 linear feet of gas line. However, the closest gas well to the Razorback Range is approximately 3.5 miles away and the permit for that well expired in September 2024 (Arkansas GIS Office, 2026).

In 2001 the Natural Resources Conservation Service (NRCS) completed soil planning surveys on FCMTTC. These surveys identified several new soil types specific to the local region. Soil associations at FCMTTC include Leadvale-Stigler, found in valleys; Cowton-Linker-Steprock, found on low rolling ridges and hillsides within valleys; and Enders-Mountainburg-Steprock, found on steep ridges and hillsides (NRCS 2025).

There are three soil types underling the range facilities: Leadvale silt loam (1 to 3 percent slopes), Leadvale silt loam (3 to 8 percent slopes), and Mountainburg sandy loam (3 to 12 percent slopes) (**Figure 3-4**). The Leadvale series is the dominant soil type beneath the range facilities and is moderately well drained with a depth to water ranging from 16 to 30 inches. There are eight soil types adjacent to Marietta Church Road and their soil physical properties are provided in **Table 3-6** (NRCS 2025).

Figure 3-4. Soil Types Within and Near the Project Footprint

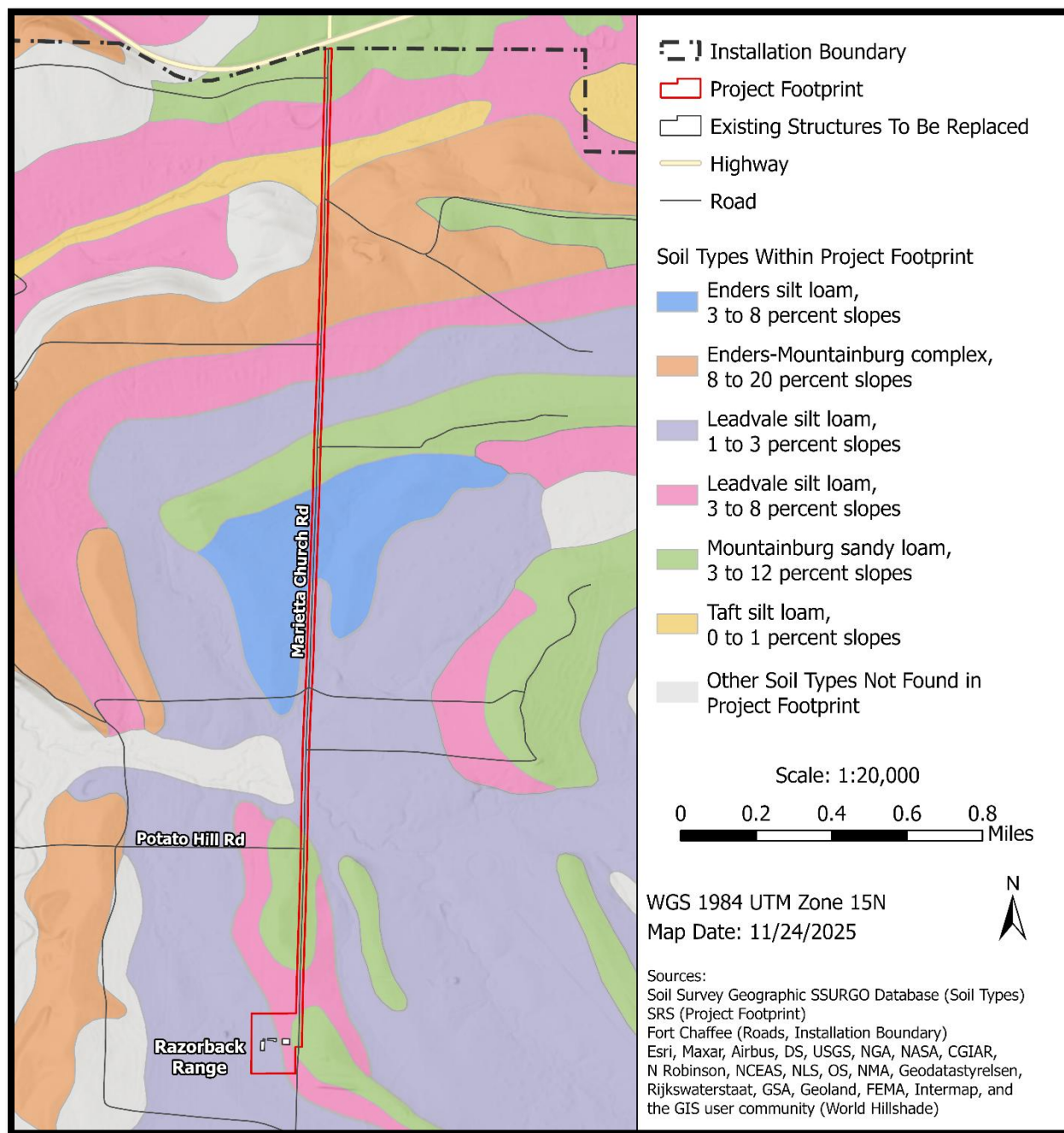


Table 3-6 Soil Types Within, and Adjacent to, the Project Footprint

Map Unit Symbol	Map Unit Name	Acres	Percent	Landform	Parent Material	Depth to Restrictive Feature	Drainage Class	Depth to Water Table
Edc	Enders silt loam, 3 to 8 percent slopes	2.0	6.8%	Hillslopes	Clayey residuum weathered from acid shale	39 to 55 inches to paralithic bedrock	Well drained	> 80 inches
EmC	Enders-Mountainburg complex, 8 to 20 percent slopes	2.9	9.5%	Enders: Mountain slopes; Mountainburg: Hillslopes	Enders: Clayey residuum weathered from acid shale; Mountainburg: Loamy residuum weathered from sandstone	Enders: 55 to 63 inches to paralithic bedrock; Mountainburg: 12 to 20 inches to lithic bedrock	Well drained	> 80 inches
LeB	Leadvale silt loam, 1 to 3 percent slopes	12.1	40.1%	Stream terraces	Old fine-silty alluvium derived from shale and siltstone over residuum weathered from sandstone and shale	23 to 31 inches to fragipan	Moderately well drained	16 to 30 inches
LeC	Leadvale silt loam, 3 to 8 percent slopes	5.6	18.8%	Stream terraces, hillslopes	Fine-silty pedisidiment derived from shale and siltstone over residuum weathered from sandstone and shale	23 to 31 inches to fragipan	Moderately well drained	16 to 30 inches
MmD	Mountainburg sandy loam, 3 to 12 percent slopes	6.4	21.2%	Hills	Gravelly and stony, loamy residuum weathered from sandstone and siltstone	12 to 20 inches to lithic bedrock	Well drained	> 80 inches
Tf	Taft silt loam, 0 to 1 percent slopes	1.1	3.6%	Stream terraces	Old fine-silty alluvium derived from shale and siltstone over residuum weathered from sandstone and shale	19 to 28 inches to fragipan	Somewhat poorly drained	9 to 18 inches

3.8.2 Environmental Consequences

3.8.2.1 Proposed Action Alternative

The Proposed Action would have no measurable effects on geological resources. Although there are ground-disturbing activities associated with the Proposed Action, excavation activities would be limited to shallow unconsolidated soils in the upper five feet of subsurface materials with the addition of engineered fill to raise the site elevation by approximately two feet or 4,800 cubic yards of fill material and would not encounter bedrock. All disturbed areas will be revegetated in accordance with ARARNG Fort Chaffee best management practices (BMPs) and permit requirements.

Short-term measurable impacts that are slight to noticeable during construction and cease upon project completion are expected. Direct impacts to soils would include soil compaction, which would affect soil structure and permeability from construction equipment and grading activities. These areas, however, already experience high traffic use and experience flooding due to shallow groundwater and poor drainage which likely results from compacted soils, shallow subsurface restrictive layers, and flat topography. Clearing of proposed construction areas may also remove protective vegetative cover and potentially increase soil erosion. Soil erosion could result in the loss of topsoil from its original location through wind and/or water erosion and indirectly increase the sediment levels of surface water through stormwater runoff. Soil erosion and loss of or damage to topsoil can also impair revegetation which is crucial for soil stabilization and restoration of temporarily disturbed sites (AR ARANG 2009).

As FCJMTTC is Army owned and operated, the ANG installation and its tenants are required to follow Department of the Army Pamphlet 420-7 - *Natural Resources—Land, Forest, and Wildlife Management* stating that “Army land will be protected from soil movement by wind and water by adoption of appropriate control or stabilization measures. Typical measures include vegetative cover, use of various aggregates, soil binding materials, artificial or live windbreaks, stabilized waterways, diversion terraces, soil laden water retention basins and natural or constructed barriers for beach protection” (FCJMTTC 2019a). As a result, contractors would be required to follow construction BMPs which include installing sediment barriers (e.g., silt fencing, straw or hay bales and sandbags), temporary slope breakers, and mulching. Such measures would be implemented during the course of construction activities and wherever demolition occurs, soil is exposed, steep slopes are present, or erosion potential is high. All permit conditions relating to ground disturbance will be adhered to during the construction process and closeout.

Ground-disturbing activities may generate surplus soil in addition to surplus groundwater from construction dewatering and may require offsite disposal and/or reuse onsite. As a result, soil and groundwater would need to be sampled and characterized following AR ARNG HC&WM SOP to determine the appropriate management of any surplus soil and groundwater accumulated during construction activities. Additionally, ground-disturbing activities would require a Dig Permit, which is coordinated through the FCJMTTC Environmental Branch (FCJMTTC 2019a) as well as a Large Site Construction General Stormwater Permit through the ADEQ (ARR150000).

During construction and operation, the potential exists for vehicles and equipment to release POLs and contaminate soil. Should an accidental POL spill occur, then the Spill Contingency Plan (SCP) procedures within the HC&WM SOP would be followed.

3.8.2.2 No Action Alternative

Soils and geological resources would be unaffected under the No Action Alternative. The Proposed Action would not occur, and conditions would remain the same as they currently are.

3.9 Water Resources

3.9.1 Affected Environment

Groundwater. The project footprint is within the boundaries of the Ouachita Mountains Aquifer, which consists of well-drained shale, sandstone, and chert beds and is notable for its areal extant rather than its water-yielding abilities (Kresse et al. 2014 and USGS 2016). The low porosity of the interbedded sandstones limit flow to the aquifer below (NRCS 2024). The average depth to ground water is approximately 20 to 27 feet (USGA 2026).

The primary source of drinking water at the Razorback Range is a well that was constructed in 1992 that has since collapsed. Currently, portable public and sanitary water is being supplied from an off-site location, and a new well is being constructed. The new well, which will be adjacent to the existing well, is an interim solution that would be abandoned when the proposed water utility line is constructed.

Surface Water. Surface water resources consist of lakes, rivers, and streams, and are important for a variety of reasons including ecological, economic, recreational, aesthetic, and human health reasons. Surface waters in and around the project footprint flow westward into Engineer Lake, which is a 12-acre impoundment open to the public, and Big Creek, a tributary of the Arkansas River (FCJMTC 2019a; USEPA 2024; AGFC 2025; and ADEQ 2025).

The project footprint is located within the Upper Big Creek hydrologic unit code 12 (HUC 12) watershed, with downstream areas of Big Creek belonging to the Lower Big Creek HUC 12 watershed (USEPA 2024). Surface water within the project footprint include two intermittent streams and three perennial streams (USACE 2025c). Four of the streams are in the northern part of the project footprint and cross under the Marietta Church Road. The fifth stream, which has an intermittent flow, is located approximately 150 feet to 350 feet southwest of the project footprint.

Section 303(d) of the CWA directs each state to identify and list impaired water bodies in which current required controls of a specified substance are inadequate to achieve water quality standards. Big Creek has been listed as an impaired or threatened waterbody; however, no Total Maximum Daily Load (TMDL) was listed in a recent TMDL list from the ADEQ and the stream was noted as being in good condition with no impairments in the 2024 Waterbody Report (ADEQ 2018; ADEQ 2022b-c; USEPA 2024).

Wetlands and Floodplains. Wetlands are areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. To identify wetlands within and near the project footprint, a WOTUS delineation was conducted on May 22, 2025, and no wetlands were identified in or near the project footprint (USACE 2025c).

Executive Order 11990 requires federal agencies to minimize actions that adversely affect wetlands, enhance the natural values that wetlands provide, and ensure that no net loss occurs. Section 404 of the Clean Water Act (CWA) (333 U.S.C. 1344) requires the USACE to issue a permit for the discharge of dredge or fill material within waters of the U.S.(WOTUS), which includes wetlands.

Floodplains are low-lying, relatively flat areas adjacent to streams, rivers, or lakes with potential for periodic or infrequent inundation due to rain or snow melt. In their natural vegetated state, floodplains slow the rate at which incoming overland flows reach the adjacent water body. Floodplains function to recharge groundwater, maintain water quality, provide wildlife habitat, and provide recreational opportunities. The Federal Emergency Management Agency (FEMA) identifies flood-prone areas on Flood Insurance Rate Maps (FIRM). Base flood areas, or the 100-year floodplain, are delineated on FIRMs and indicate a 1 percent chance of flooding each year. Two of the Marietta Church Road stream crossings are within the 100-year floodplain.

EO 11988, *Floodplain Management* requires Federal agencies to assess the effects that their actions may have on floodplains and to consider alternatives to avoid adverse effects and incompatible development on floodplains. DAFMAN 32-7003 Section 3D - *Floodplains* requires NEPA documentation evaluates practicable alternatives for actions located in or affecting floodplains and incorporates measures to minimize harm and reduce flood risk in accordance with applicable federal regulations. If floodplain impacts are anticipated, early public notice to support meaningful public involvement, including: A description of the proposed action, its purpose, reasonable alternatives, identification of appropriate state and federal reviewing agencies, and clearly states applicability of Executive Order 11988 due to floodplain impacts. When practicable, allow a minimum 30-day public comment period. Based on the scope, complexity, and public input, determine the appropriate level of NEPA document preparation. If an EA is prepared, make the EA and unsigned Finding of No Significant Impact (FONSI) available for public review for at least 30 days prior to approval and implementation.

3.9.2 Environmental Consequences

Impacts to water resources would be considered significant according to 44 CFR § 9 - *Floodplain Management and Protection of Wetlands* and 33 U.S.C. § 1251 - *Federal Water Pollution Control Act Amendments of 1972, as amended* if the Proposed Action resulted in one or more of the following: Increase in flooding due to changes in drainage patterns or construction in the 100-year floodplain.

- A net loss of wetland acreage or substantial degradation of existing wetland quality.
- Substantial alteration of the quantity or quality of surface water.
- Substantial alteration of the quantity or quality of groundwater.

3.9.2.1 Proposed Action Alternative

Ground Water. No significant impacts to ground water are anticipated to result from implementation of the Proposed Action. During demolition and construction activities, accidental spills or leaks of substances such as fuels, oils, and other lubricants could result in contamination of groundwater. Spills and leaks would be mitigated by ensuring compliance with standard maintenance, storage, and handling of all fuels and potentially hazardous materials and proper storage and operation of all equipment. Secondary containment for temporary storage and project-specific BMPs would further minimize the risk for spills or leaks.

During ground preparation for construction sites, grading, excavating, and trenching may decrease surface water infiltration to the groundwater. The increase in impervious surfaces may also result in decreased infiltration rates. Additionally, ground-disturbing activities could require

dewatering during construction and require offsite disposal and/or reuse onsite. However, ground-disturbing activities would require a Dig Permit, which is coordinated through the FCJMTC Environmental Branch (FCJMTC 2019a) as well as a Large Site Construction General Stormwater Permit through the ADEQ (ARR150000).

These adverse impacts are not expected to rise to the level of significant because BMPs would be employed including Low Impact Development and the use of materials that allow infiltration through paved surfaces. Also, site design would retain precipitation on site so that it can infiltrate and recharge groundwater or evaporate into the air and not increase stormwater runoff.

Surface Water. During ground preparation for new construction sites, grading, excavating, and trenching may expose erodible soils to stormwater runoff and increase the potential for sediments to contaminate surface waters. Similarly, accidental spills, or broken or leaking fluid lines on heavy equipment could release chemicals, solvents, and paints. The resulting stormwater runoff could carry sediments or contaminants to adjacent waterways.

However, these impacts are expected to not rise to the level of significant because land-disturbing activities would require a construction stormwater permit, and preparation of a Stormwater Pollution Prevention Plan (SWPPP). BMPs specified in the permit and SWPPP would minimize runoff and adverse impacts to surface water. Spills would be addressed effectively through required procedures including reporting, containment, and cleanup as soon as possible under the installation's SPCC Plan. Additionally, obtaining coverage under the Large Site Construction General Stormwater Permit through the ADEQ (ARR150000) would also be required.

Dust control measures such as wetting graded areas are routinely used during construction to ensure minimal adverse impacts to the sediment loads of nearby surface waters. Dust control measures are expected to not have significant short-term adverse impact on water quality. Permits will be obtained prior to construction, and all permit requirements will be incorporated into the project planning process.

The new facility and road improvements would increase impervious surfaces, which could result in increased stormwater runoff and non-point source pollution. These adverse impacts are expected to not rise to the level of significant because control measures for stormwater runoff must be incorporated in design plans.

Wetlands and Floodplains. As stated in Section 3.9.1 of this document, no wetlands occur within or near the proposed project footprint. Therefore, implementation of the Proposed Action would have no effect to wetlands.

Construction activities that would occur within the 100-year floodplain would consist of regrading the existing Marietta Church Road to accommodate utility and water line installation. adjacent ditch regrading, and water line utility installation. All paving work would occur from the top of the roadway, and no fill would enter the floodplain area. All construction activities within the floodplain would be required to obtain the applicable permits, abide by permit requirements, and implement BMPs. As a result, implementation of the Proposed Action would result in negligible effects to floodplains. Floodplain impacts will be fully evaluated during the permit application process and through completion of a Finding of No Practicable Alternative analysis in compliance with DAF requirements.

DAFMAN 32-7003 Section 3D - *Floodplains* require NEPA documentation evaluates practicable alternatives for actions located in or affecting floodplains and incorporates measures to minimize harm and reduce flood risk in accordance with applicable federal regulations. If floodplain impacts are anticipated, early public notice to support meaningful public involvement,

including: A description of the proposed action, its purpose, reasonable alternatives, identification of appropriate state and federal reviewing agencies, and clearly states applicability of Executive Order 11988 due to floodplain impacts. When practicable, allow a minimum 30-day public comment period. Based on the scope, complexity, and public input, determine the appropriate level of NEPA document preparation. If an EA is prepared, make the EA and unsigned FONSI available for public review for at least 30 days prior to approval and implementation.

3.9.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur. No facility construction, demolition, or renovation would occur. Conditions would remain the same as those identified in Section 3.9.1 of this document.

Best Management Practices

The proposed action has been evaluated in accordance with Federal Emergency Management Agency regulations at 44 CFR § 9, *Floodplain Management and Protection of Wetlands*, which implements Executive Orders 11988 (*Floodplain Management*) and 11990 (*Protection of Wetlands*). The project has been designed to avoid, to the maximum extent practicable, adverse impacts to floodplains and wetland resources in accordance with the aforementioned guidance.

Construction activities occurring within or adjacent to the regulatory floodplain will incorporate appropriate Best Management Practices (BMPs) to minimize potential impacts to floodplain functions, including flood storage capacity, flood conveyance, and water quality.

No NEPA mitigation measures are necessary to reduce adverse effects from the proposed action to below significant levels; however, to ensure compliance with 44 CFR § 9 and to minimize potential adverse effects to floodplain resources, the following BMPs will be implemented during construction:

- **Minimize disturbance within the floodplain** to the greatest extent practicable, limiting the construction footprint and staging areas.
- **Maintain natural floodplain flow paths** by avoiding obstruction, channelization, or unnecessary grading that could alter flood conveyance.
- **Use erosion and sediment control measures**, including silt fencing, stabilized construction entrances, sediment traps, and prompt revegetation of disturbed soils.
- **Properly manage stockpiled materials** outside of the floodplain where feasible or secure them to prevent transport during high-flow events.
- **Prevent pollutant discharge** into surface waters, including fuels, oils, concrete washout, and other construction-related contaminants.
- **Restore disturbed floodplain areas** to pre-construction grades and conditions to the maximum extent practicable following construction.
- **Maintain hydraulic capacity** of nearby channels and floodplain areas during and after construction.
- **Implement storm event protocols**, including securing equipment and materials when flooding or heavy precipitation is forecast.

Table 3-7 Summary Table of Regulatory Requirements, Permits, BMPs, and Mitigation Measures

Resource Area	Regulatory Requirements and Permits Required	BMPs and Mitigation Measures
Air Quality	- Compliance with USEPA, Arkansas Division of Environmental Quality, and CAA regulations. - Obtain Construction General Permit as needed.	- Water for dust control during grading. - Cover open equipment. - Routine equipment maintenance. - Remove spilled/tracked dirt.
Biological Resources	- Compliance with ESA and USFWS recommendations. - Coordination with USFWS as needed.	- Incorporate USFWS conservation measures identified during consultation. - Compliance with the Fort Chaffee - ARARNG ABB Conservation Plan identified in the EA in Section 3.3.2.2. - Adhere to guidelines set forth in the Bald and Golden Eagle Protection Act should any eagle nests be identified in the project area. - The DAF would comply with additional stipulations identified during ESA Section 7 consultation, which includes development and USFWS concurrence of a new Biological Assessment submitted for the proposed project. - Apply additional BMPs if identified by USFWS.
Cultural Resources	Compliance with NHPA sections 106 and 110.	The DAF has initiated informal Section 106 consultation with the AHPP. In a letter to the AHPP dated 16 Jul 2025, the NGB requested concurrence on its determination that the Proposed Action would have no effect on archaeological resources or historic properties. AHPP concurred in a letter dated August 12, 2025.
Earth Resources	Large Site Construction General Stormwater Permit through the ADEQ (ARR150000).	- Stormwater and erosion/sediment control BMPs (silt fencing, straw, erosion blankets). - Soil stabilization post-construction.
Hazardous Materials/Wastes	Compliance with AFI 32-7042, DAFMAN 32-7002, 40 CFR Part 112, RCRA, TSCA, and CERCLA; and USEPA Generator IDs.	- Immediate remediation of spills. - Protection from elements and flooding. - Proper disposal of ACM, LBP, and PCBs by licensed contractors. - Proper storage of hazardous materials/waste including secondary containment, as needed.
Health and Safety	Compliance with OSHA, AFI 91-301, DAFMAN 91-201, UFC 4-010-01, and NESHAP.	- Exclusion of unauthorized personnel. - Use of personal protective equipment and safety training. - Sampling for asbestos and LBP as needed.
Transportation	- Compliance with local traffic regulations. - Proper signage for detours/closures.	- Coordinate construction traffic to avoid peak hours. - Route and schedule vehicles to minimize delays.
Utilities	- CGP and SWPPP. - Compliance with local, state, and federal building regulations.	- Use energy- and water-efficient systems and fixtures. - Stormwater structures designed to comply with requirements.

Resource Area	Regulatory Requirements and Permits Required	BMPs and Mitigation Measures
	- Section 10 (USACE permit for navigable waters). - EISA Section 438 compliance.	- All indoor and outdoor lights should utilize the lowest wattage possible and be deactivated when unoccupied. - Utilize sodium vapor bulbs with shades for all outdoor lighting on new facilities expected to be utilized during nighttime hours.
Water Resources	- CGP and SWPPP. - EISA Section 438 compliance. - CWA Section 401/404 certification.	- Stormwater managed per SWPPP. - Stabilize disturbed areas post-construction. - Follow applicable BMPs outlined in Section 3.9.2.2. and commitments from permits obtained.

Additional BMPs may be required, implemented, or altered from the table above during the permitting and review process as coordination with regulatory agencies occurs.

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5 LIST OF PREPARERS

Government Agency Development Team			
Organization	Title		Name
National Guard Bureau	Environmental Program Manager		Johnna Scepansky
National Guard Bureau	Environmental Analyst		Toni Herron
Air National Guard	Natural Resources		Melanie Frisch
National Guard Bureau	Cultural Resources		Rocco de Gregory
Air National Guard	Lieutenant Colonel		Riley Donoho
Air National Guard	Environmental Manager		Lance Griffith
Contractor Development Team			
Name/Title	Project Role	Subject Area	Years of Experience
Carol Schauffert Senior Environmental Planner M.S. Wildlife Ecology B.S. Environmental and Forest Biology	Project Manager, Author, Technical Review	Project Management, NEPA Compliance	30
Rachel Glover NEPA Compliance Specialist B.S. Biology	Section Author	Biological Resources, Land Use, and Water Resources	4
Jeff Gaarder Professional Soil Scientist M.S. Soil Science B.S. Soil Science	Section Author	Hazardous Waste and Materials, and Safety and Occupational Health	40
Stephanie Waite Geographer M.S. Interdisciplinary Studies B.A. Geography	Geographic Information Systems Specialist	Cartography	10
Heather Conn NEPA Project Manager B.S. Environmental Biology A.S. Environmental Technology	Section Author	Biological Resources	35
Michelle Cannella Environmental Scientist B.S. Mineral Economics	Section Author	Protection of Children	24
Dewey Cooper Environmental Scientist B.S. Chemistry	Section Author	Air Quality and Noise	25
Escee Lopez Cultural Resource Specialist	Section Author	Cultural Resources	16

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APPENDIX A.

Government to Government, Interagency, and Intergovernmental Coordination and Consultation

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Please note – agency letters and responses will be included here

Example Tribal Consultation Letter



**NATIONAL GUARD BUEARU
AIR NATIONAL GUARD READINESS CENTER
3501 FETCHET AVENUE
JOINT BASE ANDREWS, MARYLAND 20762-5157**

21 July 2025

J. Rocco de Gregory, RPA
Cultural Resources Program Manager
Air National Guard Readiness Center
3501 Fetchet Avenue
Joint Base Andrews MD 20762-5157

Roger Cain
Tribal Historic Preservation Officer
United Keetoowah Band of Cherokee Indians in Oklahoma
PO Box 746
Tahlequah, OK 74465

RE: Cultural Resources Survey for the Razorback Range Facility Replacement and Consolidation Project, Fort Chaffee Joint Maneuver Training Center, Sebastian County, Arkansas

Dear Mr. Cain,

The Air National Guard (ANG) is proposing to complete a facility replacement and consolidation project at Fort Smith Air National Guard Base (FSANGB) in Sebastian County Arkansas. The area of potential effects (APE) for the proposed undertaking 30-acre project tract and a 2.5-mile-long project corridor located within FSANGB. The ANG has determined that the proposed action is an undertaking as defined in 36 CR Part 800 16(y).

As you are aware, the ANG has responsibilities under Sections 106 of the National Historic Preservation Act (NHPA) to take into consideration the effect of the Agency's undertakings on historic properties under its jurisdiction. To meet these responsibilities, the ANG contracted with Sealaska Remediation Solutions, LLC (Sealaska) to complete a Section 106 cultural resources survey of the proposed APE. The cultural resources survey was subsequently conducted in December of 2024 by Brockington and Associates, Inc. (Brockington). As a result of the investigation seven architectural resources six isolated pieces of lithic debitage were identified in the APE.

During the investigation, Brockington reviewed and evaluated seven buildings owned and managed by the ANG. Two of these resources, Buildings SB973 and SN974, were previously evaluated. These buildings were recommended as ineligible for listing on the National Register of Historic Places (NRHP). The remaining five resources—an observation tower, two culverts, and a

commercial warehouse (located off FCJMTTC)—were also recommended as ineligible for listing on the NRHP. The archaeological APE consisted of a 30-acre tract of land and an adjoining 2.5-mile-long project corridor. The investigation resulted in the identification of six isolated finds. Each isolated find consisted of a single lithic artifact, none of which were diagnostic of any specific culture or period.

Even though the cultural resource survey did not identify any historic properties in the area of the proposed undertaking, we understand that there may be Tribal resources and concerns of which we are unaware, and because of that, we would like to invite you to comment and consult on the proposed undertaking. Additionally, the National Guard Bureau would like to invite you to comment on the enclosed report and on any concerns, you may have regarding significant cultural resources that could be affected by future actions at the installation. If you have any questions about this document or require additional information, please contact Rocco de Gregory, Cultural Resources Program Manager, by email at joseph.de_gregory@us.af.mil or via mail at 3501 Fetchet Avenue, Joint Base Andrews, MD 20762.

Sincerely

A handwritten signature in black ink, reading "J. Rocco de Gregory". The signature is fluid and cursive, with the first name "J." and last name "de Gregory" clearly legible.

J. Rocco de Gregory RPA, GS-13 DAF
Cultural Resources Program Manager
NGB/A4VN

Consultation with Tribal Governments

TRIBES

Alabama-Quassarte Tribal Town

Ms. Brina Williams
Tribal Historic Preservation Officer
2122 Highway 27
Wetumka, OK 74883
brina.williams@alabama-quassarte.org

Apache Tribe of Oklahoma

Mr. Durell Cooper, Chairman
Apache Tribe of Oklahoma
PO Box 1330
Anadarko, OK 73005
durellcooper05@gmail.com

Caddo Nation of Oklahoma

Chairman Bobby Gonzalez and
Mr. Jonathan Rohrer, THPO
P.O. Box 487
Binger, OK 73009
section106@mycaddonation.com

Cherokee Nation

Ms. Elizabeth Toombs, THPO
PO Box 948
Tahlequah, OK 74465
elizabeth-toombs@cherokee.org

Choctaw Nation of Oklahoma

Dr. Ian Thompson
Tribal Historic Preservation Officer
PO Box Drawer 1210
Durant, OK 74702
ithompson@choctawnation.com

Coushatta Tribe of Louisiana

David Sickey, Chairman and
Kristian Poncho, THPO
1940 C.C. Bel Rd
Elton, LA 70532
Dsickey@coushattatribela.org
kponcho@coushatta.org

Delaware Nation

Ms. Katelyn Lucas, THPO
P.O. Box 825
Anadarko, OK 73005
klucas@delawarenation-nsn.gov

Mississippi Band of Choctaw Indians

Chief Cyrus Ben
101 Industrial Rd.
Choctaw, MS 39350
section106@choctaw.org
thpo@choctaw.org

Muscogee (Creek) Nation

Dr. Savannah Waters, THPO
PO Box 580
Okmuglee, OK 74447
swaters@muscogeenation.com

Osage Nation

Dr. Andrea Hunter, THPO
627 Grandview
Pawhuska, OK 74056
s106@osagenation-nsn.gov

Quapaw Nation

Mr. Billie Burtrum, THPO
PO Box 765
Quapaw, OK 74363
bburtrum@quapawnation.com

Delaware Tribe of Indians

Ms. Martina Thomas, THPO
5100 Tuxedo Blvd
Bartlesville, OK 74006
mthomas@delawaretribe.org

Miami Tribe of Oklahoma

Mr. Logan York, THPO
PO Box 1326
Miami, OK 74354
thpo@miamination.com

Peoria Tribe of Indians of Oklahoma

Mr. Burgundy Fletcher, THPO
1915 Cleveland Ave
Miami, OK 74355
bfletcher@peoriatribes.com

Seneca-Cayuga Nation

Mr. William Tarrant, THPO
PO Box 453220
Grove, OK 74344
wtarrant@sctribe.com

Absentee Shawnee

Mr. Clayton Martinez, THPO
2025 S. Gordon Cooper Drive
Shawnee, OK 74801
ClaytonM@astribe.com

Cheyenne and Arapaho Tribes of Oklahoma

Mr. Max Bear, THPO
PO Box 145
Concho, OK 73022
Mbear@cheyenneandapaho-nsn.gov

Chickasaw Nation

Ms. Karen Brunso, THPO

PO Box 1548

Ada, OK 74821

karen.brunso@chickasaw.net

Citizen Potawatomi Nation

Mr. Darian Rhodd, THPO

1601 S. Gordon Cooper Dr

Shawnee, OK 74801

darian.rhodd@potawatomi.org

Kickapoo Tribe of Oklahoma

Chariman Darwin Kaskoske

105365 S. Highway 102

McCloud, OK 74851

d.kaskoske@okkt.net

Seminole Nation of Oklahoma

Mr. Jeff Harjo, THPO

PO Box 1498

WeWoka, OK 74884

harjo.je@sno-nsn.gov

Thlopthlocco Tribal Town

Mr. David Frank, THPO

PO Box 188

Thlopthlocco Tribal Town, OK 74859

thpo@tttown.org

United Keetoowah Band of Cherokee Indians in Oklahoma

Mr. Roger Cain, THPO

PO Box 746

Tahlequah, OK 74465

rcain@ukb-nsn.gov

Wichita and Affiliated Tribes

Mr. Gary McAdams, THPO

PO Box 729

Anadarko, OK 73005

gary.mcadams@wichitatribe.com

From: [Madison D. Currie](#)
To: [DE GREGORY, JOSEPH R CIV USAF ANGRC NGB/A4](#)
Cc: [Lindsey Bilveu](#)
Subject: [Non-DoD Source] Cultural Resources Survey for the Razorback Range Facility Replacement and Consolidation Project, Fort Chaffee Joint Maneuver Training Center, Sebastian County, Arkansas
Date: Thursday, August 21, 2025 7:21:48 PM
Attachments: [image001.png](#)

You don't often get email from mcurrie@choctawnation.com. [Learn why this is important](#)

Halito,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. Sebastian County, Arkansas lies within our area of historic interest. The Choctaw Nation Historic Preservation Department concurs with the finding of “no effect”. However, we ask that work be stopped and our office contacted immediately in the event that Native American artifacts or human remains are encountered.

If you have any questions, please contact me.

Yakoke,

Faith Family Culture



Maddie Danielle Currie
NHPA Compliance Review Officer | Historic Preservation
[580-642-8467](tel:580-642-8467) | [580-470-9537](tel:580-470-9537)
mcurrie@choctawnation.com

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From: [Madison D. Currie](#)
To: [DE GREGORY, JOSEPH R CIV USAF ANGRC NGB/A4](#)
Cc: [Lindsey Bilveu](#)
Subject: [Non-DoD Source] Cultural Resources Survey of the Fort Smith Air National Guard Base Rapid Airfield Damage Recovery Pad, Sebastian County, Arkansas
Date: Thursday, August 21, 2025 1:39:28 PM
Attachments: [image001.png](#)

You don't often get email from mcurrie@choctawnation.com. [Learn why this is important](#)

Halito,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. Sebastian County, Arkansas lies within our area of historic interest. The Choctaw Nation Historic Preservation Department concurs with the finding of “no effect”. However, we ask that work be stopped and our office contacted immediately in the event that Native American artifacts or human remains are encountered.

If you have any questions, please contact me.

Yakoke,

Faith Family Culture



Maddie Danielle Currie
NHPA Compliance Review Officer | Historic Preservation
[580-642-8467](tel:580-642-8467) | [580-470-9537](tel:580-470-9537)
mcurrie@choctawnation.com

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From: [Christina Sharp](#)
To: [DE GREGORY, JOSEPH R CIV USAF ANGRC NGB/A4](#)
Cc: [section 106](#)
Subject: [Non-DoD Source] Razorback Range Facility Replacement and Consolidation Project
Date: Monday, August 4, 2025 2:25:32 PM

You don't often get email from christina.sharp@quapawnation.com. [Learn why this is important](#)

Dear Mr. Gregory,

The Quapaw Nation Historic Preservation Program (QNHPP) has received and reviewed the cultural resources survey report provided and concurs that the Proposed Razorback Range Facility Replacement and Consolidation Project in Sebastian County, Arkansas is not likely to affect properties of cultural or sacred significance to the Quapaw Nation.

In accordance with the National Historic Preservation Act, (NHPA) [16 U.S.C. 470 §§ 470-470w-6] 1966, undertakings subject to the review process are referred to in S101 (d) (6) (A), which clarifies that historic properties may have religious and cultural significance to Indian tribes. Additionally, Section 106 of NHPA requires Federal agencies to consider the effects of their actions on historic properties (36 CFR Part 800) as does the National Environmental Policy Act (43 U.S.C. 4321 and 4331-35 and 40 CFR 1501.7(a) of 1969).

The Quapaw Nation has vital interests in protecting its historic and ancestral cultural resources. We do not anticipate that this project will adversely impact any cultural resources or human remains protected under the NHPA, NEPA, or the Native American Graves Protection and Repatriation Act. If, however, artifacts or human remains are discovered during project construction, we ask that work cease immediately and that you contact the Quapaw Nation Historic Preservation Program (QNHPP).

Should you have any questions or need any additional information, please feel free to contact Christina Sharp at christina.sharp@quapawnation.com, please copy section106@quapawnation.com to ensure additional information requests are reviewed in a timely manner. Thank you for consulting with the Quapaw Nation on this matter.

Sincerely,
Christina Sharp
QHPP Compliance Specialist
Quapaw Nation
P.O. Box 765
Quapaw, OK 74363
918-238-3100 ext. 3100

APPENDIX B.

Proposed Consolidated Range Facility Design Drawing

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1. THE DATA COLLECTION OF THE UNDERGROUND UTILITIES IS INCOMPLETE AND WILL BE ADDED TO THE SITE PLAN IN THE NEXT SUBMITTAL.

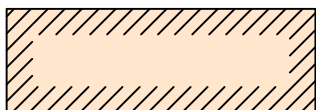
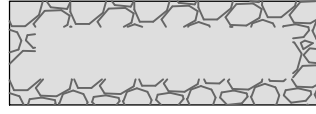


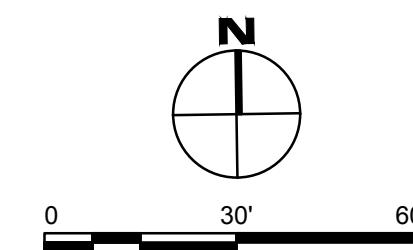
A	TYPE A-1 CONCEPT PROPOSAL		12/19/2025
.....			

- ## SHEET KEYNOTES

1. CONCRETE PAVEMENT.
2. GRAVEL PAVEMENT.
3. 6" CONCRETE CURB.
4. CONCRETE WHEEL STOP.
5. HANDICAP PARKING SPACE.
6. CONCRETE FLUME.
7. STORM CULVERT.
8. CHAIN LINK FENCE.
9. 25' WIDE SLIDE GATE.
10. KEY PAD / PIN ENTRY.
11. TRASH ENCLOSURE.
12. ABOVE GROUND STORAGE TANK (AAPPROX. 20' DIA.)
13. ARGMAG EXPLOSIVE STORAGE
14. 500 GALLON FUEL TANK.
15. 35' x 18' WASH BAY WITH OVERHEAD PROTECTION.
16. PAVEMENT STRIPING.
17. PORTABLE BUILDING / TOC TRAILER SPACE (APPROX. 32" x 8').
18. WATER LINE EXTENSION FROM CONNECTION TO EXISTING WATER DISTRIBUTION SYSTEM AT THE INTERSECTION OF AR-22 AND MARIETTA CHURCH ROAD.
19. LOCATION OF WATER SERVICE ENTRANCE TO NEW BUILDING TO BE DETERMINED.
20. NEW SEPTIC TANK.
21. EXISTING SEPTIC TANK TO BE ABANDONED OR REMOVED.
22. EXISTING STORAGE YARD TO BE RELOCATED.
23. PROPOSED WATER LINE.
24. PROPOSED FIRE PROTECTION LINE.
25. PROPOSED FIRE HYDRANT.
26. PROPOSED SANITARY LEECH FIELD. SIZE TO BE DETERMINED.
27. ACCESSIBLE PARKING SIGN AND POLE.
28. BOLLARD.
29. FLARED END SECTION WITH ROCK BLANKET.

LEGEND

— 475 —	EXISTING CONTOUR
— 465 —	PROPOSED CONTOUR
— X —	PROPOSED CHAIN LINK FENCE
— W —	PROPOSED WATER LINE
— FP —	PROPOSED FIRE PROTECTION LINE
— SD —	PROPOSED STORM CULVERT
	PROPOSED BUILDING/CANOPY
	PROPOSED CONCRETE PAVEMENT
	PROPOSED GRAVEL PAVEMENT
	PROPOSED SEEDED AREA
	PROPOSED FIRE HYDRANT



PRELIMINARY
NOT FOR
CONSTRUCTION

SHEET ID

B1.4.2

FORT CHAFFEE, ARKANSAS
CONSOLIDATED RANGE FACILITY
RAZORBACK RANGE

P/N TBD

CONCEPT PLAN

PAGE 9

TYPE A-1 CONCEPT PROPOSAL

Plot Date: 12/16/2025 2:52:41 PM

File Path: C:\Users\MM\Access\DCI\ACC Docs\Haskell\1550148 INT Cnsldtd Range Fac JV_R2024\Project
 File\21\Design Working\CM 1054\dc\CAN\2 Sheets\1 Preliminary

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APPENDIX C.

Air Conformity Applicability Model Results

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AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

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

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: FORT CHAFFEE
State: Arkansas
County(s): Sebastian; Franklin; Crawford
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Razorback Range

c. Project Number/s (if applicable): Razorback Range facilities

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action involves replacing existing Razorback Range facilities with a new, consolidated facility, and updating utilities along Marietta Church Road. The existing range facilities include a control tower, equipment storage shed, equipment parking shed, and the range control building.

The interior of the range control building would be demolished, all four buildings would be dismantled, and the parts would be moved off site. To improve site drainage and reduce the risk of flooding, all concrete pads and foundations would be removed and fill would be used to increase the elevation of the site by 2 feet. The number of equipment and personal vehicles traveling on Marietta Church Road, between Razorback Range and Highway 22, is expected to double (Pope 2025). The road is eroded in several places and would, therefore, be paved to accommodate the increased traffic volume and reduce ongoing erosion control issues (Figure 2-1). Ditches along the road would also be re-graded to ensure positive drainage away from the road.

f. National Ambient Air Quality Standards

Table F-1. National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
CO		Primary	8 hours	9 ppm	Not to be exceeded more than once a year
			1 hour	35 ppm	
NO ₂		Primary	1 hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Primary and secondary	Annual	53 ppb	Annual mean
O ₃		Primary and secondary	8 hours	0.070 ppm	Annual fourth highest daily maximum 8-hour concentration, averaged over 3 years
Particulate matter	PM _{2.5}	Primary	Annual	9 µg/m ³	Annual mean, averaged over 3 years

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
		Secondary	Annual	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
	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
Pb		Primary and secondary	Rolling 3-month average	0.15 µg/m ³	Not to be exceeded
SO ₂		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

Sources: 40 CFR Part 50; USEPA 2024a.

Notes: µg/m³ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million.

2. Air Impact Analysis: Based on the attainment status at the action location, the requirements of the GCR are:

☐ applicable
☒ not applicable

Total reasonably foreseeable net direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the start of the action through achieving “steady state” (cCba.e., no net gain/loss in emission stabilized and the action is fully implemented) emissions. The ACAM analysis uses the latest and most accurate emission estimation techniques available; all algorithms, emission factors, and methodologies used are described in detail in the *USAF Air Emissions Guide for Air Force Stationary Sources*, the *USAF Air Emissions Guide for Air Force Mobile Sources*, and the *USAF Air Emissions Guide for Air Force Transitory Sources*.

"Insignificance Indicators" were used in the analysis to provide an indication of the significance of the proposed Action's potential impacts to local air quality. The insignificance indicators are trivial (de minimis) rate thresholds that have been demonstrated to have little to no impact to air quality. These insignificance indicators are the 250 ton/yr Prevention of Significant Deterioration (PSD) major source threshold and 25 ton/yr for lead for actions occurring in areas that are "Attainment" (cCba.e., not exceeding any National Ambient Air Quality Standard (NAAQS)). These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Any action with net emissions below the insignificance indicators for all criteria pollutants is considered so insignificant that the action will not cause or contribute to an exceedance on one or more NAAQS. For further detail on insignificance indicators, refer to *Level II, Air Quality Quantitative Assessment, Insignificance Indicators*.

The action's net emissions for every year through achieving steady state were compared against the Insignificance Indicators and are summarized below.

Analysis Summary:

2026

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			

AIR CONFORMITY APPLICABILITY MODEL REPORT

RECORD OF AIR ANALYSIS (ROAA)

VOC	0.829	250	No
NOx	5.431	250	No
CO	6.741	250	No
SOx	0.012	250	No
PM 10	66.445	250	No
PM 2.5	0.200	250	No
Pb	0.000	25	No
NH3	0.010	250	No

2027

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.180	250	No
NOx	0.176	250	No
CO	2.289	250	No
SOx	0.006	250	No
PM 10	0.021	250	No
PM 2.5	0.013	250	No
Pb	0.000	25	No
NH3	0.025	250	No

2028 - (Steady State)

Pollutant	Action Emissions (ton/yr)	INSIGNIFICANCE INDICATOR	
		Indicator (ton/yr)	Exceedance (Yes or No)
NOT IN A REGULATORY AREA			
VOC	0.180	250	No
NOx	0.176	250	No
CO	2.289	250	No
SOx	0.006	250	No
PM 10	0.021	250	No
PM 2.5	0.013	250	No
Pb	0.000	25	No
NH3	0.025	250	No

None of the estimated annual net emissions associated with this action are above the insignificance indicators; therefore, the action will not cause or contribute to an exceedance of one or more NAAQSs and will have an insignificant impact on air quality. No further air assessment is needed.

Dcooper, Civ
Name, Title

Sep 12 2025
Date

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to estimate GHG emissions associated with the action. The analysis was performed 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 *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the GHG emissions analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: FORT CHAFFEE
State: Arkansas
County(s): Sebastian; Franklin; Crawford
Regulatory Area(s): NOT IN A REGULATORY AREA

b. Action Title: Razorback Range

c. Project Number/s (if applicable): Razorback Range facilities

d. Projected Action Start Date: 1 / 2026

e. Action Description:

The Proposed Action involves replacing existing Razorback Range facilities with a new, consolidated facility, and updating utilities along Marietta Church Road. The existing range facilities include a control tower, equipment storage shed, equipment parking shed, and the range control building.

The interior of the range control building would be demolished, all four buildings would be dismantled, and the parts would be moved off site. To improve site drainage and reduce the risk of flooding, all concrete pads and foundations would be removed and fill would be used to increase the elevation of the site by 2 feet. The number of equipment and personal vehicles traveling on Marietta Church Road, between Razorback Range and Highway 22, is expected to double (Pope 2025). The road is eroded in several places and would, therefore, be paved to accommodate the increased traffic volume and reduce ongoing erosion control issues (Figure 2-1). Ditches along the road would also be re-graded to ensure positive drainage away from the road.

f. Point of Contact:

Name: Dcooper
Title: Civ
Organization: Tetra Tech Inc
Email: Dewey.coopertetrattech.com
Phone Number:

2. Analysis: Total combined direct and indirect GHG emissions associated with the action were estimated through ACAM on a calendar-year basis from the action's start through the action's "steady state" (SS, net gain/loss in emission stabilized and the action is fully implemented) of emissions.

GHG Emissions Analysis Summary:

GHGs produced by fossil-fuel combustion are primarily carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). These three GHGs represent more than 97 percent of all U.S. GHG emissions. Emissions of GHGs are typically quantified and regulated in units of CO₂ equivalents (CO₂e). The CO₂e takes into account the global warming potential (GWP) of each GHG. The GWP is the measure of a particular GHG's ability to absorb solar radiation as well as its residence time within the atmosphere. The GWP allows comparison of global warming impacts between different gases; the higher the GWP, the more that gas contributes to climate change in comparison

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

to CO₂. All GHG emissions estimates were derived from various emission sources using the methods, algorithms, emission factors, and GWPs from the most current Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and/or Air Emissions Guide for Air Force Transitory Sources.

The Air Force has adopted the Prevention of Significant Deterioration (PSD) threshold for GHG of 75,000 ton per year (ton/yr) of CO₂e (or 68,039 metric ton per year, mton/yr) as an indicator or "threshold of insignificance" for NEPA air quality impacts in all areas. This indicator does not define a significant impact; however, it provides a threshold to identify actions that are insignificant (de minimis, too trivial or minor to merit consideration). Actions with a net change in GHG (CO₂e) emissions below the insignificance indicator (threshold) are considered too insignificant on a global scale to warrant any further analysis. Note that actions with a net change in GHG (CO₂e) emissions above the insignificance indicator (threshold) are only considered potentially significant and require further assessment to determine if the action poses a significant impact. For further detail on insignificance indicators see Level II, Air Quality Quantitative Assessment, Insignificance Indicators (April 2023).

The following table summarizes the action-related GHG emissions on a calendar-year basis through the projected steady state of the action.

Action-Related Annual GHG Emissions (mton/yr)						
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e	Threshold	Exceedance
2026	1,243	0.04960566	0.01592751	1,248	68,039	No
2027	249	0.01134084	0.00585428	251	68,039	No
2028 [SS Year]	249	0.01134084	0.00585428	251	68,039	No

The following U.S. and State's GHG emissions estimates (next two tables) are based on a five-year average (2016 through 2020) of individual state-reported GHG emissions (Reference: State Climate Summaries 2022, NOAA National Centers for Environmental Information, National Oceanic and Atmospheric Administration. <https://statesummaries.ncics.org/downloads/>).

State's Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	65,297,212	350,369	27,645	82,433,522
2027	65,297,212	350,369	27,645	82,433,522
2028 [SS Year]	65,297,212	350,369	27,645	82,433,522

U.S. Annual GHG Emissions (mton/yr)				
YEAR	CO ₂	CH ₄	N ₂ O	CO ₂ e
2026	5,136,454,179	25,626,912	1,500,708	6,251,695,230
2027	5,136,454,179	25,626,912	1,500,708	6,251,695,230
2028 [SS Year]	5,136,454,179	25,626,912	1,500,708	6,251,695,230

GHG Relative Significance Assessment:

A Relative Significance Assessment uses the rule of reason and the concept of proportionality along with the consideration of the affected area (Rtba.e., global, national, and regional) and the degree (intensity) of the proposed action's effects. The Relative Significance Assessment provides real-world context and allows for a reasoned choice against alternatives through a relative comparison analysis. The analysis weighs each alternative's annual net change in GHG emissions proportionally against (or relative to) global, national, and regional emissions.

The action's surroundings, circumstances, environment, and background (context associated with an action) provide the setting for evaluating the GHG intensity (impact significance). From an air quality perspective, context of an action is the local area's ambient air quality relative to meeting the NAAQSs, expressed as attainment, nonattainment, or maintenance areas (this designation is considered the attainment status). GHGs are non-hazardous to health at normal ambient concentrations and, at a cumulative global scale, action-related GHG emissions can only

AIR CONFORMITY APPLICABILITY MODEL REPORT

GREENHOUSE GAS (GHG) EMISSIONS

potentially cause warming of the climatic system. Therefore, the action-related GHGs generally have an insignificant impact to local air quality.

However, the affected area (context) of GHG/climate change is global. Therefore, the intensity or degree of the proposed action's GHG/climate change effects are gauged through the quantity of GHG associated with the action as compared to a baseline of the state, U.S., and global GHG inventories. Each action (or alternative) has significance, based on their annual net change in GHG emissions, in relation to or proportionally to the global, national, and regional annual GHG emissions.

To provide real-world context to the GHG and climate change effects on a global scale, an action's net change in GHG emissions is compared relative to the state (where the action will occur) and U.S. annual emissions. The following table provides a relative comparison of an action's net change in GHG emissions vs. state and U.S. projected GHG emissions for the same time period.

Total GHG Relative Significance (mton)					
		CO2	CH4	N2O	CO2e
2026-2028	State Total	195,891,637	1,051,107	82,936	247,300,566
2026-2028	U.S. Total	15,409,362,537	76,880,735	4,502,123	18,755,085,689
2026-2028	Action	1,740	0.072287	0.027636	1,750
Percent of State Totals		0.00088839%	0.00000688%	0.00003332%	0.00070775%
Percent of U.S. Totals		0.00001129%	0.00000009%	0.00000061%	0.00000933%

From a global context, the action's total GHG percentage of total global GHG for the same time period is: 0.00000125%.*

* Global value based on the U.S. emitting 13.4% of all global GHG annual emissions (2018 Emissions Data, Center for Climate and Energy Solutions, accessed 7-6-2023, <https://www.c2es.org/content/international-emissions>).

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

1. General Information

- Action Location

Base: FORT CHAFFEE
State: Arkansas
County(s): Sebastian; Franklin; Crawford
Regulatory Area(s): NOT IN A REGULATORY AREA

- **Action Title:** Razorback Range

- **Project Number/s (if applicable):** Razorback Range facilities

- **Projected Action Start Date:** 1 / 2026

- Action Purpose and Need:

Proposed Action involves replacing existing Razorback Range facilities with a new, consolidated facility, and updating utilities along Marietta Church Road (Figure 2-1). The existing range facilities include a control tower, equipment storage shed, equipment parking shed, and the range control building

- Action Description:

The Proposed Action involves replacing existing Razorback Range facilities with a new, consolidated facility, and updating utilities along Marietta Church Road. The existing range facilities include a control tower, equipment storage shed, equipment parking shed, and the range control building.

The interior of the range control building would be demolished, all four buildings would be dismantled, and the parts would be moved off site. To improve site drainage and reduce the risk of flooding, all concrete pads and foundations would be removed and fill would be used to increase the elevation of the site by 2 feet. The number of equipment and personal vehicles traveling on Marietta Church Road, between Razorback Range and Highway 22, is expected to double (Pope 2025). The road is eroded in several places and would, therefore, be paved to accommodate the increased traffic volume and reduce ongoing erosion control issues (Figure 2-1). Ditches along the road would also be re-graded to ensure positive drainage away from the road

- Point of Contact

Name: Dcooper
Title: Civ
Organization: Tetra Tech Inc
Email: Dewey.coopertetratech.com
Phone Number:

Report generated with ACAM version: 5.0.24a

- Activity List:

Activity Type		Activity Title
2.	Construction / Demolition	Razorback
3.	Heating	16,560 of new construction
4.	Emergency Generator	Emergency Generator
5.	Personnel	100 Personnel
6.	Tanks	Aux Tank for Genset

Emission factors and air emission estimating methods come from the United States Air Force's Air Emissions Guide for Air Force Stationary Sources, Air Emissions Guide for Air Force Mobile Sources, and Air Emissions Guide for Air Force Transitory Sources.

2. Construction / Demolition

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

2.1 General Information & Timeline Assumptions

- Activity Location

County: Sebastian; Franklin; Crawford

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Razorback

- Activity Description:

Demolition

Total demolition: 14,000 SF

Debris for disposal: ~8,000–12,000 CY

Disturbance area: 112,500 SF

Soil removal (septic tank/utilities): 1,650 SF (~250 CY)

Construction

New construction (ROM, covered area): 16,560 SF

On-site soil haul: 8,500 CY

Paving: 60,000 SF

Road Repair

Road length (Google Earth): 13,500 LF

Widening (UFC 3-201-01 standard): 30 feet wide

Ditches: 1:6 slope to as high as 1:10

Average impact width: ~16 feet per side (assuming 1 ft excavation)

Excavation volume: ~16,000 CY (some soil may be reused on-site for non-construction lifts)

Total impact area: 405,000 SF

Gravel placement: 2 inches (~125 loads of gravel)

- Activity Start Date

Start Month: 1

Start Month: 2026

- Activity End Date

Indefinite: False

End Month: 12

End Month: 2026

- Activity Emissions:

Pollutant	Total Emissions (TONs)
VOC	0.828500
SO _x	0.012357
NO _x	5.430859
CO	6.741494

Pollutant	Total Emissions (TONs)
PM 10	66.444885
PM 2.5	0.200405
Pb	0.000000
NH ₃	0.009630

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Total Emissions (TONs)
CH ₄	0.054681
N ₂ O	0.017557

Pollutant	Total Emissions (TONs)
CO ₂	1369.876385
CO ₂ e	1376.060137

2.1 Demolition Phase

2.1.1 Demolition Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Concrete/Industrial Saws Composite [HP: 33] [LF: 0.73]

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02330	0.00466	574.35707	576.32812
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.54993	534.37751
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

2.1.4 Demolition Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (0.00042 * BA * BH) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

0.00042: Emission Factor (lb/ft³)

BA: Area of Building to be demolished (ft²)

BH: Height of Building to be demolished (ft)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$VMT_{VE} = BA * BH * (1 / 27) * 0.25 * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building being demolish (ft²)

BH: Height of Building being demolish (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

0.25: Volume reduction factor (material reduced by 75% to account for air space)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

2.2 Site Grading Phase

2.2.1 Site Grading Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2026

- Phase Duration

Number of Month: 12

Number of Days: 0

2.2.2 Site Grading Phase Assumptions

- General Site Grading Information

Area of Site to be Graded (ft²): 500000

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Amount of Material to be Hauled On-Site (yd³): 8500

Amount of Material to be Hauled Off-Site (yd³): 8.5

- Site Grading Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	1	8
Graders Composite	1	8
Other Construction Equipment Composite	1	8
Rubber Tired Dozers Composite	1	8
Scrapers Composite	2	8
Tractors/Loaders/Backhoes Composite	3	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.2.3 Site Grading Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.39317	0.00542	3.40690	4.22083	0.09860	0.09071
Graders Composite [HP: 148] [LF: 0.41]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.31292	0.00490	2.52757	3.39734	0.14041	0.12918
Other Construction Equipment Composite [HP: 82] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.28160	0.00487	2.73375	3.50416	0.15811	0.14546
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.35280	0.00491	3.22260	2.72624	0.14205	0.13069
Scrapers Composite [HP: 423] [LF: 0.48]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.19606	0.00488	1.74061	1.53912	0.06788	0.06245
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02381	0.00476	587.02896	589.04350
Graders Composite [HP: 148] [LF: 0.41]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02153	0.00431	530.81500	532.63663
Other Construction Equipment Composite [HP: 82] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.54121	529.35159
Rubber Tired Dozers Composite [HP: 367] [LF: 0.4]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02160	0.00432	532.54993	534.37751
Scrapers Composite [HP: 423] [LF: 0.48]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02145	0.00429	528.85412	530.66901
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

2.2.4 Site Grading Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)

HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

2.3 Trenching/Excavating Phase

2.3.1 Trenching / Excavating Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2026

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- Phase Duration

Number of Month: 12

Number of Days: 0

2.3.2 Trenching / Excavating Phase Assumptions

- General Trenching/Excavating Information

Area of Site to be Trenched/Excavated (ft²): 54000

Amount of Material to be Hauled On-Site (yd³): 2500

Amount of Material to be Hauled Off-Site (yd³): 16000

- Trenching Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Excavators Composite	2	8
Other General Industrial Equipmen Composite	1	8
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Capacity (yd³): 20 (default)

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.3.3 Trenching / Excavating Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.39317	0.00542	3.40690	4.22083	0.09860	0.09071
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.45335	0.00542	3.58824	4.59368	0.11309	0.10404
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Excavators Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e

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Emission Factors	0.02381	0.00476	587.02896	589.04350
Other General Industrial Equipmen Composite [HP: 35] [LF: 0.34]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02385	0.00477	587.87714	589.89459
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH₄	N₂O	CO₂	CO₂e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO_x	NO_x	CO	PM 10	PM 2.5	NH₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH₄	N₂O	CO₂	CO₂e
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

2.3.4 Trenching / Excavating Phase Formula(s)

- Fugitive Dust Emissions per Phase

$$PM10_{FD} = (20 * ACRE * WD) / 2000$$

PM10_{FD}: Fugitive Dust PM 10 Emissions (TONs)

20: Conversion Factor Acre Day to pounds (20 lb / 1 Acre Day)

ACRE: Total acres (acres)

WD: Number of Total Work Days (days)

2000: Conversion Factor pounds to tons

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = (HA_{OnSite} + HA_{OffSite}) * (1 / HC) * HT$$

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VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
HA_{OnSite}: Amount of Material to be Hauled On-Site (yd³)
HA_{OffSite}: Amount of Material to be Hauled Off-Site (yd³)
HC: Average Hauling Truck Capacity (yd³)
(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)
HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Vehicle Exhaust On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)
WD: Number of Total Work Days (days)
WT: Average Worker Round Trip Commute (mile)
1.25: Conversion Factor Number of Construction Equipment to Number of Works
NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)
VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
EF_{POL}: Emission Factor for Pollutant (grams/mile)
VM: Worker Trips On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

2.4 Building Construction Phase

2.4.1 Building Construction Phase Timeline Assumptions

- Phase Start Date

Start Month: 1
Start Quarter: 1
Start Year: 2026

- Phase Duration

Number of Month: 12
Number of Days: 0

2.4.2 Building Construction Phase Assumptions

- General Building Construction Information

Building Category: Commercial or Retail
Area of Building (ft²): 17000
Height of Building (ft): 30
Number of Units: N/A

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- Building Construction Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cranes Composite	1	4
Forklifts Composite	2	6
Tractors/Loaders/Backhoes Composite	1	8

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

- Vendor Trips

Average Vendor Round Trip Commute (mile): 40 (default)

- Vendor Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

2.4.3 Building Construction Phase Emission Factor(s)

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.19758	0.00487	1.83652	1.63713	0.07527	0.06925
Forklifts Composite [HP: 82] [LF: 0.2]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.24594	0.00487	2.34179	3.57902	0.11182	0.10287
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cranes Composite [HP: 367] [LF: 0.29]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02140	0.00428	527.46069	529.27080
Forklifts Composite [HP: 82] [LF: 0.2]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02138	0.00428	527.09717	528.90603
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Emission Factors	0.02149	0.00430	529.70686	531.52468
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- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

2.4.4 Building Construction Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = BA * BH * (0.32 / 1000) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

BA: Area of Building (ft²)

BH: Height of Building (ft)

(0.32 / 1000): Conversion Factor ft³ to trips (0.32 trip / 1000 ft³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Vender Trips Emissions per Phase

$$VMT_{VT} = BA * BH * (0.05 / 1000) * HT$$

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)

BA: Area of Building (ft²)

BH: Height of Building (ft)

(0.05 / 1000): Conversion Factor ft³ to trips (0.05 trip / 1000 ft³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VT}: Vender Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

2.5 Architectural Coatings Phase

2.5.1 Architectural Coatings Phase Timeline Assumptions

- Phase Start Date

Start Month: 6

Start Quarter: 1

Start Year: 2026

- Phase Duration

Number of Month: 6

Number of Days: 0

2.5.2 Architectural Coatings Phase Assumptions

- General Architectural Coatings Information

Building Category: Non-Residential

Total Square Footage (ft²): 17000

Number of Units: N/A

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Architectural Coatings Default Settings

Default Settings Used: Yes
Average Day(s) worked per week: 5 (default)

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.5.3 Architectural Coatings Phase Emission Factor(s)

- Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

2.5.4 Architectural Coatings Phase Formula(s)

- Worker Trips Emissions per Phase

$$VMT_{WT} = (1 * WT * PA) / 800$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

1: Conversion Factor man days to trips (1 trip / 1 man * day)

WT: Average Worker Round Trip Commute (mile)

PA: Paint Area (ft²)

800: Conversion Factor square feet to man days (1 ft² / 1 man * day)

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Off-Gassing Emissions per Phase

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

$$VOC_{AC} = (AB * 2.0 * 0.0116) / 2000.0$$

VOC_{AC}: Architectural Coating VOC Emissions (TONs)

BA: Area of Building (ft²)

2.0: Conversion Factor total area to coated area (2.0 ft² coated area / total area)

0.0116: Emission Factor (lb/ft²)

2000: Conversion Factor pounds to tons

2.6 Paving Phase

2.6.1 Paving Phase Timeline Assumptions

- Phase Start Date

Start Month: 1

Start Quarter: 1

Start Year: 2026

- Phase Duration

Number of Month: 1

Number of Days: 0

2.6.2 Paving Phase Assumptions

- General Paving Information

Paving Area (ft²): 60000

- Paving Default Settings

Default Settings Used: Yes

Average Day(s) worked per week: 5 (default)

- Construction Exhaust (default)

Equipment Name	Number Of Equipment	Hours Per Day
Cement and Mortar Mixers Composite	4	6
Pavers Composite	1	7
Paving Equipment Composite	1	8
Rollers Composite	1	7
Tractors/Loaders/Backhoes Composite	1	7

- Vehicle Exhaust

Average Hauling Truck Round Trip Commute (mile): 20 (default)

- Vehicle Exhaust Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	0	0	0	0	0	100.00	0

- Worker Trips

Average Worker Round Trip Commute (mile): 20 (default)

- Worker Trips Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	50.00	50.00	0	0	0	0	0

2.6.3 Paving Phase Emission Factor(s)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

- Construction Exhaust Criteria Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.55280	0.00854	4.19778	3.25481	0.16332	0.15025
Pavers Composite [HP: 81] [LF: 0.42]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.23717	0.00486	2.53335	3.43109	0.12904	0.11872
Paving Equipment Composite [HP: 89] [LF: 0.36]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18995	0.00487	2.06537	3.40278	0.08031	0.07388
Rollers Composite [HP: 36] [LF: 0.38]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.54202	0.00541	3.61396	4.09268	0.15387	0.14156
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]						
	VOC	SO _x	NO _x	CO	PM 10	PM 2.5
Emission Factors	0.18406	0.00489	1.88476	3.48102	0.06347	0.05839

- Construction Exhaust Greenhouse Gasses Pollutant Emission Factors (g/hp-hour) (default)

Cement and Mortar Mixers Composite [HP: 10] [LF: 0.56]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02313	0.00463	570.16326	572.11992
Pavers Composite [HP: 81] [LF: 0.42]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02133	0.00427	525.80405	527.60847
Paving Equipment Composite [HP: 89] [LF: 0.36]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02141	0.00428	527.70636	529.51732
Rollers Composite [HP: 36] [LF: 0.38]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02381	0.00476	586.91372	588.92786
Tractors/Loaders/Backhoes Composite [HP: 84] [LF: 0.37]				
	CH ₄	N ₂ O	CO ₂	CO ₂ e
Emission Factors	0.02149	0.00430	529.70686	531.52468

- Vehicle Exhaust & Worker Trips Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.29416	0.00224	0.12373	4.11008	0.02120	0.00705	0.04916
LDGT	0.23609	0.00283	0.17914	3.78975	0.02148	0.00773	0.04160
HDGV	0.73137	0.00609	0.59369	9.65026	0.04614	0.02255	0.08604
LDDV	0.12398	0.00125	0.17302	5.89741	0.02191	0.00750	0.01611
LDDT	0.17922	0.00127	0.31053	4.06470	0.02145	0.00843	0.01598
HDDV	0.11468	0.00430	2.49826	1.52881	0.15125	0.07472	0.06653
MC	2.47053	0.00283	0.64224	11.65256	0.03003	0.02067	0.05529

- Vehicle Exhaust & Worker Trips Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO ₂ e
LDGV	0.01533	0.00505	318.07464	319.84326
LDGT	0.01574	0.00689	401.42592	403.69166
HDGV	0.04503	0.02346	863.90829	871.38506
LDDV	0.05313	0.00066	369.99506	371.65778
LDDT	0.03000	0.00095	376.98892	378.07968
HDDV	0.02530	0.16405	1278.48735	1322.67009
MC	0.09684	0.00272	393.80405	397.23655

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

2.6.4 Paving Phase Formula(s)

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * EF_{POL}) / 2000$$

- Construction Exhaust Emissions per Phase

$$CEE_{POL} = (NE * WD * H * HP * LF * EF_{POL} * 0.002205) / 2000$$

CEE_{POL}: Construction Exhaust Emissions (TONs)

NE: Number of Equipment

WD: Number of Total Work Days (days)

H: Hours Worked per Day (hours)

HP: Equipment Horsepower

LF: Equipment Load Factor

EF_{POL}: Emission Factor for Pollutant (g/hp-hour)

0.002205: Conversion Factor grams to pounds

2000: Conversion Factor pounds to tons

- Vehicle Exhaust Emissions per Phase

$$VMT_{VE} = PA * 0.25 * (1 / 27) * (1 / HC) * HT$$

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

PA: Paving Area (ft²)

0.25: Thickness of Paving Area (ft)

(1 / 27): Conversion Factor cubic feet to cubic yards (1 yd³ / 27 ft³)

HC: Average Hauling Truck Capacity (yd³)

(1 / HC): Conversion Factor cubic yards to trips (1 trip / HC yd³)

HT: Average Hauling Truck Round Trip Commute (mile/trip)

$$V_{POL} = (VMT_{VE} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Vehicle Exhaust Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Vehicle Exhaust On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

- Worker Trips Emissions per Phase

$$VMT_{WT} = WD * WT * 1.25 * NE$$

VMT_{WT}: Worker Trips Vehicle Miles Travel (miles)

WD: Number of Total Work Days (days)

WT: Average Worker Round Trip Commute (mile)

1.25: Conversion Factor Number of Construction Equipment to Number of Works

NE: Number of Construction Equipment

$$V_{POL} = (VMT_{WT} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL}: Vehicle Emissions (TONs)

VMT_{VE}: Worker Trips Vehicle Miles Travel (miles)

0.002205: Conversion Factor grams to pounds

EF_{POL}: Emission Factor for Pollutant (grams/mile)

VM: Worker Trips On Road Vehicle Mixture (%)

2000: Conversion Factor pounds to tons

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- Off-Gassing Emissions per Phase

$$\text{VOC}_P = (2.62 * \text{PA}) / 43560 / 2000$$

VOC_P : Paving VOC Emissions (TONs)

2.62: Emission Factor (lb/acre)

PA: Paving Area (ft²)

43560: Conversion Factor square feet to acre (43560 ft² / acre)² / acre)

2000: Conversion Factor square pounds to TONs (2000 lb / TON)

3. Heating

3.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Sebastian; Franklin; Crawford

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: 16,560 of new construction

- Activity Description:

Heating

- Activity Start Date

Start Month: 1

Start Year: 2027

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.005038
SO _x	0.000091
NO _x	0.065500
CO	0.037789

Pollutant	Emissions Per Year (TONs)
PM 10	0.003527
PM 2.5	0.003527
Pb	0.000000
NH ₃	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH ₄	0.003033
N ₂ O	0.003033

Pollutant	Emissions Per Year (TONs)
CO ₂	63.550198
CO ₂ e	64.438913

3.2 Heating Assumptions

- Heating

Heating Calculation Type: Heat Energy Requirement Method

- Heat Energy Requirement Method

Area of floorspace to be heated (ft²): 16560

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Type of fuel: LPG (Propane)
Type of boiler/furnace: Commercial/Institutional (0.3 - 9.9 MMBtu/hr)
Heat Value (MMBtu/gal): 0.094
Energy Intensity (MMBtu/ft²): 0.0572

- Default Settings Used: Yes

- Boiler/Furnace Usage

Operating Time Per Year (hours): 900 (default)

3.3 Heating Emission Factor(s)

- Heating Criteria Pollutant Emission Factors (lb/1000 gal)

VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃
1	0.018	13	7.5	0.7	0.7		

- Heating Greenhouse Gasses Pollutant Emission Factors (lb/1000 gal)

CH ₄	N ₂ O	CO ₂	CO _{2e}
0.602	0.602	12613	12664

3.4 Heating Formula(s)

- Heating Fuel Consumption gallons per Year

$$FC_{HER} = HA * EI / HV / 1000$$

FC_{HER}: Fuel Consumption for Heat Energy Requirement Method

HA: Area of floorspace to be heated (ft²)

EI: Energy Intensity Requirement (MMBtu/ft²)

HV: Heat Value (MMBtu/gal)

1000: Conversion Factor

- Heating Emissions per Year

$$HE_{POL} = FC * EF_{POL} / 2000$$

HE_{POL}: Heating Emission Emissions (TONs)

FC: Fuel Consumption

EF_{POL}: Emission Factor for Pollutant

2000: Conversion Factor pounds to tons

4. Emergency Generator

4.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Crawford; Franklin; Sebastian

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Emergency Generator

- Activity Description:

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Standard DAF unit

- Activity Start Date

Start Month: 1
Start Year: 2027

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.005650
SO _x	0.004759
NO _x	0.023288
CO	0.015552

Pollutant	Emissions Per Year (TONs)
PM 10	0.005083
PM 2.5	0.005083
Pb	0.000000
NH ₃	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH ₄	0.000094
N ₂ O	0.000019

Pollutant	Emissions Per Year (TONs)
CO ₂	2.328750
CO ₂ e	2.693250

4.2 Emergency Generator Assumptions

- Emergency Generator

Type of Fuel used in Emergency Generator: Diesel
Number of Emergency Generators: 1

- Default Settings Used: Yes

- Emergency Generators Consumption

Emergency Generator's Horsepower: 135 (default)
Average Operating Hours Per Year (hours): 30 (default)

4.3 Emergency Generator Emission Factor(s)

- Emergency Generators Criteria Pollutant Emission Factor (lb/hp-hr)

VOC	SO _x	NO _x	CO	PM 10	PM 2.5	Pb	NH ₃
0.00279	0.00235	0.0115	0.00768	0.00251	0.00251		

- Emergency Generators Greenhouse Gasses Pollutant Emission Factor (lb/hp-hr)

CH ₄	N ₂ O	CO ₂	CO ₂ e
0.000046297	0.000009259	1.15	1.33

4.4 Emergency Generator Formula(s)

- Emergency Generator Emissions per Year

$$AE_{POL} = (NGEN * HP * OT * EF_{POL}) / 2000$$

AE_{POL}: Activity Emissions (TONs per Year)

NGEN: Number of Emergency Generators

HP: Emergency Generator's Horsepower (hp)

OT: Average Operating Hours Per Year (hours)

EF_{POL}: Emission Factor for Pollutant (lb/hp-hr)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

5. Personnel

5.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Crawford; Franklin; Sebastian

Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: 100 Personnel

- Activity Description:

100 Personnel

- Activity Start Date

Start Month: 1

Start Year: 2027

- Activity End Date

Indefinite: Yes

End Month: N/A

End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.168129
SO _x	0.001469
NO _x	0.087458
CO	2.235201

Pollutant	Emissions Per Year (TONs)
PM 10	0.012083
PM 2.5	0.004376
Pb	0.000000
NH ₃	0.024703

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH ₄	0.009374
N ₂ O	0.003401

Pollutant	Emissions Per Year (TONs)
CO ₂	208.345228
CO ₂ e	209.508621

5.2 Personnel Assumptions

- Number of Personnel

Active Duty Personnel: 75

Civilian Personnel: 25

Support Contractor Personnel: 0

Air National Guard (ANG) Personnel: 0

Reserve Personnel: 0

- Default Settings Used: Yes

- Average Personnel Round Trip Commute (mile): 20 (default)

- Personnel Work Schedule

Active Duty Personnel: 5 Days Per Week (default)

Civilian Personnel: 5 Days Per Week (default)

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

Support Contractor Personnel: 5 Days Per Week (default)
Air National Guard (ANG) Personnel: 4 Days Per Week (default)
Reserve Personnel: 4 Days Per Month (default)

5.3 Personnel On Road Vehicle Mixture

- On Road Vehicle Mixture (%)

	LDGV	LDGT	HDGV	LDDV	LDDT	HDDV	MC
POVs	37.55	60.32	0	0.03	0.2	0	1.9
GOVs	54.49	37.73	4.67	0	0	3.11	0

5.4 Personnel Emission Factor(s)

- On Road Vehicle Criteria Pollutant Emission Factors (grams/mile)

	VOC	SO _x	NO _x	CO	PM 10	PM 2.5	NH ₃
LDGV	0.28819	0.00219	0.11189	3.96361	0.02066	0.00698	0.04752
LDGT	0.22877	0.00279	0.16228	3.61964	0.02106	0.00763	0.04004
HDGV	0.67959	0.00601	0.52610	8.85112	0.04485	0.02180	0.08398
LDDV	0.13087	0.00124	0.18147	6.13479	0.02224	0.00793	0.01616
LDDT	0.12258	0.00124	0.21132	3.10778	0.02017	0.00759	0.01596
HDDV	0.10257	0.00421	2.26346	1.47887	0.14406	0.06813	0.06721
MC	2.46162	0.00283	0.64068	11.53028	0.02990	0.02066	0.05562

- On Road Vehicle Greenhouse Gasses Emission Factors (grams/mile)

	CH ₄	N ₂ O	CO ₂	CO _{2e}
LDGV	0.01457	0.00491	310.88099	312.58947
LDGT	0.01490	0.00669	395.13444	397.32365
HDGV	0.04176	0.02243	852.68301	859.79571
LDDV	0.05326	0.00066	368.32660	369.99304
LDDT	0.02993	0.00095	369.69368	370.78261
HDDV	0.02500	0.16557	1252.94975	1297.52531
MC	0.09562	0.00272	393.85139	397.24873

5.5 Personnel Formula(s)

- Personnel Vehicle Miles Travel for Work Days per Year

$$VMT_P = NP * WD * AC$$

VMT_P: Personnel Vehicle Miles Travel (miles/year)

NP: Number of Personnel

WD: Work Days per Year

AC: Average Commute (miles)

- Total Vehicle Miles Travel per Year

$$VMT_{Total} = VMT_{AD} + VMT_C + VMT_{SC} + VMT_{ANG} + VMT_{AFRC}$$

VMT_{Total}: Total Vehicle Miles Travel (miles)

VMT_{AD}: Active Duty Personnel Vehicle Miles Travel (miles)

VMT_C: Civilian Personnel Vehicle Miles Travel (miles)

VMT_{SC}: Support Contractor Personnel Vehicle Miles Travel (miles)

VMT_{ANG}: Air National Guard Personnel Vehicle Miles Travel (miles)

VMT_{AFRC}: Reserve Personnel Vehicle Miles Travel (miles)

- Vehicle Emissions per Year

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$$V_{POL} = (VMT_{Total} * 0.002205 * EF_{POL} * VM) / 2000$$

V_{POL} : Vehicle Emissions (TONs)
 VMT_{Total} : Total Vehicle Miles Travel (miles)
0.002205: Conversion Factor grams to pounds
 EF_{POL} : Emission Factor for Pollutant (grams/mile)
VM: Personnel On Road Vehicle Mixture (%)
2000: Conversion Factor pounds to tons

6. Tanks

6.1 General Information & Timeline Assumptions

- Add or Remove Activity from Baseline? Add

- Activity Location

County: Crawford; Franklin; Sebastian
Regulatory Area(s): NOT IN A REGULATORY AREA

- Activity Title: Aux Tank for Genset

- Activity Description:

Aux Tank for Genset

- Activity Start Date

Start Month: 1
Start Year: 2027

- Activity End Date

Indefinite: Yes
End Month: N/A
End Year: N/A

- Activity Emissions of Criteria Pollutants:

Pollutant	Emissions Per Year (TONs)
VOC	0.001064
SO _x	0.000000
NO _x	0.000000
CO	0.000000

Pollutant	Emissions Per Year (TONs)
PM 10	0.000000
PM 2.5	0.000000
Pb	0.000000
NH ₃	0.000000

- Global Scale Activity Emissions of Greenhouse Gasses:

Pollutant	Emissions Per Year (TONs)
CH ₄	0.000000
N ₂ O	0.000000

Pollutant	Emissions Per Year (TONs)
CO ₂	0.000000
CO ₂ e	0.000000

6.2 Tanks Assumptions

- Chemical

Chemical Name: Jet kerosene (JP-5, JP-8 or Jet-A)
Chemical Category: Petroleum Distillates
Chemical Density: 7
Vapor Molecular Weight (lb/lb-mole): 130
Stock Vapor Density (lb/ft³): 0.000170775135930213

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Vapor Pressure: 0.00725

Vapor Space Expansion Factor (dimensionless): 0.068

- Tank

Type of Tank: Horizontal Tank

Tank Length (ft): 15

Tank Diameter (ft): 8

Annual Net Throughput (gallon/year): 500

6.3 Tank Formula(s)

- Vapor Space Volume

$$VSV = (PI / 4) * D^2 * L / 2$$

VSV: Vapor Space Volume (ft³)

PI: PI Math Constant

D²: Tank Diameter (ft)

L: Tank Length (ft)

2: Conversion Factor (Vapor Space Volume is assumed to be one-half of the tank volume)

- Vented Vapor Saturation Factor

$$VVSF = 1 / (1 + (0.053 * VP * L / 2))$$

VVSF: Vented Vapor Saturation Factor (dimensionless)

0.053: Constant

VP: Vapor Pressure (psia)

L: Tank Length (ft)

- Standing Storage Loss per Year

$$SSL_{VOC} = 365 * VSV * SVD * VSEF * VVSF / 2000$$

SSL_{VOC}: Standing Storage Loss Emissions (TONs)

365: Number of Daily Events in a Year (Constant)

VSV: Vapor Space Volume (ft³)

SVD: Stock Vapor Density (lb/ft³)

VSEF: Vapor Space Expansion Factor (dimensionless)

VVSF: Vented Vapor Saturation Factor (dimensionless)

2000: Conversion Factor pounds to tons

- Number of Turnovers per Year

$$NT = (7.48 * ANT) / ((PI / 4.0) * D * L)$$

NT: Number of Turnovers per Year

7.48: Constant

ANT: Annual Net Throughput

PI: PI Math Constant

D²: Tank Diameter (ft)

L: Tank Length (ft)

- Working Loss Turnover (Saturation) Factor per Year

$$WLSF = (18 + NT) / (6 * NT)$$

WLSF: Working Loss Turnover (Saturation) Factor per Year

18: Constant

NT: Number of Turnovers per Year

DETAIL AIR CONFORMITY APPLICABILITY MODEL REPORT

6: Constant

- Working Loss per Year

$$WL_{VOC} = 0.0010 * VMW * VP * ANT * WLSF / 2000$$

0.0010: Constant

VMW: Vapor Molecular Weight (lb/lb-mole)

VP: Vapor Pressure (psia)

ANT: Annual Net Throughput

WLSF: Working Loss Turnover (Saturation) Factor

2000: Conversion Factor pounds to tons

APPENDIX D.

U.S. Fish and Wildlife Service

Information for Planning and Consultation

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arkansas Ecological Services Field Office
110 South Amity Suite 300
Conway, AR 72032-8975
Phone: (501) 513-4470 Fax: (501) 513-4480



In Reply Refer To:

03/20/2026 16:51:07 UTC

Project Code: 2026-0065741

Project Name: Razorback Range Consolidated Facility

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 the IPaC system 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 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 <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

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:

Arkansas Ecological Services Field Office

110 South Amity Suite 300

Conway, AR 72032-8975

(501) 513-4470

PROJECT SUMMARY

Project Code: 2026-0065741

Project Name: Razorback Range Consolidated Facility

Project Type: Mixed-Use Construction

Project Description: The Proposed Action consists of demolishing the existing Razorback Range facilities and constructing a new, consolidated range support facility, along with associated roadway and utility improvements along Marietta Church Road.

The existing range facilities include a range control tower, range control building, equipment storage shed, and equipment parking shed. Under the Proposed Action, the interior of the range control building would be demolished, and all four buildings would be dismantled and removed from the site. Existing concrete pads and foundations would also be removed. To improve site drainage and reduce the risk of flooding, engineered fill would be placed to raise the site elevation by approximately two feet.

The new consolidated facility would include a 15,000 SF, two-story building; a range control tower, four pull-through maintenance bays; an equipment storage area with overhead protection; outdoor vehicle and equipment wash area; and a paved parking lot and driveway.

The two-story building would include office space, a training classroom, a range control tower, administrative area, target and equipment storage area, maintenance office, conference room, gym, and restrooms. The four-bay maintenance facility would be attached to the south side. This consolidated facility would be a permanent structure built in accordance with DoD Unified Facilities Criteria (UFC) 4-010-01 – Antiterrorism Standards for Buildings and 1-200-01 – DoD Building Code, FCJMTC General Building Requirements 210-1, and Air Force (DAFMAN 32-1084) design standards.

Equipment permanently stored on site would include but is not limited to construction equipment (i.e., excavator, backhoe, loader), two tractors, two trailers, one 5-ton truck with trailer, two utility terrain vehicles (UTVs), three trucks, various equipment attachments, five trailer-mounted radio frequency threat emitters, three medium-fidelity trailer-mounted targets, and one trailer-mounted welder. Traffic along Marietta Church Road is expected to double due to expanded operations at Razorback Range. This increase is driven equally by two key factors: the need to meet current U.S. military mission standards and expanded training under the Foreign Military Sales (FMS) program. To manage this higher traffic volume and address existing roadway degradation, Marietta Church Road would be paved, and its drainage ditches regraded.

A significant portion of the increased activity is necessary to align with evolving military readiness standards, which require more frequent and intensive training exercises to ensure U.S. forces are prepared for modern

operational demands. In addition, the FMS program, a key component of U.S. foreign policy, involves training allied nations on U.S. defense equipment and tactics. This partnership training increases the operational tempo at U.S. facilities like Razorback Range.

Utility improvements would include installation of a new septic system within the project footprint; upgrade of the existing electrical service from single-phase to three-phase power; and installation of a new water supply line within approximately 25 feet of the Marietta Church Road centerline. The new water line would connect to an above-ground water storage tank located within the project footprint. A stormwater management system would be constructed to convey runoff to a downstream pond that discharges into one of three existing on-site stormwater ponds.

The facilities are used by range personnel for scheduling, maintenance, administrative requirements and flight operations for approximately 40 to 65 hours a week, depending on training requirements. The operational use of the facilities would increase to approximately 65 hours per week under the Proposed Action. The number of full-time personnel and Joint Tactical Air Controller (JTAC) personnel assigned to the range is not expected to change.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@35.27484405,-94.09806789047752,14z>



Counties: Sebastian County, Arkansas

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 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 Fisheries¹, 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.

MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis jamaicensis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10477	Threatened
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as 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/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

REPTILES

NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
American Burying Beetle <i>Nicrophorus americanus</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/66	Threatened
Monarch Butterfly <i>Danaus plexippus</i>	Proposed Threatened

NAME

STATUS

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

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.

**DRAFT FINDING OF NO SIGNIFICANT IMPACT (FONSI) AND FINDING OF NO
PRACTICABLE ALTERNATIVE (FONPA)**
FOR
**ENVIRONMENTAL ASSESSMENT FOR CONSTRUCTION AND OPERATION OF A
CONSOLIDATED RANGE SUPPORT COMPLEX (CRSC)**
**RAZONRBACK RANGE, FORT CHAFFEE JOINT MANEUVER TRAINING CENTER
(FCJMTC)**
SEBASTIAN COUNTY, ARKANSAS

1. INTRODUCTION

The United States Department of the Air Force (DAF) prepared an Environmental Assessment (EA) to analyze the potential environmental consequences to the human and natural environments associated with a Proposed Action at the Fort Chaffee Joint Maneuver Training Center (FCJMTC) located in Sebastian County, Arkansas.

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 as amended [42 United States Code (USC) 4321, et seq], the Department of War (DoW) NEPA Implementing Procedures (2026), and DAF NEPA Implementing Procedures (2026).

DAF completed an EA-level of NEPA analysis due to the scale of the proposed demolition of structures and construction of new facilities at the CRSC, and, in particular, the placement of two feet of engineered fill within the entire site area. Additionally, DAF anticipates potential impacts to floodplains, and endangered species. The EA identifies best management practices (BMPs) that would avoid or minimize effects resulting from implementing the Proposed Action - or alternatives - of replacing the existing Razorback Range facilities at the FCJMTC with a new, consolidated facility.

The purpose of the Proposed Action is to provide adequately sized and compliant facilities at the Razorback Range CRSC to support bombing, strafing operations, maintenance, storage, administrative functions, airspace management, and physical readiness activities required to sustain current and projected mission requirements of the 188th Operations Group – Arkansas Air National Guard (ARANG) and supported training units. The bombing range is located approximately 2,700 feet northeast of the proposed project area footprint.

The Proposed Action includes construction of a new CRSC, including a Range Control Tower, operations and administrative space, vehicle maintenance facilities, covered storage physical fitness space, and supporting utility infrastructure improvements along Marietta Church Road. The new tower would replace the existing tower and provide improved operational visibility. The CRSC building will increase communications capability, improve life-safety systems, and comply with current building safety and anti-terrorism/force protection (AT/FP) standards.

DAF's Proposed Action is needed to address facility deficiencies, space shortfalls, utility limitations, and safety/security compliance issues that currently constrain mission execution at Razorback Range. The existing range control tower was constructed in 1974. Four additional buildings were constructed in 1992. These buildings exhibit ongoing deterioration requiring increased maintenance due to water intrusion through windows and doors, despite resealing efforts and repairs. Fogging and reduced visibility through double-paned windows in the control tower creates operational and aviation safety concerns, as well as the absence of fire sprinkler systems. Non-functional, degraded security alarm systems, non-operational mass notification systems, and aging utility infrastructure are inadequate to support current operational demands. The existing facilities are undersized relative to authorized space requirements. The range facilities currently lack an estimated 10,495-square feet (SF) of required space and lack sufficient utility systems (ANGH 32-1084 and applicable NGB space criteria).

Personnel levels are expected to increase by approximately 70 percent as the Foreign Military Sales (FMS) mission becomes fully operational, which represents up to 30 additional personnel during peak operations due to more frequent range use. Separate manning studies determined the need for seven additional full-time personnel to support training requirements. Current facilities cannot accommodate required staffing during mission briefings and operational periods, necessitating temporary facilities and creating inefficiencies. There is currently no available space at the main base (Fort Smith, AR - ARANG) to accommodate range-assigned vehicles. Conducting vehicle maintenance at the main base would require repeated transport of vehicles between the range and base facilities, increasing operational costs and reducing efficiency.

The lack of adequate maintenance space prevents concurrent maintenance and reduces operational readiness. Additionally, insufficient covered storage has resulted in training equipment and vehicles exposed to environmental conditions, accelerating degradation and increasing lifecycle costs.

The approximate 2-acre CRCF area (**Figure 2-4**), although not in a floodplain, floods seasonally, compromising the structural integrity of the existing buildings. Recurring interior flooding and mold concerns in the control house and control tower have been documented during health and safety inspections. Additionally, the proximity of the aging septic system to the potable water supply has resulted in contamination by septic effluent and iron bacteria, rendering the water non-potable. ARANG must transport potable water from off-site. The lack of adequate maintenance space prevents concurrent maintenance and reduces operational readiness. Additionally, insufficient covered storage has resulted in training equipment and vehicles exposed to environmental conditions, accelerating degradation and increasing lifecycle costs. These conditions present documented health and safety risks to personnel occupying the facilities. The deficiencies identified, along with resolutions under the scope of the proposed action, are presented in detail in the associated EA. In addition, the existing facilities do not comply with regulatory standards (e.g., DoD AT/FP and emergency response requirements outlined in DoD Instructions 2000.16; 2000.12; and 2000.18) nor provide operational efficiency. Therefore, the existing facilities are not secure, potentially jeopardizing the effectiveness of training and mission readiness.

The Proposed Action and alternatives would have negligible potential for adverse effects on the following environmental resource areas: airspace, land use, socioeconomics, socioeconomics

(including the protection of children), and noise. Therefore, DAF did not carry forward those resource areas for detailed analysis in the EA.

A preliminary analysis of environmental effects determined that the Proposed Action could have minor effects on the following resource areas: air quality, biological resources, cultural resources, earth resources (topography and soils), hazardous materials and wastes, health and safety, utilities, and water resources. Therefore, DAF carried forward these resource areas for detailed analysis in the EA.

2.0 PROPOSED ACTION

The Proposed Action consists of demolishing the existing Razorback Range facilities and constructing a new, CRSF along with associated roadway and utility improvements along Marietta Church Road (**Figure 2-1**).

The existing range facilities include a range control tower, range control building, equipment storage shed, and equipment parking shed (**Figure 2-2**). Under the Proposed Action, the interior of the range control building would be demolished, and all four buildings would be dismantled and removed from the site. Existing concrete pads and foundations would also be removed. To improve site drainage and reduce the risk of flooding, engineered fill would be placed to raise the site elevation by approximately two feet (**Figures 2-3 and 2-4**).

Consequently, the State of Arkansas contains a substantial proportion of land mapped within the FEMA 100-year floodplain (approximately 22.6 percent) statewide, with Sebastian County having an even greater percentage (approximately 26 percent). Portions of the floodplain bisect Marietta Church Road via culverts and stormwater management features (**Figure 2-5**). The CRCF range area floods seasonally, however, is not located within a floodplain.

Additionally, the presence of approximately 3180.8 linear feet of streams (0.614 acres) within the CRSF project area were identified bisecting the road and adjacent to the proposed building locations (**Figure 2-6**). No additional WOTUS including wetlands were observed.

The new consolidated facility would include a 15,000 SF, two-story building; a range control tower, four pull-through maintenance bays; an equipment storage area with overhead protection; outdoor vehicle and equipment wash area; and a paved parking lot and driveway (**Figure 2-4**). The two-story building would include office space, a training classroom, a range control tower, administrative area, target and equipment storage area, maintenance office, conference room, gym, and restrooms. The four-bay maintenance facility would be attached to the south side. This consolidated facility would be a permanent structure built in accordance with DoD Unified Facilities Criteria (UFC) 4-010-01 – Antiterrorism Standards for Buildings and 1-200-01 – DoD Building Code, FCJMTC *General Building Requirement* 210-1, and Air Force (DAFMAN 32-1084) design standards.

Equipment stored on site would include: construction equipment (i.e., excavator, backhoe, loader), two tractors, two trailers, one 5-ton truck with trailer, two utility terrain vehicles (UTVs), three trucks, various equipment attachments, five trailer-mounted radio frequency threat emitters, three medium-fidelity trailer-mounted targets, and one trailer-mounted welder.

Traffic along Marietta Church Road between Razorback Range and Highway 22 is anticipated to increase, with equipment and personnel vehicle trips expected to approximately double with increased range use (D. Pope, Senior Master Sergeant, Razorback Range, June 2, 2025). The utilities and drainage bordering Marietta Church Road would be updated and Marietta Church Road would be regraded as needed.

Utility improvements would include installation of a new septic system within the approximate 2-acre CRCF project footprint (**Figure 2-4**) at a new location far from the site's potable water source; upgrade of the existing electrical service from single-phase to three-phase power; and installation of a new water supply line within approximately 25 feet of the Marietta Church Road centerline. The new water line would connect to a constructed above-ground water storage tank located within the project footprint. A stormwater management system would be constructed to convey runoff to a downstream pond that discharges into one of three existing on-site stormwater ponds.

Figure 2-1. Razorback Range Proposed Project Footprint

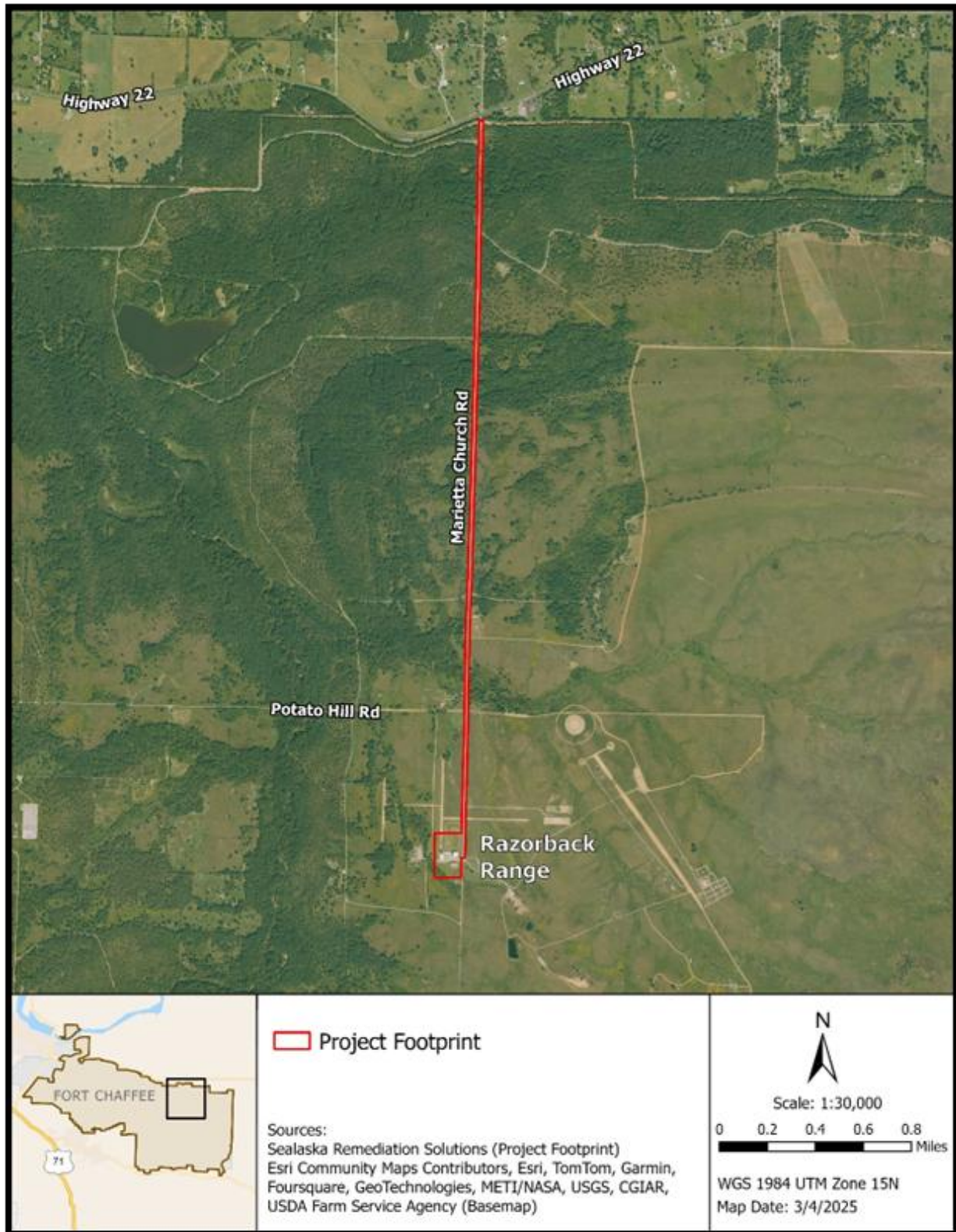


Figure 2-2 Existing Razorback Range Facilities

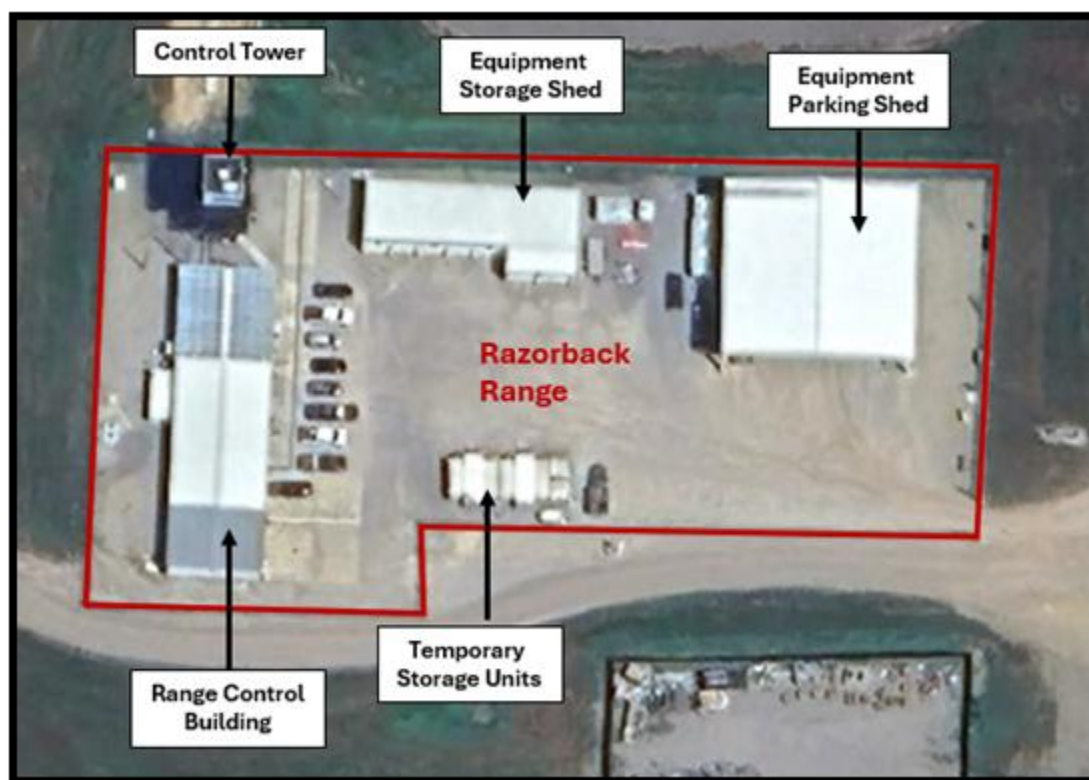
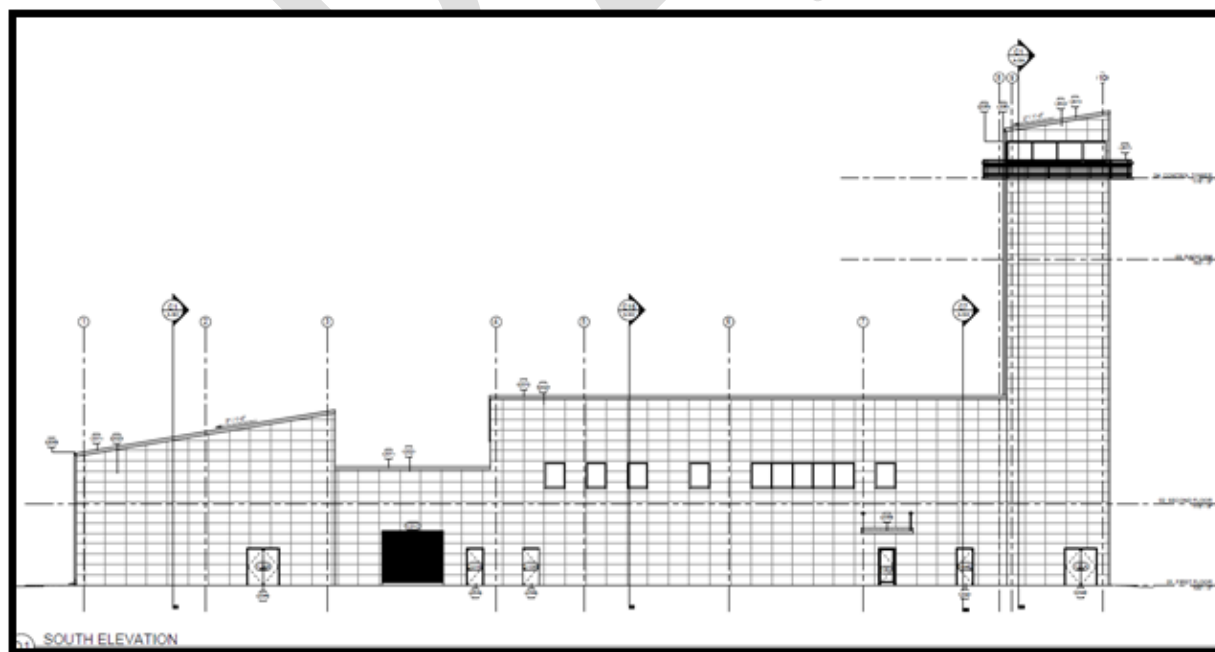
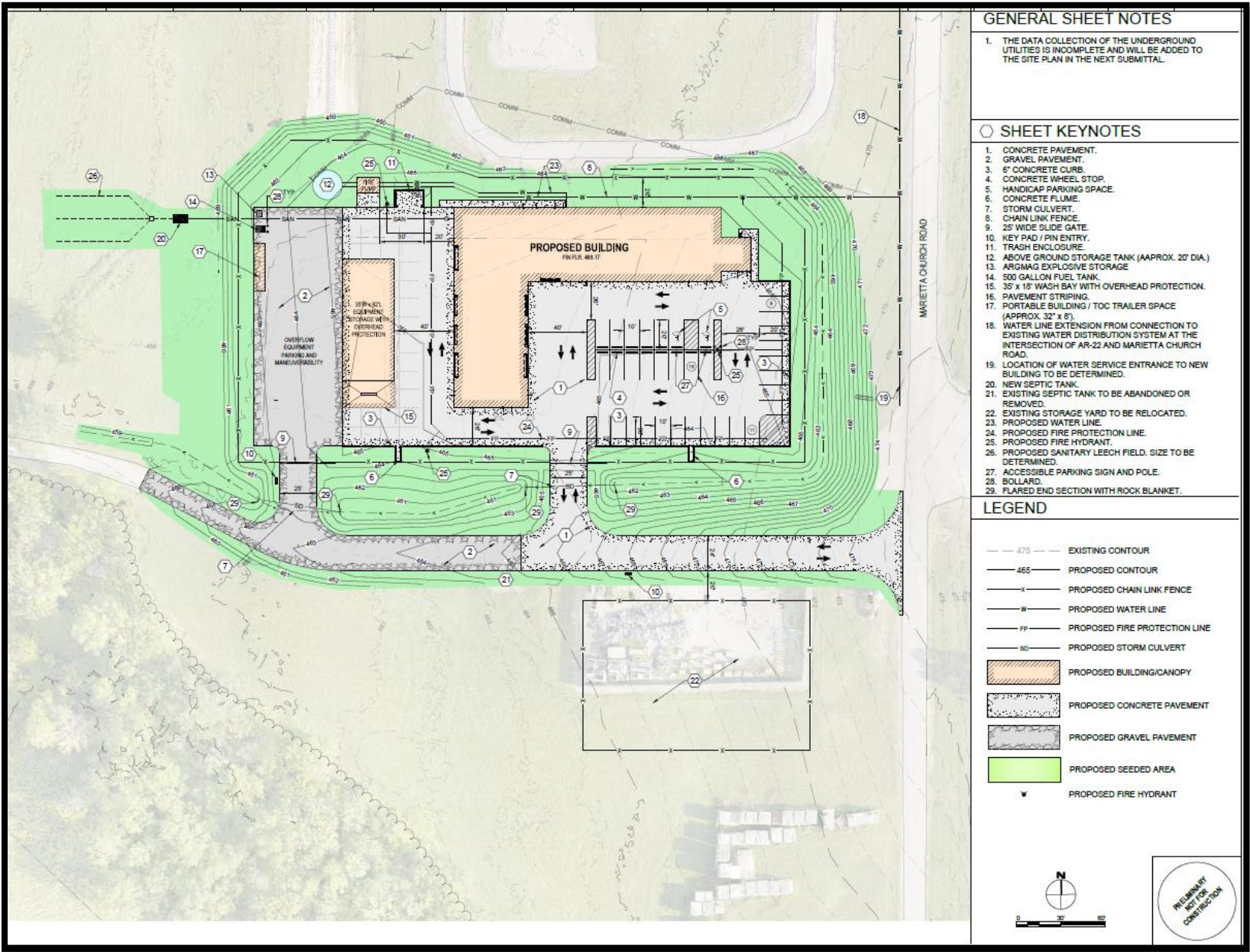


Figure 2-3 Side Elevation of Proposed Building Facing North

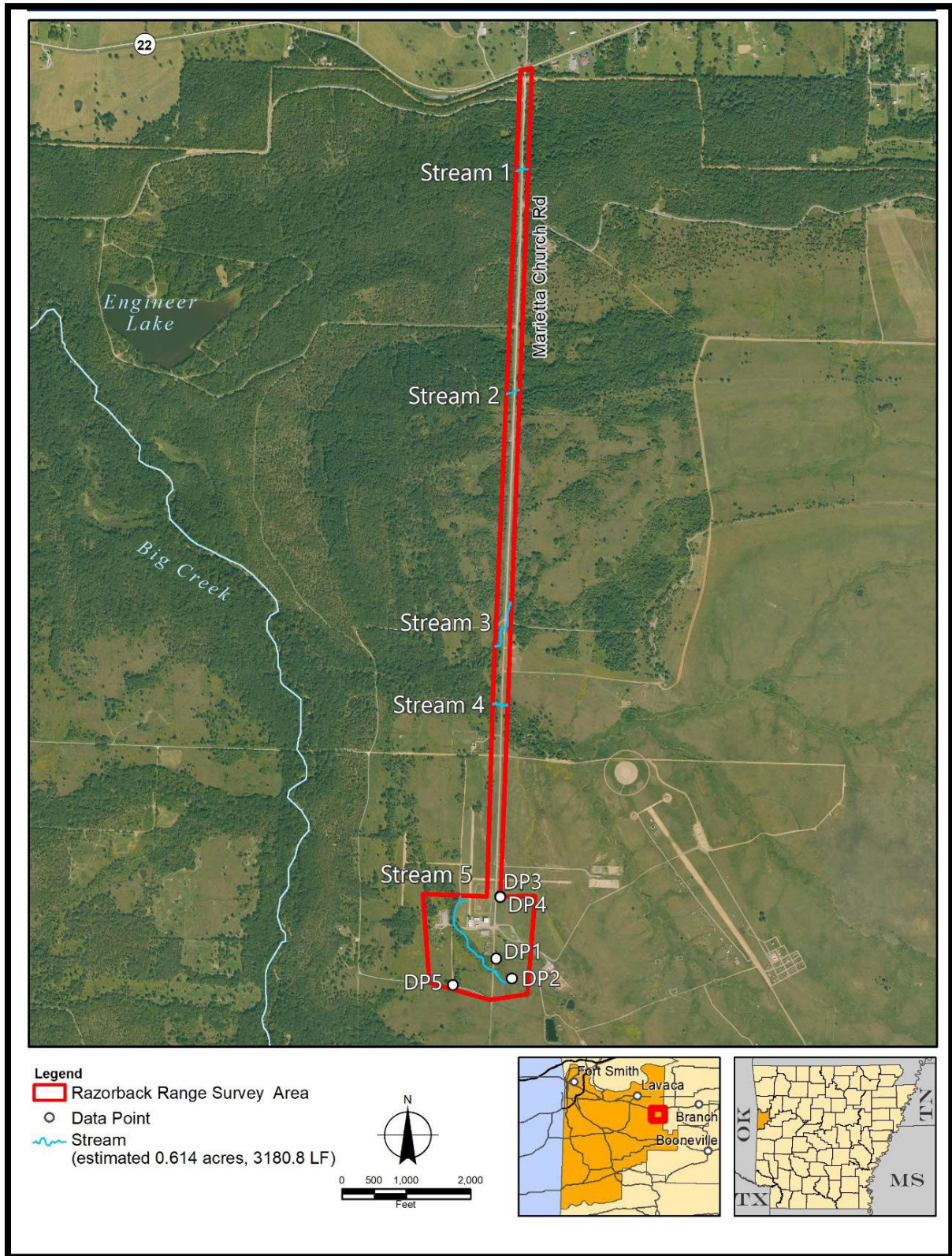


1 **Figure 2-4 Proposed Razorback Range Consolidated Facility Layout**



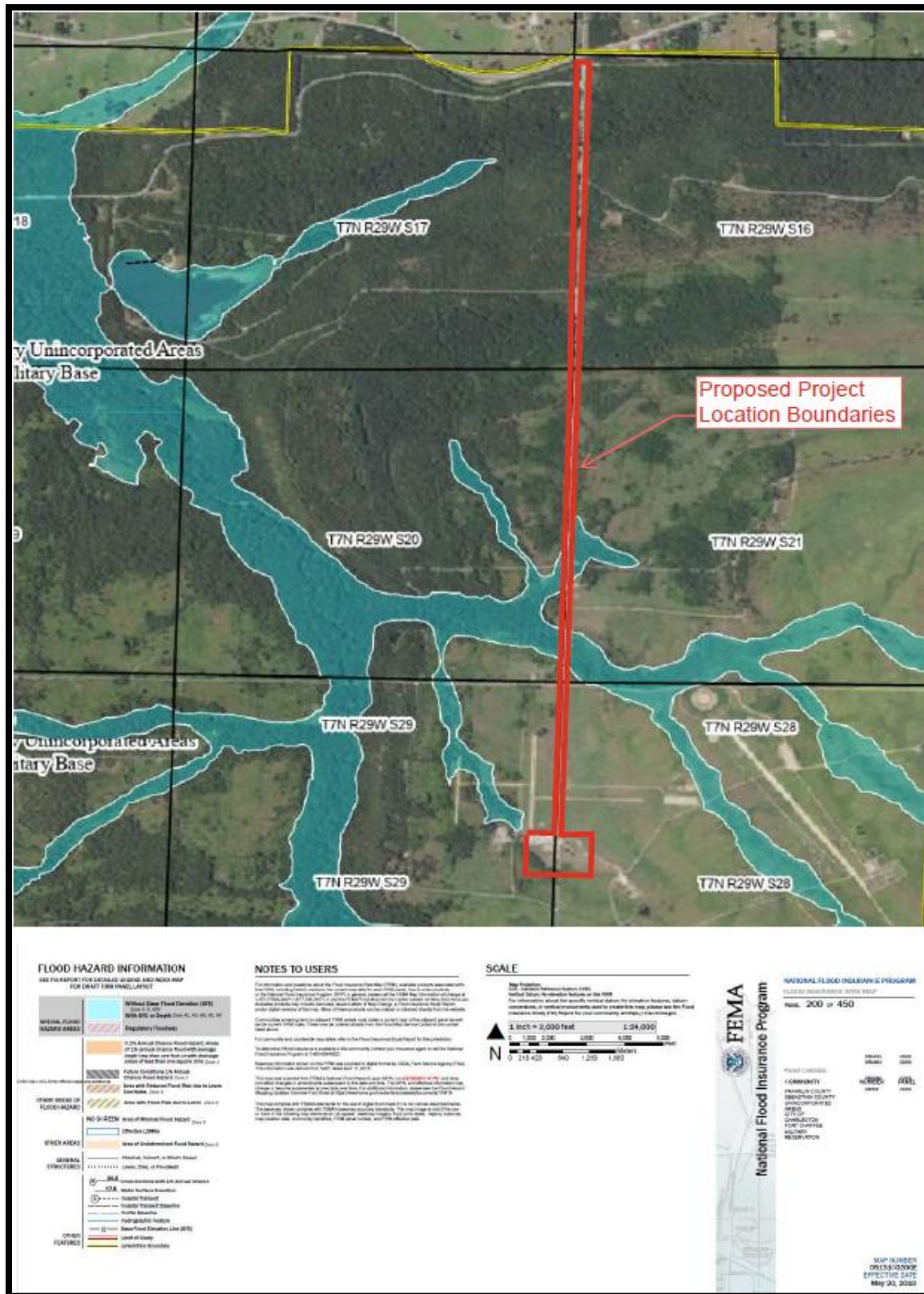
2
3

1 **Figure 2-5 Waters of the United States (WOTUS)/Wetland Delineation Map**



2

1 **Figure 2-6 Federal Emergency Management Agency (FEMA) Flood Map**



3.0 ALTERNATIVES

3.1 Action Alternatives Considered but Dismissed from Detailed Analysis

The following design options were considered during project development but eliminated from further consideration.

- **Repair Existing Facilities** - The existing structures have suffered significant degradation due to repeated flooding. This design option would not address underlying drainage and flooding issues, and the facilities would likely continue to deteriorate. Prolonged exposure to moisture could result in mold growth, posing ongoing health risks to personnel.
- **Repair Existing Septic System** - The current septic system is aging and degraded. It is in close proximity to the water supply. Frequent filter replacement is required to maintain functionality. ARANG expects it to have limited long-term reliability, resulting in non-potable water.
- **Tie into the City of Charleston Sewer System** - Due to municipal sewer system capacity constraints, connection was eliminated as a viable alternative during detailed analysis. The existing system cannot handle additional wastewater from the range. This issue is compounded by the Arkansas Health Department's moratorium on significant new projects until municipalities can increase their wastewater treatment capacity (Grajeda and Hickey, 2025). Furthermore, implementation would require crossing multiple privately-owned properties, potentially forcing those property owners to connect to the system.
- **Use Existing Water Supply Line** - The current system is a three-mile, dead-end water main, which provides inadequate flow to maintain water freshness. Due to insufficient pressure and limited capacity, the system cannot meet the anticipated demand. Similar to the challenges with the sewer system, the existing water supply line would not support the additional capacity required to accommodate the anticipated increase in usage (Grajeda and Hickey, 2025).
- **Use Existing Well with On-site Treatment** - The existing well does not provide sufficient capacity and is subject to recurring issues due to proximity of the septic system. This option would require substantial upgrades to ensure safe and reliable water supply.

Alternative Air National Guard locations within Arkansas, including Fort Smith and Little Rock, were not considered, as these locations cannot accommodate the required range facilities without additional land acquisition, which may also occur within designated floodplain areas. Relocation to available out-of-state ranges would introduce substantial travel distances and logistical constraints, adversely affecting mission readiness, training efficiency, and deployment capability. DAF did not consider construction of a new access road to avoid the floodplain as the Arkansas Army National Guard (ARARNG) maintains control of the property and allows only limited DAF access and for maintenance only. Therefore, off-site alternatives and alternatives outside of the current project footprint were determined to be impracticable.

3.2 No Action Alternative

Under the No Action Alternative, a new CRSC and related utilities would not be constructed, and the outdated, inefficient facilities would not be demolished. Two feet of fill would not be placed on the site, flooding issues would persist, continuing to pose safety risks to personnel while training equipment and vehicles would remain inadequately protected leading to ongoing degradation. Additionally, the Razorback Range would remain inadequate to meet ARANG's anticipated future training and mission readiness requirements.

4.0 ENVIRONMENTAL EFFECTS OF THE PREFERRED ALTERNATIVE

The EA evaluated the existing environmental conditions and potential environmental consequences of implementing the Proposed Action. Resources analyzed and potential environmental consequences are summarized in **Table 1**, which shows that implementation of the Proposed Action is not anticipated to result in significant adverse environmental impacts.

Table 1. Potential Environmental Impacts of the Proposed Action

Resource Area	Level of Impact
Air Quality	Per Air Conformity Applicability Model (ACAM) estimates, the total direct and indirect emissions from the Preferred Alternative would be below the insignificance indicators; therefore, the level of effects are not anticipated to be significant. Fort Chaffee (ARANG) would comply with applicable State and municipality regulations when constructing the new facilities, such as controlling fugitive dust. Reasonable precautions to control fugitive dust might include using water to control dust from building construction, road grading, and land clearing.
Biological Resources	Short-term and long-term minor effects would be expected. There would be no significant effects regarding loss, degradation, or fragmentation of wildlife habitat. BMPs would be implemented if American Burying Beetle, Bald Eagle, American Kestrel, or bat activity is observed prior to ground disturbance and construction activity in coordination with U.S. Fish and Wildlife Service (USFWS). The DAF would comply with additional stipulations identified during Endangered Species Act (ESA) Section 7 consultation, which includes development and concurrence of a new Biological Assessment submitted for the proposed project.
Cultural Resources	Impacts on cultural and paleontological resources would be considered not significant if installations follow existing SOPs for avoiding, minimizing, or mitigating adverse effects as listed in the ICRMP, applicable guidance and instructions, agreement documents (such as PAs), and the Section 106 process. The DAF has initiated informal Section 106 consultation with the Arkansas Historic Preservation Program (AHPP) (Arkansas SHPO). In a letter to the AHPP dated 16 Jul 2025, the NGB requested concurrence on its determination that the Proposed Action would have no effect on archaeological resources or historic properties. AHPP concurred in a letter dated August 12, 2025.
Hazardous Materials & Waste	Hazardous Materials and Waste impacts would be considered not significant. No federal or state regulated contaminated sites occur within Project Footprint (ANG 1994), however, there is the potential to encounter

	unknown contaminated soil and groundwater during earthwork activities. During demolition and construction of the facility structures, septic system, water tank installation, and Marietta Church Road utility installation, ground-disturbing activities may generate surplus soil in addition to groundwater from construction dewatering that may require offsite disposal and/or reuse onsite. As a result, soil and groundwater would need to be sampled and characterized following AR ARNG's HC&WM SOP to determine the appropriate management of any surplus soil and groundwater. Upon completion of the new facilities, all hazardous materials use/storage operations would also comply with federal, state, and DAF/ANG regulations.
Infrastructure & Utilities	Beneficial impacts to infrastructure and utilities are expected. Electricity: Population on the range is expected to increase by 70 percent. That population increase is expected to increase electrical demands by the same proportion. The existing electrical service is proposed to be upgraded from single-phase to three-phase power. Potable Water: Existing water supply facilities would be decommissioned in accordance with the local, state, and federal requirements and water would be supplied via a private 2.5-mile water line extension, tapped from the existing public main located on the north side of Highway 22 to an above-ground water tank. This system would reliably supply potable water to the range and eliminate the potential of contamination from the adjacent septic system. Wastewater: The new septic system would be designed to handle the expected population increase at the range. It will also be able to handle the new vehicle/equipment wash facility (Donoho 2026). It would be located on the west side of the new consolidated range facility away from the water supply system.
Safety & Occupational Health	The Proposed Action would improve mission safety at Razorback Range by providing new facilities that allow for effective training and mission readiness. The new facility would be constructed to prevent seasonal flooding and would be upgraded to comply with DoD regulatory standards. Construction of the new septic system and water supply would prevent effluent leaching into the water supply and protect groundwater quality, and regrading Marietta Church Road would improve driving safety to Razorback Range. As a result, the Proposed Action would have a moderate beneficial impact on mission safety.
Soils and Geological Resources	Impacts to soil resources from construction would result in short-term but measurable impacts that are not significant. During construction and operation, the potential exists for vehicles and equipment to release petroleum, oil, and lubricants (POLs) and contaminate soil. Should an accidental POL spill occur, then appropriate handling and response procedures would be followed.
Water Resources	Ground Water: Impacts to groundwater are not anticipated to be significant as a result of implementation of the Proposed Action. Surface Water: Impacts to surface waters are anticipated to not be significant due to construction related BMPs, preparation of a Stormwater Pollution Prevention Plan (SWPPP), and permit requirements. Wetlands: No wetlands occur within or near the proposed Project Footprint. Therefore, implementation of the Proposed Action would have no effect to wetlands.

Floodplain: Construction activities that would occur within the 100-year floodplain would consist of regrading the existing Marietta Church Road, adjacent ditch regrading, and water line utility installation. All road regrading work would occur from the top of the roadway, and no fill would enter the floodplain area. All construction activities within the floodplain would be required to obtain the applicable permits, abide by permit requirements, and implement BMPs. As a result, implementation of the Proposed Action would result in negligible effects to floodplains. Floodplain impacts will be fully evaluated during the permit application process. Pursuant to EO 11988, *Floodplain Management*, and applicable Air Force guidance, DAFMAN 32-7003 Section 3D – *Floodplains* a Finding of No Practicable Alternative (FONPA) is required and included within this document.

5.0 REGULATORY REQUIREMENTS, PERMITS, MITIGATION MEASURES, AND BMPS

The DAF will comply with all applicable federal and state laws and regulations and implement best management practices (BMP) identified in permits. Additionally, activities will be conducted in accordance with installation management plans, including but not limited to hazardous material, hazardous waste, spill prevention, natural resources, (ARANG's INRMP) and cultural resources management (ARARNG's statewide ICRMP).

With implementation of these measures and other BMP design commitments identified in the EA, the Proposed Action is anticipated to have no significant adverse impacts. Table 2 summarizes the regulatory requirements, permits, mitigation measures, and BMPs discussed in the preceding sections. NEPA mitigation measures are not required to reduce significant adverse impacts to below significant levels; However, the following best management practices (BMPs), mitigation measures, and permit requirements will be implemented to reduce all proposed project impacts.

Table 2. Regulatory Requirements, Permits, Mitigation Measures, and BMPs

Resource Area	Regulatory Requirements and Permits Required	BMPs and Mitigation Measures
Air Quality	- Compliance with USEPA, Arkansas Division of Environmental Quality, and CAA regulations. - Obtain Construction General Permit (CGP) as needed.	- Water for dust control during grading. - Cover open equipment. - Routine equipment maintenance. - Remove spilled/tracked dirt.
Biological Resources	- Compliance with ESA and USFWS recommendations. - Coordination with USFWS as needed.	- Incorporate USFWS conservation measures identified during consultation. - Compliance with the Fort Chaffee - ARARNG American Burying Beetle (ABB) Conservation Plan identified in the EA in Section 3.3.2.2. - Adhere to guidelines set forth in the Bald and Golden Eagle Protection Act should any eagle nests be identified in the project area. - The DAF would comply with additional stipulations identified during ESA Section 7 consultation, which includes development and USFWS concurrence of a new Biological Assessment (BA) submitted for the proposed project.

Resource Area	Regulatory Requirements and Permits Required	BMPs and Mitigation Measures
		Apply additional BMPs if identified by USFWS.
Cultural Resources	Compliance with NHPA sections 106 and 110.	The DAF has initiated informal Section 106 consultation with the Arkansas Historic Preservation Program (AHPP) (Arkansas SHPO). In a letter to the AHPP dated 16 Jul 2025, the NGB requested concurrence on its determination that the Proposed Action would have no effect on archaeological resources or historic properties. AHPP concurred in a letter dated August 12, 2025.
Earth Resources	Large Site Construction General Stormwater Permit through the ADEQ (ARR150000).	- Stormwater and erosion/sediment control BMPs (silt fencing, straw, erosion blankets). - Soil stabilization post-construction.
Hazardous Materials/Wastes	Compliance with AFI 32-7042, DAFMAN 32-7002, 40 CFR Part 112, RCRA, TSCA, and CERCLA; and USEPA Generator IDs.	- Immediate remediation of spills. - Protection from elements and flooding. - Proper disposal of ACM, LBP, and PCBs by licensed contractors. - Proper storage of hazardous materials/waste including secondary containment, as needed.
Health and Safety	Compliance with OSHA, AFI 91-301, DAFMAN 91-201, UFC 4-010-01, and NESHAP.	- Exclusion of unauthorized personnel. - Use of personal protective equipment and safety training. - Sampling for asbestos and LBP as needed.
Transportation	- Compliance with local traffic regulations. - Proper signage for detours/closures.	- Coordinate construction traffic to avoid peak hours. - Route and schedule vehicles to minimize delays.
Utilities	- CGP and SWPPP. - Compliance with local, state, and federal building regulations. - Section 10 (USACE permit for navigable waters). - EISA Section 438 compliance.	- Use energy- and water-efficient systems and fixtures. - Stormwater structures designed to comply with requirements. - All indoor and outdoor lights should utilize the lowest wattage possible and be deactivated when unoccupied. - Utilize sodium vapor bulbs with shades for all outdoor lighting on new facilities expected to be utilized during nighttime hours.
Water Resources	- CGP and SWPPP. - EISA Section 438 compliance. - CWA Section 401/404 certification.	- Stormwater managed per SWPPP. - Stabilize disturbed areas post-construction. - Follow applicable BMPs outlined in Section 3.9.2.2. and commitments from permits obtained.

Notes: ACM = asbestos-containing materials; AFI = Air Force instruction; CAA = Clean Air Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; DAFMAN = Department of the Air Force manual; EISA = Energy Independence and Security Act of 2007; ESA = Endangered Species Act; NHPA = National Historic Preservation Act; LBP = lead-based paint; NESHAP = National Emission Standards for Hazardous Air Pollutants; PCBs = polychlorinated biphenyls; RCRA = Resource Conservation and Recovery Act; OSHA = Occupational Safety and Health Administration; TSCA = Toxic Substances Control Act; UFC = Unified Facilities Criteria; USACE = U.S. Army Corps of Engineers.

**6.0 INTERAGENCY COORDINATION, GOVERNMENT-TO-GOVERNMENT
CONSULTATION, AND PUBLIC REVIEW**

DAF encourages public participation in the NEPA process to ensure open communication and better decision-making. In compliance with Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, the DAF has notified other federal, state, and local agencies with jurisdiction potentially affected by the alternative actions will be notified and consulted during the EA development per the Intergovernmental Cooperation Act of 1968 (42 USC 4231(a)) and EO 12372.

The DAF is consulting with the United States Fish and Wildlife Service (USFWS), as the Proposed Action could affect federally listed/proposed threatened/endangered species per Section 7 of the Endangered Species Act of 1973 (ESA) (16 USC 1531 et seq.) and its regulations at 50 CFR 402. The DAF also sent early notification letters to the USFWS, informing them of the Proposed Action and requesting data on applicable protected species. The DAF would comply with additional stipulations identified during USFWS Section 7 consultation, which includes development and concurrence of a new Biological Assessment submitted for the proposed project.

The DAF is considering the effects of its actions on historic properties and will strive to avoid, minimize, or mitigate adverse effects per the National Historic Preservation Act (NHPA) (54 USC §300101 et seq.) and is consulting with the Arkansas State Historic Preservation Officer (SHPO) per Section 106 of the NHPA and 36 CFR §800.1(a)). The DAF has initiated informal Section 106 consultation with the Arkansas Historic Preservation Program (AHPP) (Arkansas SHPO). In a letter to the AHPP dated 16 Jul 2025, the NGB requested concurrence on its determination that the Proposed Action would have no effect on archaeological resources or historic properties. AHPP concurred in a letter dated August 12, 2025.

The DAF has engaged in consultation with Tribal Nation officials per EO 13175, *Consultation and Coordination with Indian Tribal Governments*; DoD Instruction (DODI) 4710.02, *DoD Interactions with Federally Recognized Tribes*, Department of the Air Force Instruction (DAFI) 90-2002, *Air Force Interactions with Federally Recognized Tribes*.

Copies of all related correspondence are included in Appendix A of the EA.

NEPA also requires public review of the EA before approval of the Finding of No Significant Impact (FONSI) and implementation of the Proposed Action. The Draft EA and Draft FONSI and Finding of No Practicable Alternative (FONPA) are available in electronic form for public review on the 188 WG website at <https://www.188wg.af.mil/>. Written comments should be sent by email to ngb.cca4f.nepacommentsorg@us.af.mil with a subject line of ATTN: Fort Chaffee EA. A copy of the Notice of Availability as it appeared in *[Newspaper]* is included in **Appendix A** of the EA.

7.0 FINDING OF NO PRACTICABLE ALTERNATIVE (FONPA)

Pursuant to EO 11988, *Floodplain Management*, and applicable Air Force guidance, DAFMAN 32-7003 Section 3D - *Floodplains* I have considered all supporting information contained in the attached Environmental Assessment (EA). Based on this review, I find there is no practicable alternative to implementing the proposed action (ditch regrading and utility conduits) within the 100-year (1-percent annual chance) floodplain.

The State of Arkansas contains a substantial proportion of land mapped within the FEMA 100-year floodplain (approximately 22.6 percent) statewide, with Sebastian County having an even greater percentage (approximately 26 percent). Due to the geographic extent of floodplain areas within the region, as well as the floodplain bisecting the only access road (Marietta Church Road) to FCJMTC, avoidance of floodplain impacts is not practicable if water line installation and roadside ditch regrading is proposed to occur.

Alternative Air National Guard locations within Arkansas, including Fort Smith and Little Rock, were not considered, as these locations cannot accommodate the required range facilities without additional land acquisition, which may also occur within designated floodplain areas. Relocation to available out-of-state ranges would introduce substantial travel distances and logistical constraints, adversely affecting mission readiness, training efficiency, and deployment capability. Construction of a new access road to avoid the floodplain was not considered, as the Arkansas Army National Guard maintains control of the property and allows limited DAF access and maintenance only. Therefore, off-site alternatives and alternatives outside of the current project footprint were determined to be impracticable.

The attached EA identifies practicable measures to minimize potential adverse impacts to the floodplain and surrounding environment. No increase to impervious surfaces are anticipated within the floodplain as a result of the proposed actions. Associated stormwater runoff will be addressed through project design measures consistent with applicable stormwater management requirements. The installation's Stormwater Pollution Prevention Plan (SWPPP) will be updated to incorporate the new stormwater management features and associated inspection and maintenance requirements.

In accordance with Section 2. (a)(2)(ii) of EO 11988, the ARANG provided the public with the opportunity to review this FONPA pursuant to the NEPA public participation requirements. The draft CRSC EA and FONSI/FONPA were published in electronic form for public review on the 188 WG website at <https://www.188wg.ang.af.mil/> from [date] to [date]. Additional mitigation measures and best management practices (BMPs) identified during the coordination and permit process will be incorporated as required. Based on the analysis presented in the EA and the implementation of mitigation measures identified in Table 2, the proposed action complies with EO 11988. All practicable measures to avoid and minimize harm to the floodplain have been incorporated.

MARC V. HEWETT, P.E., GS-15, DAF
Chief, Asset Management Division, NGB

8.0 FINDING OF NO SIGNIFICANT IMPACT (FONSI)

This Finding of No Significant Impact (FONSI) is prepared in accordance with the National Environmental Policy Act (NEPA), as amended (42 U.S.C., et seq), the Department of Defense War (DoW) NEPA Implementing Procedures (2026), and DAF NEPA Implementing Procedures (2026). After careful review of the potential effects of the Proposed Action and No Action Alternative, I have concluded that the Proposed Action, described and analyzed as the Preferred Alternative in the Environmental Assessment (EA), would not have a significant impact on the quality of the human or natural environment or generate significant controversy.

The United States Department of the Air Force (DAF) prepared an EA to consider the potential environmental consequences to the human and natural environments associated with a Proposed Action at the Fort Chaffee Joint Maneuver Training Center (FCJMTTC) located in Sebastian County, Arkansas. Public and agency coordination was conducted in accordance with NEPA, DoW, and DAF implementing procedures. Comments received during the EA review period were considered in the decision-making process. The EA also identifies best management practices (BMPs) that would avoid or minimize minor adverse effects resulting from implementing the Proposed Action or alternatives of replacing the existing Razorback Range facilities at the Fort Chaffee Joint Maneuver Training Center (FCJMTTC) with a new, consolidated facility.

The analysis presented in the EA demonstrates that anticipated impacts to resource areas would be negligible to moderate and would not rise to the level of significance, either individually or cumulatively. The Proposed Action would not result in substantial degradation of environmental resources, significant controversy, or substantial uncertainty regarding environmental effects.

All applicable regulatory requirements would be satisfied through the appropriate permitting processes, and BMPs would be implemented to avoid, minimize, and manage potential minor adverse impacts. All BMPs and mitigation measures described in the EA (**Table 3-7**), including Arkansas Army National Guard (ARARNG) procedures, as required per its role as property host, are adopted as part of this FONSI and are enforceable.

Accordingly, the requirements of NEPA have been fulfilled. Based on the analysis presented in the EA, the DAF finds that the Proposed Action will not significantly affect the quality of the human environment, either individually or cumulatively. Therefore, preparation of an Environmental Impact Statement (EIS) is not required and will not be prepared.

MARC V. HEWETT, P.E., GS-15, DAF
Chief, Asset Management Division, NGB