

Chapter 2

Description of Proposed Action and Alternatives

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This chapter describes the proposed actions and alternatives to achieve the vision for the Joint Pacific Alaska Range Complex (JPARC). The proposed actions and alternatives have been structured to modernize and otherwise enhance flight and ground training opportunities and infrastructure, provide additional airspace for military training, enhance the availability of restricted areas to support training, improve range support infrastructure and operations, and modernize and otherwise enhance testing at JPARC. Proposals for improving and expanding the training capacity of JPARC to support flying and ground-based training and exercises are described in this section.

The definitive proposed actions and alternatives, including No Action Alternatives for each proposal, are described in sufficient detail to assess the foreseeable environmental consequences. The programmatic proposed actions and alternatives, including No Action Alternatives for each proposal, include baseline information and available information to assess the foreseeable environmental consequences, but require additional planning, programming, and design. This section also identifies implementation options for each of the objectives in the *JPARC Master Plan, August 2011 (JPARC Master Plan)* that were not carried forward for further evaluation in this environmental impact statement (EIS) after it was determined that they would not meet future training or testing requirements for JPARC.

The actions being proposed are independent of each other and have standalone value for improving training and testing operations. Some projects solely benefit Air Force or Army training, whereas others benefit both or other Services. While full implementation of all of the proposed actions is desired and would result in the greatest training benefit for Airmen and Soldiers, each of the proposals, if implemented alone, would have a positive effect on the modernization and enhancement of JPARC.

Establishing JPARC as a full-spectrum, all-domain joint military testing and training facility would address the testing and training deficiencies and limitations described in Chapter [1.0](#), Purpose and Need for the Proposed Actions.

2.1 DEFINITIVE ACTIONS EVALUATED IN THIS EIS

The following are definitive projects being evaluated in this EIS:

- Fox 3 Military Operations Area (MOA) Expansion / Paxon MOA Addition (Air Force)
- Realistic Live Ordnance Delivery (RLOD) (Air Force)
- Battle Area Complex (BAX) Restricted Area Addition (Army)
- R-2205 Expansion, including the Digital Multi-Purpose Training Range (DMPTR) (Army)
- Night Joint Training (NJT) (Air Force)
- Unmanned Aerial Vehicle (UAV) Access (Army)

For the definitive proposals, the decision makers have enough information to identify discreet impacts, conduct a thorough impact analysis, assess both adverse and beneficial impacts, and identify specific mitigation measures to minimize or mitigate adverse impacts, as may be applicable.

2.1.1 Fox 3 MOA Expansion and New Paxon MOA

As the fifth generation of U.S. Air Force fighters (F-22 and F-35 aircraft) is developed, fielded, and deployed in combat, pilots will need to train in the skills and tactics appropriate for these aircraft within an airspace best configured for such training. Combat conditions have proven that engaging a threat at

low altitudes is a critical tactic for combat success. The airspace environment required to most effectively rehearse this engagement is a lateral area of 180 by 60 nautical miles (NM) with altitudes from 500 feet above ground level (AGL) up to flight level (FL) 600 (60,000 feet above mean sea level [MSL]). Engagements would involve the long axis of the airspace, with threat aircraft maneuvering at low altitudes through terrain at one end and a fifth-generation fighter advancing against the threat from the other end. Both Eielson Air Force Base (AFB) aircraft (taking the role of adversary aircraft) and the Joint Base Elmendorf-Richardson (JBER) aircraft (F-22 Raptors) require access to this airspace; therefore, expanding this training airspace environment, as shown in [Figure 2-1](#), would place it in closer proximity to JBER so as to reduce flight times and distances to this airspace, maximize training productivity within this airspace, and reduce fuel usage.

The proposed alternatives for this action were based on meeting the following requirements and selection criteria:

- The MOA must have a floor of 500 feet AGL.
- The MOA must be large enough for fifth-generation aircraft to conduct effective engagements.
- The MOA must be in a location central to JBER and Eielson AFB.
- The airspace should minimize the interruption of commercial and general aviation traffic.
- The proposed Fox 3 and Paxon MOAs would inhibit instrument flight rules (IFR) traffic in the proposed Paxon MOA during major flying exercises (MFEs). These exercises would close the IFR airways for 2.5 hours twice a day for up to 60 days per year. MFEs are scheduled months in advance, so that any IFR flight could be planned around the military exercise times.

To support the nonhazardous training to be conducted in this proposed airspace (i.e., no live fire or ordnance use), the designated MOA must have a floor no higher than 500 feet AGL, be of sufficient size to allow opposing aircraft to maneuver and engage from multiple, diverse directions, and have adequate radar and radio coverage for effective command and control. A multidirectional axis is essential in replicating a true combat environment and thus making all exercise and routine training mission activities as realistic as possible. This environment must include targets and airspace that allow for multi-axis, all-altitude approaches for dry target bombing runs from FL200 to FL500. Currently, engagements are restricted to a north-south axis only, which limits offensive and defensive tactics and scenarios. Most important, this training airspace must have minimal impacts on all commercial and general aviation air traffic operating within the region. All of these key siting factors were considered in the proposal to expand the existing Fox 3 MOA and establish a new Paxon MOA adjacent to this expanded airspace shown in [Figure 2-1](#) and [Figure 2-2](#) for Alternatives A and E.

2.1.1.1 Proposed Action

The Air Force proposes to expand the Fox 3 MOA and establish a new, adjacent Paxon MOA to provide the vertical and horizontal airspace structure required to more effectively accommodate low-altitude threat and multi-axis mission activities for fifth-generation fighters during JPARC training activities. The expanded airspace would also reduce aircraft transit distances from JBER, thus reducing fuel use while optimizing training opportunities within this airspace.

Use of these MOAs would be included as part of the Special Use Airspace Information Service (SUAIS) that is currently used on a 24-hour basis to inform civilian pilots when the MOAs and restricted areas within central Alaska are being scheduled and used (activated) for conducting planned military operations. This would afford pilots the opportunity to better schedule their flight activities around those times when this airspace is active or otherwise plan their flight profiles around this airspace.

[Table 2-1](#) compares the existing airspace structure with that proposed under each alternative described in this section and shown in [Figure 2-1](#) and [Figure 2-2](#).

Table 2-1. Comparison of Existing Fox 3 MOA with Each Proposed Alternative

MOA	Existing	Alternative A	Alternative E
Fox 3	5,000 feet AGL up to but not including FL180.	Expand Fox 3 MOA to east and south as shown in Figure 2-1 . Stratify expanded Fox 3 MOA vertically into low (500 feet AGL up to but not including 5,000 feet AGL) and high (5,000 feet AGL up to but not including FL180) strata.	Reduced in size from Alternative A proposal with high- and low-altitude strata. See Figure 2-2 .
Paxon	Not applicable.	Establish new MOA east and adjacent to the expanded Fox 3 MOA from 500 feet AGL up to but not including FL180, as shown in Figure 2-1 . Paxon MOA would be stratified vertically into low (500 feet AGL up to but not including 14,000 feet MSL) and high (14,000 feet MSL up to but not including FL180) strata.	Establish new MOA as described for Alternative A with the southern boundary aligned as shown in Figure 2-2 . Paxon MOA would be stratified vertically the same as described for Alternative A.

Key: AGL=above ground level; FL=flight level; MOA=Military Operations Area; MSL=mean sea level.

2.1.1.1.1 Alternative A

AIRSPACE STRUCTURE

Expanded Fox 3 MOA

Alternative A would expand the current Fox 3 MOA boundaries to the south and east as shown in [Figure 2-1](#) and stratify the boundaries into low and high sectors, with the low extending from 500 feet AGL up to but not including 5,000 feet AGL, and the high extending from 5,000 feet AGL up to but not including 18,000 feet MSL (FL180).

New Paxon MOA

The other component of this airspace proposal is to establish a new Paxon MOA to the east of and adjoining the proposed expanded Fox 3 MOA, as shown in [Figure 2-1](#). This proposed MOA would also be stratified into low and high sectors with the low extending from 500 feet AGL up to but not including 14,000 feet MSL, and the high extending from 14,000 feet MSL up to but not including FL180. This MOA would be used in conjunction with the proposed expanded Fox 3 MOA to provide the additional airspace and dry target area sites required for more-realistic training scenarios and thus to more fully support RED FLAG–Alaska.

This proposed MOA, coupled with the Fox 3 MOA expansion and lowered floors, would also expand the capability to perform multiple missions simultaneously and provide greater flexibility for enhanced air-to-ground maneuvers throughout a larger airspace complex. The Paxon MOA would also provide the additional maneuvering airspace needed to conduct air-to-air combat intercept and close air support (CAS) training in conjunction with those air-to-ground activities performed in Restricted Areas R-2202 and R-2205. Improved connectivity and reception of the air combat maneuvering instrumentation (flight data recording system) in the Fox MOAs would markedly improve the communications capabilities needed to support enhanced RED FLAG–Alaska training. SUAIS capabilities and the manner in which this service is provided is outlined in an Federal Aviation Administration (FAA) agreement and Air Force procedures. Any changes to these capabilities relative to existing or proposed airspace uses are appropriately reflected in the FAA agreement and communicated to the public.

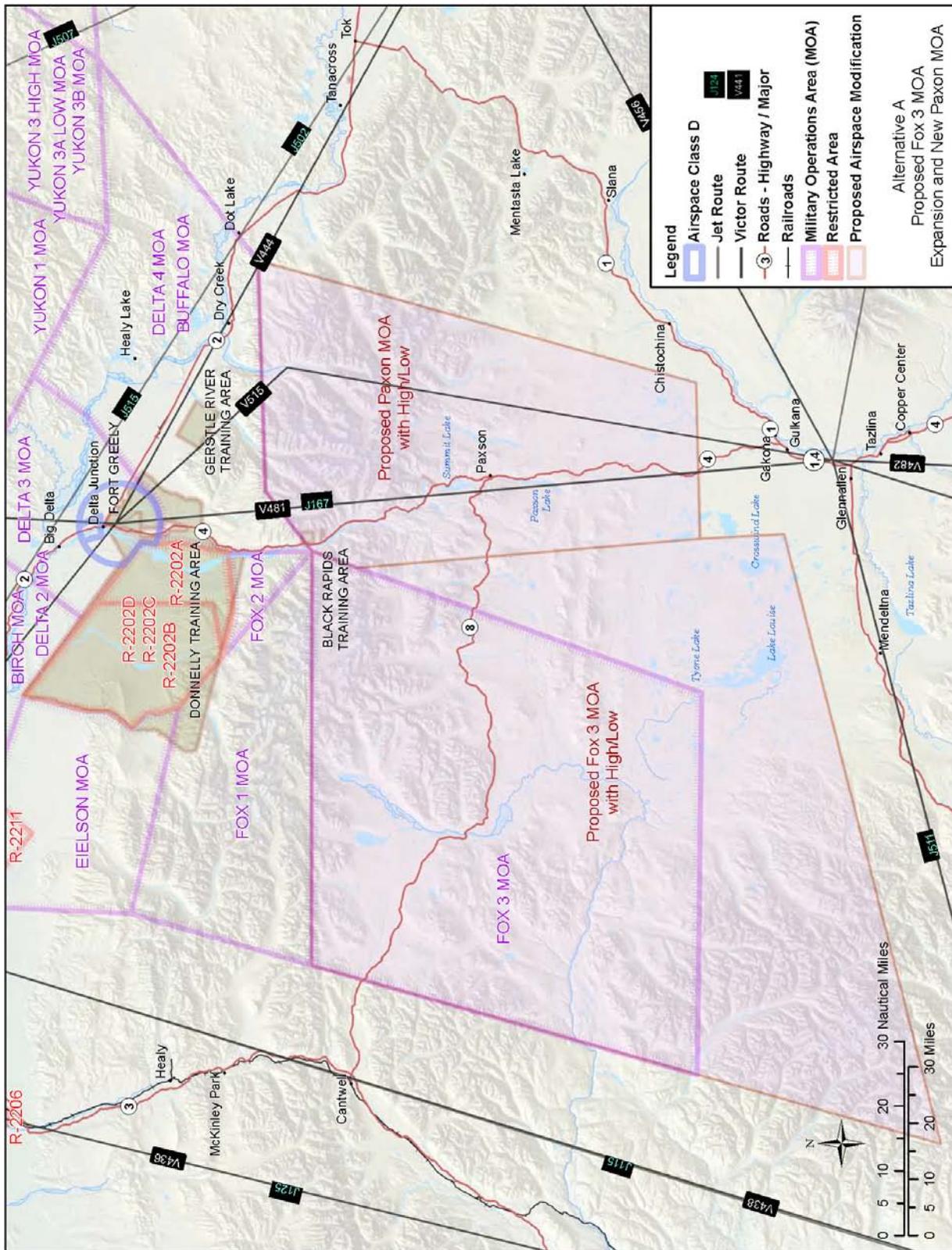


Figure 2-1. Alternative A Proposed Fox 3 MOA Expansion and New Paxon MOA

As noted previously, establishing this proposed airspace between Eielson AFB and JBER would provide an essential middle ground for achieving more-effective flight training missions; it would reduce the need for aerial refueling support, resulting in greater energy-cost savings and more productive training time within this airspace environment.

AIRSPACE USE

Expanded Fox 3 MOA

[Table 2-2](#) contrasts the representative baseline sortie-operations with those estimated for each proposed alternative. A sortie refers to an operational mission conducted by a single aircraft from takeoff to landing while a sortie-operation refers to a flight activity conducted by that single aircraft within a designated airspace area during the sortie mission. Airspace-use tracking typically accounts for an aircraft sortie-operation within each area it operates throughout the course of the overall training mission. These sortie-operation projections are based on anticipated future changes in training/exercise operations, and the likelihood that a good portion of the current JBER training sorties would be relocated from the more distant Stony MOA (approximately 120 NM west of JBER) to the less distant expanded Fox 3 MOA (approximately 60 NM north of JBER). Projected sortie-operations by different aircraft types are further described and discussed in the EIS analyses. This expanded MOA would be activated year-round as needed to support MFEs as well as routine training. Routine training includes all ongoing aircrew qualification and continuation training dictated by Ready Aircrew Program requirements for each aircraft type. Current Fox 3 MOA published times of use are 8:00 a.m. to 6:00 p.m. local time, Monday–Friday and other times by Notice to Airmen (NOTAM). The Fox 3 MOA is also available on weekends between 7:00 a.m. and 10:00 p.m.

[Table 2-3](#) presents the representative baseline listed in [Table 2-2](#) by the aircraft types conducting those sortie-operations within the existing Fox 3 MOA and overlying Air Traffic Control Assigned Airspace (ATCAA), the existing Paxon ATCAA, and the Stony MOA during a typical 1-year period. The Stony MOA is currently used by JBER aircraft but, due to its distance from JBER, it is estimated that about half of the Stony MOA missions would be reallocated to the less distant Fox 3 MOA if the boundaries are expanded as proposed. This representative baseline is inclusive of aircrew training missions, MFEs (RED FLAG–Alaska and NORTHERN EDGE flight operations), and other flight activities that would be conducted within this airspace over a 12-month period. This baseline includes adjustments in sortie-operations resulting from planned reallocation of Stony sorties to the expanded Fox 3 MOA. Appendix D, *Airspace Management*, includes a table (Table D-3) that provides estimated percentages of sortie duration time that those aircraft types typically operate within the different altitudes listed in the table. This altitude distribution information is discussed further in the EIS, as these estimates relate to impact analyses for airspace, noise, air quality, and other resource areas, as appropriate.

Table 2-2. Representative Baseline and Estimated Alternative Sortie-Operations

MOA	Representative Baseline Use ¹	Alternative A Estimated Use ¹	Alternative E Estimated Use ¹
Fox 3	9,877	11,127	11,127
Paxon	Not Applicable	11,127 ²	11,127 ²
Stony A/B	2,499	1,250	1,250

¹ Based on fiscal year 2010 operations data adjusted to account for six annual MFEs, JBER F-22 basing/F-15 drawdown, and anticipated relocation of 50 percent Stony A/B sortie missions to extended Fox 3 MOA under Alternative A.

² Assumes Paxon MOA use would be the same use as the Fox 3 MOA representative use with about half of the sortie-operations being routine training at 14,000 feet MSL and above.

Key: MOA=Military Operations Area.

Table 2-3. Representative Baseline Use of Existing Fox 3 and Stony MOAs/ATCAAs and Paxon ATCAA by Aircraft Type

MOA/ ATCAA	Representative Annual Sortie-Operations by Aircraft Types ¹									
	A-10	AV-8	B-1B	B-2	B-52H	C-130	C-17	E-3	E-767	F-15
Fox 3	645	253	1	54	113	133	53	99	29	1,191
Paxon ATCAA	645	253	9	50	113	133	48	103	29	764
Stony	0	0	0	0	0	0	4	0	0	539
MOA/ ATCAA	F-16	F-16CJ	F-22	F-18	GR1	KC-10	KC-130	KC-135R	KC-767	Total
Fox 3	3,599	265	2,717	0	275	1	16	413	24	9,877
Paxon ATCAA	2,736	268	1,005	0	275	5	16	509	24	6,982
Stony	0	0	1,942	8	0	0	0	6	0	2,499

¹ Based on adjusted fiscal year 2010 operations data noted in [Table 2-2](#).

Key: ATCAA=Air Traffic Control Assigned Airspace; MOA=Military Operations Area.

Throughout Alaska’s training airspace, chaff and flares are used in air combat exercises as countermeasures to air- or ground-based threats. During training, an MFE aircraft sortie may deploy up to 14 bundles of chaff and four flares. Data collected from 2006 to 2008 show that a typical 10-day MFE uses 4,000 to 7,000 bundles of chaff and 1,000 to 2,000 flares. For the purpose of this proposal, a 10-day MFE is estimated to use 7,000 bundles of chaff and 1,800 flares within the overall MFE airspace.

Paxon MOA

The proposed use of the Paxon MOA would be the same as described for the expanded Fox 3 MOA with both MFE and routine training, with the exception that the routine training sorties would be limited to the high-altitude sector only (14,000 feet MSL and above). The low sector would be used only for MFEs, which are conducted up to six times annually and no more than 60 days per year. MFEs would use the high sector as well.

As currently occurs in the existing Special Use Airspace (SUA), MFE activities would be conducted in low/high sectors during two 1.5- to 2.5-hour blocks each weekday, with one MFE session in the morning and another in the afternoon. In practice, airspace used for the MFEs would typically be active in 1.5-hour blocks but could be scheduled in blocks up to a maximum of 2.5 hours to allow for aircraft launch, marshalling, and other sortie events that may require that longer period. During a typical MFE, there may be 100 single-aircraft sorties by a variety of aircraft types. Actual usage could vary depending upon the aircraft participating in an MFE and the specific training objectives. Unlike MFEs, a lower number of routine training sorties would be conducted within the Paxon high sector throughout the year for an average of 240 flying days. The daily times of use would be similar to those described for MFEs but with fewer aircraft.

The use of training chaff and flares during MFEs would be extended into the proposed Paxon MOA airspace. Their use would not increase within the overall airspace; rather, it would simply be distributed over a larger expanse of airspace proposed for the Paxon MOA.

GROUND/INFRASTRUCTURE ASSETS

In support of the new airspace projected for the Paxon MOA, it has been proposed that additional dry targets be integrated into the tactically relevant JPARC threat-air defense system. Pilots use dry targets to practice bombing tactics without the release of actual ordnance. According to plans, the dry target sites would be temporary and would not require permanent supporting infrastructure such as fencing, pads, power poles, hard lines, or permanent fixtures. They would be in the form of nonfunctional threat

vehicles and trailers approved by the Alaska Department of Transportation, and would be placed within MOA airspace such that they could be approached from a full 360 degrees. Additional ground support would include unmanned air defense threat emitters on trailers and microwave and ground/air very-high-frequency/ultra-high-frequency radios. The dry target ground support equipment would be located on lands currently withdrawn for exclusive military use or other Federal and State lands within the MOA boundaries.

2.1.1.1.2 Alternative E (Preferred Alternative)

Alternative E was added in consideration of public and agency scoping comments, as described below and analyzed in Chapter 3.0. Alternative E is the Preferred Alternative because it will still provide the Air Force with the ability to support multi-axis capability for fifth generation fighter aircraft to train at low altitudes in an area proximate to both JBER and Eielson AFB for optimal training efficiency, while decreasing impacts to airspace and local communities.

AIRSPACE STRUCTURE

Expanded Fox 3 MOA and New Paxon MOA

The overall airspace structure proposed under this alternative for the Fox 3 MOA expansion and the Paxon MOA would be smaller in size than proposed for Alternative A with the southern Fox 3 boundary moved approximately 20 NM to the north as shown in [Figure 2-2](#). This would result in an airspace reduction of approximately 1.164 million acres (1,820 square miles). The altitude structure would be the same for each of the Fox 3 and Paxon MOAs as proposed for Alternative A. MFEs would be conducted in both the Fox 3 and Paxon high/low sectors while routine training would be conducted within the Fox 3 high/low sectors but limited to 14,000 feet MSL and above in the Paxon MOA. This alternative would provide a greater separation from the airways, jet routes, recreational areas (to include Lake Louise and Wasilla-Palmer) and airfields located south of the proposed airspace boundaries.

The representative baseline and estimated aircraft sortie-operations and projected periods of use for both the expanded Fox 3 MOA and new Paxon MOA would be the same as described under Alternative A and listed in [Table 2-2](#).

GROUND/INFRASTRUCTURE ASSETS

Additional dry targets and support equipment would be the same as under Alternative A.

2.1.1.2 No Action Alternative

There would be no changes to the current Fox 3 MOA configuration and altitudes or proposed addition of the Paxon MOA under the No Action Alternative. This would not satisfy the requirement for multi-axis, low-altitude threat training that is needed to effectively train with fifth-generation fighter aircraft. The No Action Alternative would continue to require distant travel, which would negate opportunities to minimize fuel use while maximizing sortie training time in the expanded airspace being proposed.

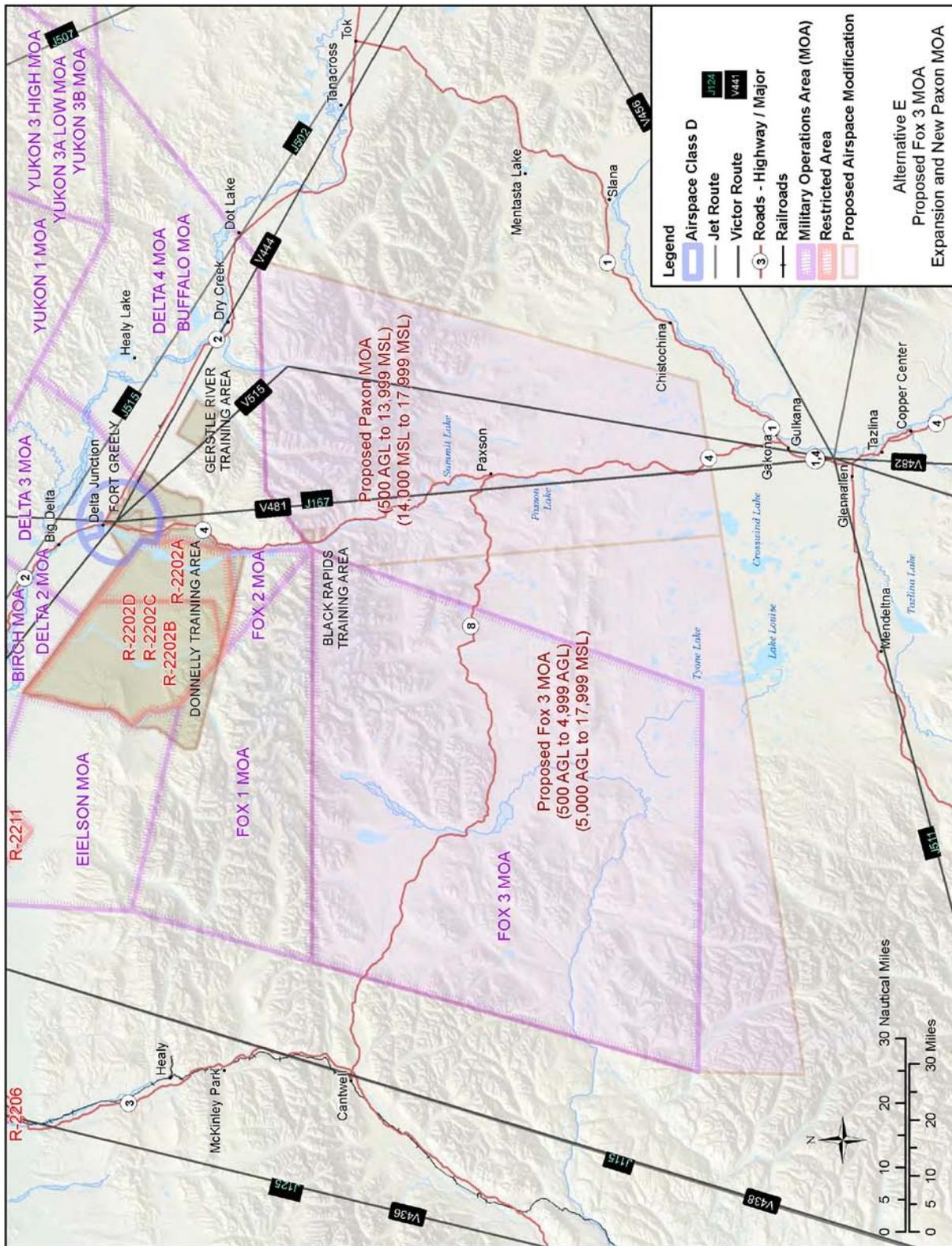


Figure 2-2. Alternative E Proposed Fox 3 MOA Expansion and New Paxson MOA

2.1.1.3 Alternatives Considered But Not Carried Forward

Three alternatives were presented during the scoping process that were determined not provide the lateral and vertical airspace structure required to fully achieve the stated objectives for expanding the current training airspace environment. Therefore, these alternatives were not carried forward. As indicated previously, Alternative E was added and analyzed as another viable option for achieving the stated objectives for this proposal.

- Alternative B: This alternative included only the Fox 3 MOA expansion as proposed for Alternative A without the proposed new Paxon MOA.
- Alternative C: This alternative included the Fox 3 expansion as proposed for Alternative A without the lower altitude sector below 5,000 feet AGL.
- Alternative D: This alternative proposed to keep the Fox 3 MOA boundaries the same as they currently exist with the same high and low altitude strata as proposed for Alternative A.

2.1.2 Realistic Live Ordnance Delivery

2.1.2.1 Proposed Action

The proposed Air Force action is to establish a realistic air-to-ground training environment that would accommodate live and inert ordnance delivery. As the technology for new weapons systems continues to evolve, the ground footprint for ordnance delivery continues to expand, thus creating the need for larger airspace and ground control areas in which to safely conduct this training. The Joint Direct Attack Munition (JDAM), both live and inert, and Small Diameter Bomb (SDB), live only, have the largest footprints; therefore, they would serve as the basis for planning the target locations and airspace needed to fully support live ordnance delivery using these systems. Live and inert ordnance activities would be executed as part of both individual pilot training and joint training with other air and ground units, including MFEs. There would be an additional training benefit from ground controller participation in the operation, even if the training is for a single pilot.

For air-to-ground ordnance delivery training to be as realistic as possible, pilots must be able to use a multi-axis approach to the range target areas. This would require use of a MOA or a restricted area in which aircraft can safely maneuver and conduct ordnance delivery within a specified weapon danger zone (WDZ) footprint. [Table 2-4](#) presents the representative baseline requirements for RLOD.

Table 2-4. Realistic Live Ordnance Delivery Requirements

MDS	Ordnance	Delivery Speed	Delivery Altitude
F-22	GBU-32 (JDAM)	1.5 M	FL400 – FL500
F-22	GBU-39 (SDB)	1.5 M	FL400 – FL500
F-15E	GBU-39 (SDB)	450–550 KTAS	FL200 – FL350
F-15E	GBU-15	450–550 KTAS	1,000 feet AGL – FL350
F-15E	AGM-130	450–550 KTAS	1,000 feet AGL – FL350
F-15E/16/18	GBU-10, -12, -16, -24, -27 (LGB)	450–550 KTAS	FL200 – FL350
F-15E/16/18	GBU-31, -32, -38 (JDAM)	450–550 KTAS	FL200 – FL350

Key: AGL=above ground level; AGM=air-to-ground missile; FL=flight level; GBU=Guided Bomb Unit; JDAM=Joint Direct Attack Munition; KTAS=knots true airspeed; LGB=laser guided bomb; M=mach; MDS=mission design series; SDB=Small Diameter Bomb.

F-22 aircrews are required to drop two live and two inert bombs annually. For the purposes of this EIS’s impact assessment, the following quantities are representative of those that would be released from F-22s:

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- 200 live SDBs at 250 pounds (lb) each
- 200 JDAMs (e.g. 100 inert and 100 live) at 1,000 lb each

Key ground-based siting considerations include the location of targets within an existing restricted area large enough to contain the release point and the required WDZ for proposed weapons delivery for live and inert ordnance from the required run-in headings. For tactical relevance, target sets must be integrated into the existing Integrated Air Defense System; accordingly, for live SDB and Guided Bomb Unit (GBU)-32 ordnance, targets must be situated within existing duded or permanently bounded impact areas, while inert GBU-32 ordnance may use existing or temporary impact areas within a specified JPARC training area. The inert GBU-32 ordnance does not contain an explosive charge and consists of concrete within a metal casing, guidance fins, a battery, and a guidance kit. Temporary impact areas on Army-managed lands require Army approval. Temporary impact areas also require periodic cleanup and removal of debris from the use of inert ordnance.

This airspace would also provide for UAV access, including a loiter area clear of the run-in lines for the targets. The target set requires an approximately 2-acre site within existing JPARC training area lands already used as a live or inert ordnance impact area. The infrastructure needed for live ordnance drops would require the use of existing targets in the Oklahoma Impact Area in Donnelly Training Area (DTA), scoring, and maintenance access. Power for scoring may be provided by generators or power lines, and communications may be transmitted by microwave or fiber optic cable.

The proposed alternatives for this action were based on meeting the following requirements and selection criteria:

- The Air Force is the lead agency for this proposed action and would manage the process for expanding the airspace and ground surface area required for the restricted area in close coordination with the Army and the Cold Regions Test Center (CRTC). They would coordinate on those actions required to manage preparing, negotiating, and securing potential real property instruments required to control public access within the proposed expansion of the restricted area for this proposal, including potential special use permits, land agreements, memoranda of understanding (MOUs), easements, leases, or other conveyances with non-Department of Defense (non-DoD) land owners.
- The CRTC is the requesting agency for restricted airspace that extends or abuts R-2202, and the 354th Fighter Wing (354 FW) is the requesting agency for any restricted airspace that abuts or extends R-2211.
- CRTC will retain jurisdiction of R-2202, and scheduling/coordination of the use of that area will continue to be managed through DTA Range Control.
- As the proponent and the current restricted airspace controlling agency, both 354 FW and CRTC will coordinate responsibilities associated with this proposed action. The 354 FW and CRTC will include the Installation Range Office and the DTA Range Office during any deliberations affecting R-2202.
- The anticipated schedule for ordnance delivery training would be the same as currently exists for R-2202 use for 90 to 150 days annually at a maximum of 5 hours daily, and would include the RED FLAG–Alaska flying periods.
- The proposed expansion of existing restricted area for this proposed action would require the acquisition of new restricted airspace to the ground surface area in areas that are not currently under DoD jurisdiction, as shown on [Figure 2-3](#) for Alternative A and [Figure 2-5](#) for Alternative B. This is based on the need for DoD to have control of the airspace and ground

surface area within the expanded restricted area. The additional restricted area would also be subject to safety controls necessary to exclude nonparticipating persons and aircraft from the WDZ when ordnance delivery training is taking place in the range training area and the associated air and ground surface space are active.

- The restricted area and the adjoining MOA would require a wide range of run-in headings.
- Targets within a restricted area require an approximately 2-acre site to contain the ordnance after impact and the maximum WDZ for the representative weapons to be delivered from all release points and run-in headings.
- Targets must be located within existing duded impact areas where live ordnance use is currently permitted.
- Inert targets can be located within an existing impact area or a temporary impact area within specified JPARC training areas.
- The target site would be integrated into the Integrated Air Defense System.
- The target set would be located at a flying distance from JBER and Eielson AFB to reduce transit time and maximize training opportunities.
- The land and airspace would be available for a reasonable number of days per year so as not to conflict with competing mission or user requirements.
- Target sets would be located to minimize impacts on current noise-sensitive areas and air traffic routes.
- Target locations for live ordnance would be able to support the future deployment of the SDB Increments I and II (SDB I and II) from the required altitudes and speeds.
- Air Force MFEs would not take place in September of each year to avoid impacts on hunting seasons in DTA.

2.1.2.1.1 Alternative A (Preferred Alternative)

Alternative A alternative was selected as the Preferred Alternative because it provides the Air Force with the capability to drop ordnance from fifth-generation fighter aircraft from realistic delivery profiles with the addition of mitigations to avoid and minimize land use and access impacts. This alternative would enable the use of live and inert ordnance for RLOD training and exercises.

The live ordnance component proposes the use of the existing targets in an existing duded impact area in the Oklahoma Impact Area within R-2202. This would require the expansion of the R-2202 restricted area to the west of DTA to include the use of non-military land, to encompass the airspace and underlying lands required for the larger GBU-32 and SDB footprints.

The inert component of Alternative A proposes to establish (1) a temporary impact area and target in northwest DTA in Training Area (TA) 544 for new run-in headings, release points, and hazard zones from JBER to the south and (2) a temporary impact area and target in southeast DTA in TA 533 for new run-in headings, release points, and hazard zones from Eielson AFB to the north, as shown in [Figure 2-4](#). The proposed new targets would not, however, be located within an existing DTA impact area, but would provide for RLOD training with only inert GBU-32 ordnance while staying within the existing R-2202 restricted area in DTA. Targets, such as CONEX boxes, would be within a flying distance from JBER and Eielson AFB, so as to reduce transit time, reduce aircraft fuel use, and maximize training opportunities.

AIRSPACE STRUCTURE

The current configuration and altitude stratification for R-2202 A, B, C, and D are as described in [Table 2-5](#) and shown in [Figure 2-3](#). R-2202 extends from the surface over controlled lands to an unlimited ceiling (R-2202 D). As noted, the area is subdivided such that each segment can be activated, as needed, to support the altitudes required for the different training activities and ordnance deliveries. This alternative proposes that the existing R-2202 be expanded to the west, as shown in [Figure 2-3](#), to encompass the weapons footprints and altitudes up to the unlimited ceiling of R-2202 D. The altitudes needed for RLOD would depend on specific requirements for the ordnance and aircraft types and the delivery profiles reflected in [Table 2-4](#). The proposed expansion would provide the optimum additional restricted airspace necessary to accommodate the safety footprints of the ordnance destined for use within the Oklahoma Impact Area.

Table 2-5. Description and Representative Baseline Annual Use

Airspace Designation	Altitudes	Total Annual Sorties	Annual Days/Hours of Use	Controlling/Scheduling Agency
R-2202 A	Surface up to but not including 10,000 feet MSL	3,489	265/2,974	FAA, Anchorage ARTCC, USARAK, CRTC, Donnelly Training Area
R-2202 B	Surface up to but not including 10,000 feet MSL	3,489	263/2,861	
R-2202 C	10,000 feet MSL – FL310	3,489	226/2,316	
R-2202 D	Above FL310, ceiling unlimited	3,489	224/2,311	
R-2211	Surface to FL310	1,637	170/410	FAA; Fairbanks Approach Control; Air Force, 354th Fighter Wing, Eielson Air Force Base
Eielson MOA	100 feet AGL up to but not including FL180	7,042	215/688	FAA; Fairbanks Approach Control; Air Force, 354th Fighter Wing, Eielson Air Force Base

Key: AGL=above ground level; ARTCC=Air Route Traffic Control Center; CRTC=Cold Regions Test Center; FAA=Federal Aviation Administration; FL=flight level; MOA=Military Operations Area; MSL=mean sea level; USARAK=U.S. Army Alaska.

AIRSPACE USE

R-2202 is currently used by fighter, bomber, and helicopter aircraft for training in CAS, air-to-ground aerial gunnery, bombing, unmanned aerial reconnaissance, and air-to-air combat. R-2202 is also used to support small arms training; direct and indirect fires; air-to-surface/surface-to-surface laser operations; explosive ordnance disposal; mortars; tube-launched, optically-tracked, wire-command data link, guided missiles (TOWs); artillery; parachute operations; assault landings; and unmanned aircraft system (UAS) reconnaissance and surveillance. [Table 2-5](#) includes a description and data on the representative baseline use of this restricted area. Projected use of this airspace for RLOD may include all types of fighter aircraft. Currently, the F-22 is the only aircraft using GBU-32s, while the F-15E is the only aircraft currently using SDBs. F-22 pilots are required to drop two live and two inert bombs annually. Eventually, most fighter-type aircraft will be using this ordnance for both local unit training and MFEs.

2.0 – Description of Proposed Action and Alternatives
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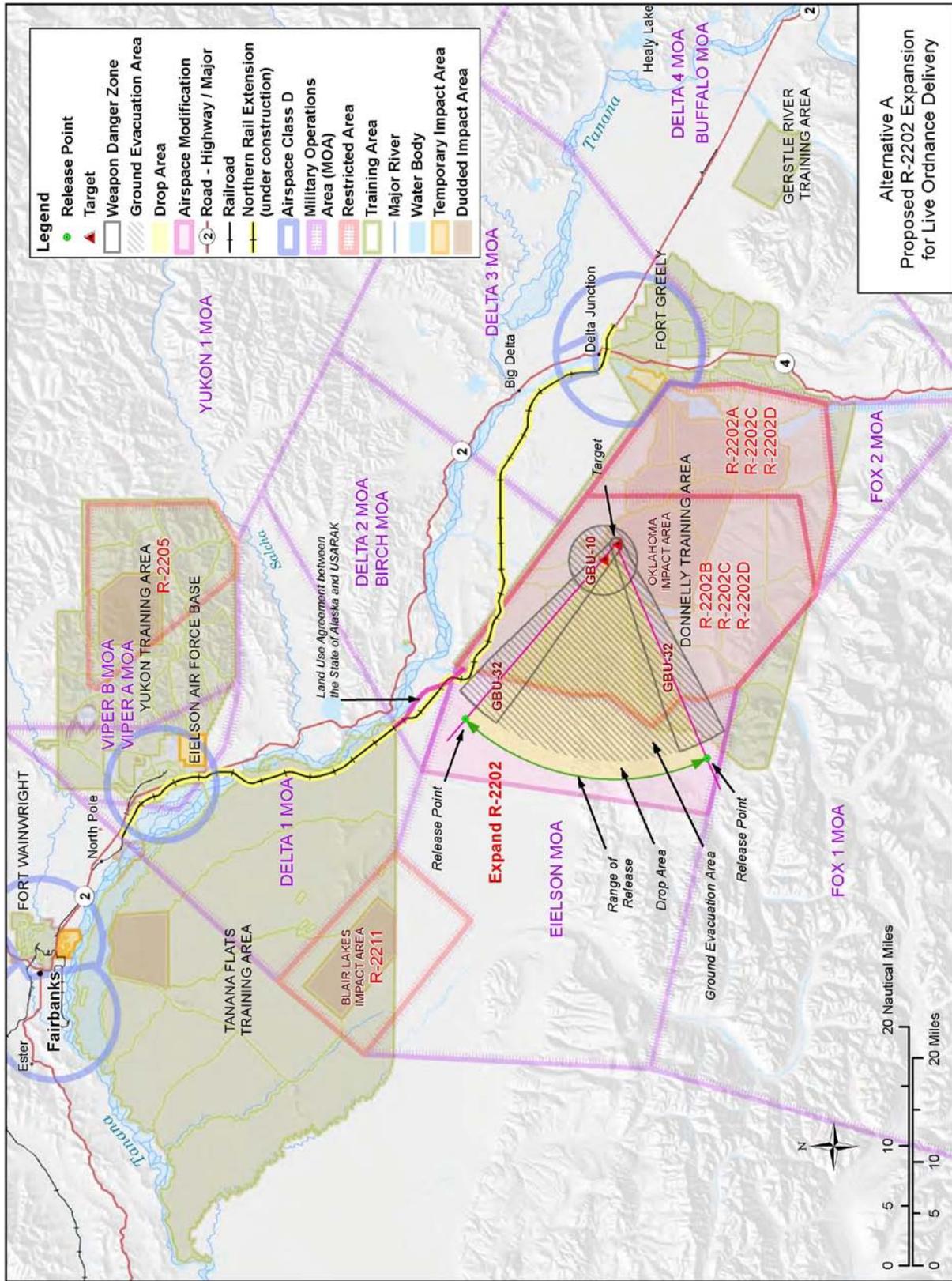


Figure 2-3. Alternative A Proposed R-2202 Expansion for Live Ordnance Delivery

A majority of the annual sortie-operations in R-2202 were conducted by fighter aircraft, with the F-22 and F-15E accounting for 70 and 506 operations, respectively. Of the ordnance types listed in [Table 2-4](#), 149 live deliveries were made from R-2202 during fiscal year 2009. These figures constitute a general estimate of the number of live GBU-32 and SDB deliveries likely to occur within the expanded restricted area proposed under this proposed action. The proposed airspace is scheduled for use Monday through Friday, 7:00 a.m. to 6:00 p.m., with other times stipulated by NOTAM. These activities would be conducted up to 170 days annually, with a maximum duration of 4 to 5 hours daily, depending on mission requirements.

The airspace for inert ordnance would be used in the same manner as with live ordnance, with the key exception that only inert ordnance such as GBU-32 would be dropped on the proposed new targets in TA 544 for south run-ins and in TA 533 for north run-ins.

It is noted also that supersonic flight operations would not be permitted in the expanded area of R-2202 at altitudes at which supersonic operations are not already permitted. Currently fighter aircraft are allowed to fly supersonic speeds at altitudes greater than FL300 without a special waiver. As a result, there is no proposed change from current operations.

GROUND-BASED USE

The existing targets in the northwest area of the Oklahoma Impact Area would be used for the proposed action, and the underlying land would be used as a hazard area in support of the western expansion of R-2202 for the WDZs. Due to the hazardous nature of ordnance delivery, the ground evacuation area shown in [Figure 2-3](#) will need to be free of all personnel not participating in military operations.

For the proposed north-south run-in headings targets would be located within DTA-West. The inert component requires the use of proposed new target areas in DTA TA 544 and in DTA TA 533 for inert GBU-32 ordnance delivery. The proposed new targets in TAs 544 and 533 would be classified as temporary impact areas and approximately 1 to 2 acres in size. They would not be located within the boundaries of any existing DTA impact area, given the requirements to meet RLOD GBU-32 run-in and release point requirements to remain within the existing R-2202 boundaries.

Final siting of targets would be according to established procedures used by U.S. Army Alaska (USARAK) and the U.S. Army Garrison Fort Wainwright, Alaska (USAG-FWA) Environmental Division working with the Air Force to select a suitable location while also considering a range of environmental, operations, and land use constraints. The process would employ siting criteria identified in [Section 3.2.8.4](#) to minimize impacts on wildlife and vegetation as well as appropriate National Environmental Policy Act (NEPA) review and documentation.

2.1.2.1.2 Alternative B

Alternative B is basically an expansion of Alternative A. Alternative B adds the use of the Blair Lakes Impact Area in R-2211 of the Tanana Flats Training Area (TFTA) to the northwest of R-2202 of the DTA. The Blair Lakes Impact Area would provide for the use of inert ordnance only, given its current use by the Air Force, as well as its current configuration and hazard zone safety requirements. The use of both DTA and TFTA would provide the Air Force with the maximum capability and capacity to conduct RLOD training and exercises for Air Force fifth-generation fighters.

2.0 – Description of Proposed Action and Alternatives

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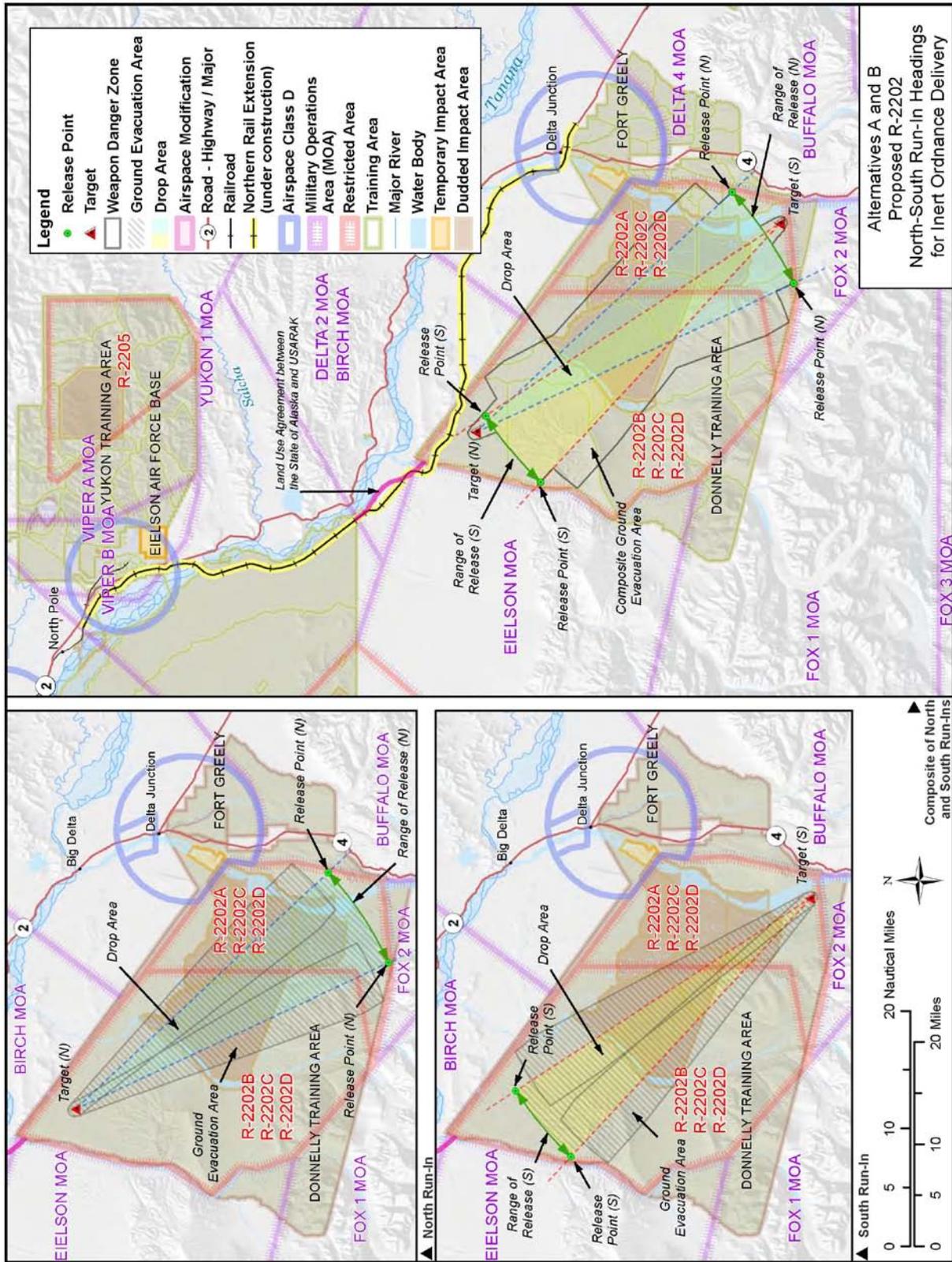


Figure 2-4. Alternatives A and B Proposed R-2202 North-South Run-In Headings for Inert Ordnance Delivery

AIRSPACE STRUCTURE

Under this alternative, live ordnance delivery would be conducted on existing targets in the Oklahoma Impact Area, and inert ordnance delivery would be conducted in the Blair Lakes Impact Area, requiring a proposed new restricted area linking R-2211 and R-2202. This proposed configuration is depicted in [Figure 2-5](#). An unlimited ceiling altitude is proposed for the linking restricted area, as this is necessary to support deliveries of the higher-profile live-fire ordnance listed in [Table 2-4](#).

AIRSPACE USE

The description and use of R-2202 are as discussed for Alternative A and shown in [Figure 2-5](#). Training activities are currently conducted in R-2211 by fighter, bomber, helicopter, and cargo aircraft and include air-to-ground aerial gunnery, bombing, air combat training, basic fighter maneuvers, air combat maneuvers, intercept training, low-altitude air-to-air training, low-altitude step-down training, and simulated low-altitude surface attack tactics. Representative figures on the annual baseline use of R-2211 are listed in [Table 2-5](#).

Use of this airspace for RLOD with GBU-32 ordnance could be bidirectional, involving use of the Oklahoma Impact Area for live and inert ordnance delivery and the Blair Lakes Impact Area for inert ordnance delivery. The use of SDBs, which is only a live ordnance type, can only be dropped in the duded area of the Oklahoma Impact Area, as noted under Alternative A.

As discussed under Alternative A, based on current use of R-2202 for live GBU-type ordnance, it is estimated that live deliveries of GBU-32 and SDB-type ordnance could be up to 400 deliveries annually by the different aircraft types conducting these training exercises. Formal R-2211 Air Force utilization reports for fiscal years 2009 and 2010 indicate that no inert GBU-32 ordnance was used on the Blair Lakes Impact Area, given the lack of restricted area required to drop GBU-32 ordnance.

GROUND-BASED USE

Ground-based use would be the same as Alternative A with the addition of the Blair Lakes Impact Area targets for inert ordnance delivery. Due to the hazardous nature of ordnance delivery for both live and inert rounds, the ground access restriction area shown in [Figure 2-5](#) would need to be free of all personnel not participating in military operations.

2.1.2.2 No Action Alternative

The No Action Alternative would involve not expanding the footprint, associated WDZ, and hazard areas for ordnance delivery or the use of ordnance requiring an expanded footprint, such as the SDB, which is a critical element of the proposed JPARC full-spectrum and air-ground domain training requirements.

2.0 – Description of Proposed Action and Alternatives
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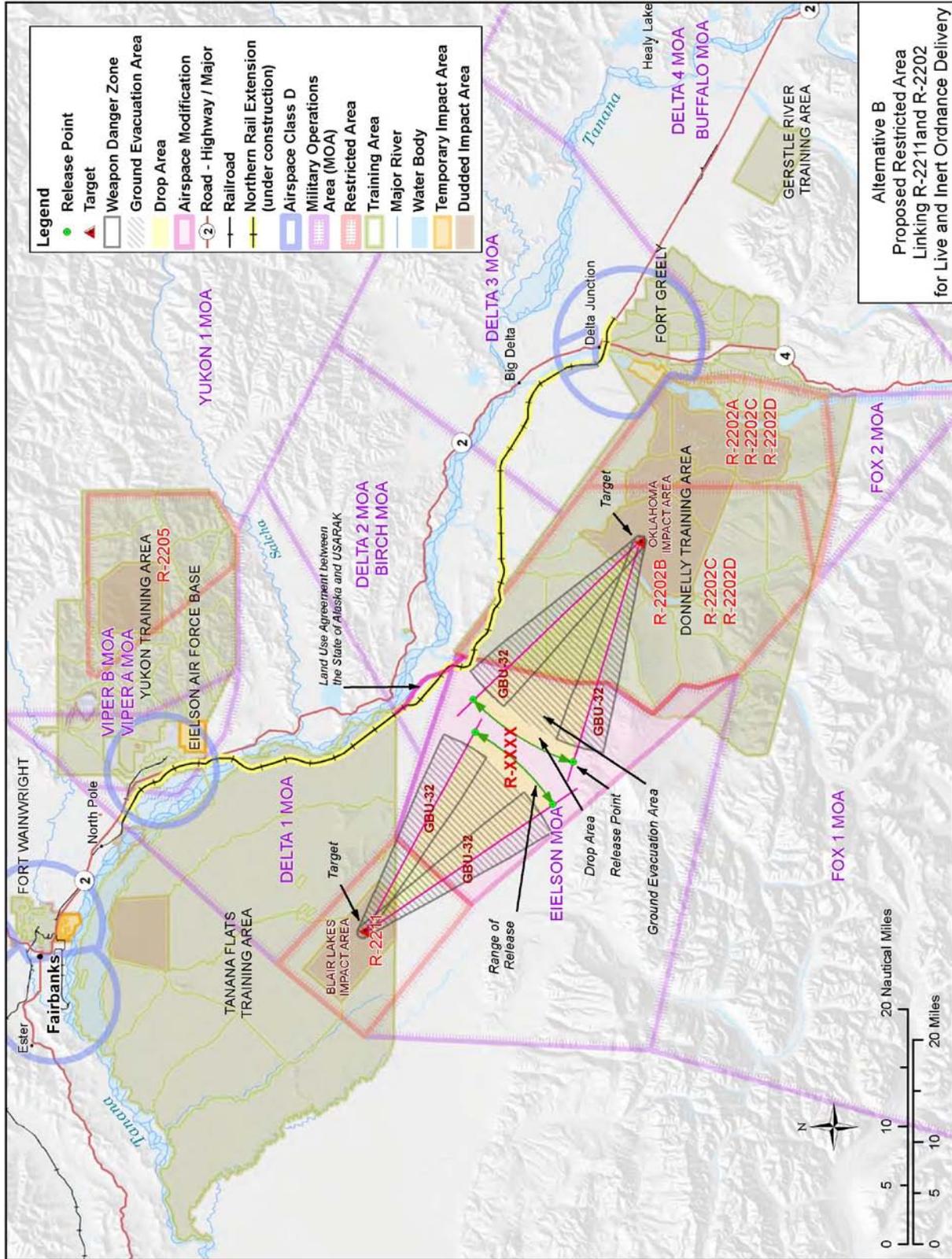


Figure 2-5. Alternative B Proposed Restricted Area Linking R-2211 and R-2202 for Live and Inert Ordnance Delivery

2.1.2.3 Alternatives Considered But Not Carried Forward

The following alternatives were examined during the master planning and scoping process but were not carried forward for further consideration because they did not adequately meet the selection and requirements criteria listed in Section [2.1.2.1](#):

- Establish weapons corridors through the Eielson MOA and overlying ATCAA to provide two protective pathways for live ordnance use within the Oklahoma Impact Area. This alternative would have required the designation of a special airspace where operations and air traffic rules would have to be authorized and prescribed by the FAA.
- Establish a new target area north of the Oklahoma Impact Area outside DTA for GBU-32 approaches within TA 546, and use existing targets in the Oklahoma Impact Area for all other ordnance. This would require new impact areas and would not support a SDB.
- Use existing targets in the Yukon Training Area (YTA) and expand R-2205 eastward and adjust the floor altitude. This alternative would provide limited run-in headings because of public and private lands within this area.

2.1.3 Battle Area Complex Restricted Area Addition

2.1.3.1 Proposed Action

The Army's proposed action alternatives propose that a new restricted area be established over the BAX area within DTA-East. This airspace is proposed to be of sufficient area to encompass hazardous activities and weapons footprints for those types of munitions and ordnance to be used in this area. To fully support more realistic joint training at the BAX, the action alternative requires additional restricted area.

The BAX is used to train and test the Stryker Brigade Combat Team (SBCT) and infantry brigade combat team (IBCT) crews, sections, platoons, companies, and dismounted infantry squads on the skills necessary to detect, identify, engage, and defeat stationary and moving infantry and armor targets in a tactical arrangement in both open and urban terrain environments. This complex also supports tactical live-fire operations independently of, or simultaneously with, supporting vehicles in free maneuver. Company Combined Arms Live-Fire Exercises (CALFEX) may also be conducted on this facility. This complex accommodates training with subcaliber and/or training devices. A Convoy Live Fire route would be included, with the use of qualification/tactical trails.

The Combined Arms Collective Training Facility (CACTF) is a training facility designed to conduct multiple unit, full-spectrum operations (FSO) training up to battalion task force levels. The CACTF is a critical component of the proposed action, as it replicates an urban environment, and the facility consists of urban sprawl, which includes buildings, roads, alleys, parking areas, underground sewers, parks, athletic fields, and a command and control building. The CACTF is designed to support heavy and light infantry, armor, artillery, and aviation positioning and maneuver. The CACTF accommodates force-on-force (FOF) and force-on-target (FOT) training. Units can use enablers such as UAVs for surveillance or helicopter support for air assault operations (repelling out of a helicopter). This training is invaluable to deploying Soldiers by creating similar conditions found in hostile urban environments. CACTF home station training allows Soldiers to conduct important after-action reviews (AARs) to identify what went right and what needs correction, thus increasing survivability.

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In accordance with Army Technical Circular 25-8, Training Ranges, May 2010, the Army-wide standard for range availability is 242 days. This number is determined by subtracting all weekends (104 days) and Federal holidays (10 days)—to include an additional 9 days for range maintenance/inclement weather. Training schedules for tenant and regional units will impact range availability and must be considered by range managers. The following tables prepared by USARAK provide information on units, unit activity levels, and unit echelons to be used to achieve BAX and CACTF training requirements. It is noted that this information would be the same as or similar to that to be used for the Expansion of Restricted Area R-2205 in Section 2.1.4 below.

Table 2-6. Minimum Number of Days Required to Train USARAK Units to Standard on a Battle Area Complex

Military Units	Number of Companies	×	Number of Training Iterations per Company	×	Hours per Training Iteration	÷	Hours of Range Availability per Day	=	Total Days
172 nd Infantry SBCT	13	×	8	×	8	÷	16	=	52
4-25 th ABCT	11	×	8	×	8	÷	16	=	44
Number of Days Required for Retraining Opportunities ¹									10
Minimum Number of Days Required to Train USARAK Units to Standard on a BAX									106

¹ An additional 10 percent of the total training days required for each unit is added to the total to account for retraining requirements necessitated by unsuccessful training events.

Key: ABCT=Airborne Brigade Combat Team; BAX=Battle Area Complex; SBCT=Stryker Brigade Combat Team; USARAK=U.S. Army Alaska.

Actual utilization of the CACTF is expected to be similar to the BAX. Units would likely use the CACTF when they are training at the BAX in order to efficiently expend funding and equipment for training. However, unforeseen adjustments to the number of utilization days to accommodate training requirements may still occur at the CACTF.

Table 2-7. Maximum Number of Battle Area Complex Utilization Days

Military Units	Number of Units	×	Number of Training Iterations per Unit	×	Hours per Training Iteration	÷	Hours of Range Availability per Day	=	Total Days
172 nd Infantry SBCT Company	13	×	8	×	8	÷	16	=	52
4-25 th ABCT Company	11	×	8	×	8	÷	16	=	44
Alaska Army National Guard Company	9	×	8	×	8	÷	16	=	36
172 nd Infantry SBCT Cavalry Section	24	×	16	×	2	÷	16	=	48
4-25 th ABCT Cavalry Section	18	×	16	×	2	÷	16	=	36
Number of Days Required for Retraining Opportunities ¹									22
Maximum Number of BAX Utilization Days									238

¹ An additional 10 percent of the total training days required for each unit is added to the total to account for retraining requirements necessitated by unsuccessful training events.

Key: ABCT=Airborne Brigade Combat Team; BAX=Battle Area Complex; SBCT=Stryker Brigade Combat Team.

Table 2-8. Unit Levels by Frequency of Use

Echelon	Frequency of Use
Brigade	Annual
Battalion	Semi-Annual
Company	Quarterly
Platoon	Quarterly
Squad	Quarterly
Individual	Quarterly

A typical training event would last for 15 days. The actual 15-day event consists of 10 actual on-the-range training days, beginning and ending with 2 days of travel and preparation. An additional day is typically added in the middle of the training event to allow the unit to reset for further training operations. A typical training day is 16 hours. This training day consists of both daytime and nighttime operations. Unit commanders have the authority to train and deploy in smaller-sized elements dependent on training objectives to be met.

2.1.3.1.1 Alternative A

Under Alternative A, a new restricted area would be established over the BAX and the CACTF in DTA-East to provide the protective airspace required for hazardous flight activities and ordnance use in this training environment. The size and configuration of this proposed restricted airspace must be of sufficient dimensions to encompass these hazardous activities and the weapons footprints for those types of ordnance to be used within this area. The restricted area proposed under this action alternative would support the need for more realistic joint training at the BAX.

The proposed action would allow the expansion of ordnance usage up to and including 155-millimeter (mm) howitzer inert rounds. These operations may be conducted in another impact area while being controlled from the BAX.

The restricted area must be of sufficient size over the BAX to accommodate the hazardous air and ground activities and weapons safety footprints required for training with the munitions and ordnance types listed in [Table 2-9](#). All munitions are planned to be inert. It is noted that these requirements are also applicable to the proposed action to expand R-2205 to include the DMPTR, as described in Section [2.1.4](#).

The munitions systems for CACTF, which involve Battalion Level Operations, include the following:

- Demolitions Charges (structure entry cratering charges)
- Helicopters: All types for Intelligence Surveillance Reconnaissance (ISR), Air Assault, and Resupply Operations (no weapon systems used)
- UAVs: Use of ISR Sensors and Laser Designator/Range Finder and Laser Pointer Capabilities
- CAS: Use of ISR Sensor and Laser Capabilities

Creation of the BAX Restricted Area Addition involved consideration of the following criteria and siting requirements:

- The BAX restricted area would be scheduled for use 12 hours per day, Monday through Friday, or as otherwise stipulated by NOTAM, to support training requirements. This would include night hours, as needed, to support training requirements of all units in Alaska.

Table 2-9. Battle Area Complex (Company Level Operations) Munitions Systems

Stryker	Small Arms	Aircraft	Indirect Fire
.50 cal MG 105-mm MGS TOW-2B	40-mm TPT	.50 cal MG Kiowa 2.75-inch Practice Rocket	60 mm Mortar-FRTR 81 mm Mortar-FRTR
	5.56 mm Firearms	CAS: 30mm and below; use of ISR Sensor and Laser Capabilities	120 mm Mortar-FRTR
	7.62 mm Firearms	Hellfire Laser Carry Trainer	105 mm Howitzer-IR
	.50 cal MG	UAVs: Use of ISR Sensors and Laser Designator/ Range Finder and Laser Pointer Capabilities	155 mm Howitzer-IR

Key: cal=caliber; CAS=Close Air Support; FRTR=Full Range Training Round; IR=Illumination Round; ISR=Intelligence Surveillance Reconnaissance; MG=machine gun; MGS=mobile gun system; mm=millimeter; TOW=tube-launched, optically-tracked, wire-command data link, guided missile; TPT=target practice tracer.

- The restricted area and WDZs must be large enough to encompass the BAX.
- The airspace structure would need to allow simultaneous operations for combined arms while allowing sufficient clearance for aircraft to operate within the visual flight rules (VFR) corridors and regularly used flight patterns while also remaining clear of the BAX restricted area, when it is active.
- Impacts on current IFR departure and arrival routes and other air corridors must be minimized.
- The restricted area would be split vertically below the Minimum Obstacle Clearance Altitude (MOCA) of the existing Victor route IFR corridor in the vicinity of the BAX.
- The land must be large enough to support the maneuver of a Stryker company in the attack and have access routes to the start-fire line.
- The restricted area must include access for UAVs and armed helicopters.
- Only non-dud-producing munitions will be fired in the BAX/CACTF, so that no new duded (permanent) impact areas would need to be created.
- Coordination with Fort Greely and the Space and Missile Defense Command will be undertaken regarding the proposed restricted airspace and deconfliction of the use of existing Class D airspace close to the BAX.

AIRSPACE STRUCTURE

The airspace structure proposed for the action alternative is to essentially convert the area currently established as the BAX Controlled Firing Area (CFA) to a restricted area, as depicted in [Figure 2-6](#). A CFA is a type of SUA that is established to contain activities that could be hazardous to nonparticipating aircraft if they are not conducted in a controlled environment. CFAs are not charted on aeronautical maps because they do not cause a nonparticipating aircraft to change its flight path, but activities must be suspended if such aircraft are observed approaching CFAs.

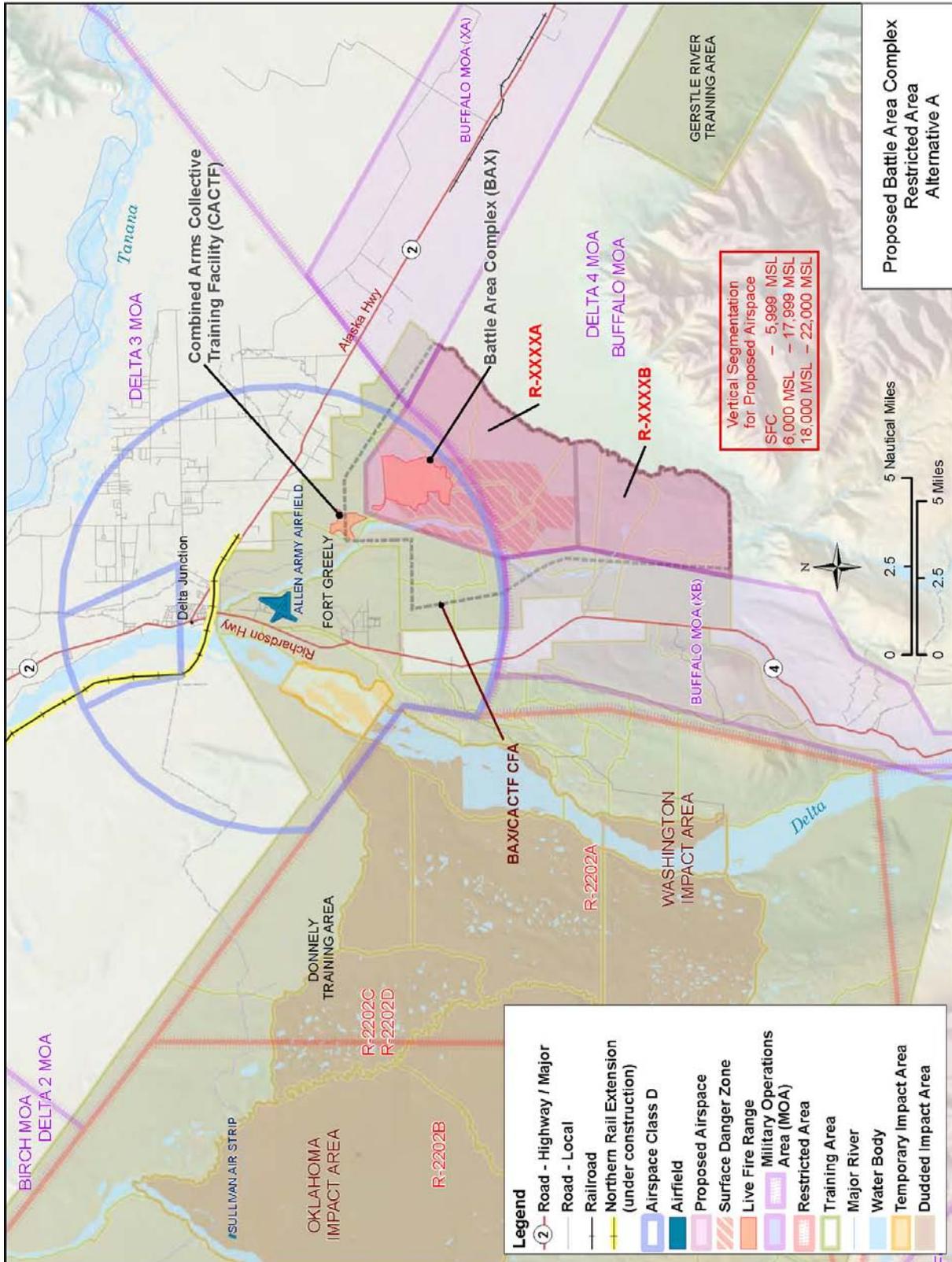


Figure 2-6. Proposed Battle Area Complex Restricted Area Alternative A

While there are other SUA areas in Alaska where such activities may be conducted, they do not provide the same training venue as the BAX. The land mass of R-2202 does not provide the free maneuver or target opportunities that are present in the BAX footprint. The proposed restricted area would provide the protective airspace required for hazardous activities that are not currently authorized under the rules that govern a CFA.

The proposed BAX restricted area would be established as R-XXXXA (north) and R-XXXXB south as shown in [Figure 2-6](#). Both subdivisions would be stratified in three layers: from the surface up to but not including 6,000 feet MSL; 6,000 feet MSL up to but not including 18,000 feet MSL; and 18,000 feet MSL up to 22,000 feet MSL (FL220). However, BAX activities would occur in the lower-altitude layer (below 6,000 feet MSL) approximately 60 percent of the training year with use of the higher altitudes (up to FL220) being included approximately 40 percent of the training year.

AIRSPACE USE

The estimated use of R-XXXX A and B would be 12 hours per training day from 7:00 a.m. to 7:00 p.m. local time, Monday through Friday, and other times as required and stipulated by NOTAM to support the Joint Combined Arms Live Fire (JCALF) activities. [Table 2-10](#) and [Table 2-11](#) provide information regarding training frequency and capability requirements, respectively, for the proposed restricted area. The potential annual use of the BAX and the associated airspace would range from approximately 106 to 238 days. Information regarding the scheduled use of the proposed restricted area subdivisions would be made available through the SUAIS.

Table 2-10. Battle Area Complex/Combined Arms Collective Training Facility Projected Annual Use

Type of Training	Annual Number of Days
Battle Area Complex	98
Combined Arms Collective Training Facility	140
Air-ground Integration Training	64
Aerial Gunnery	90

Table 2-11. Battle Area Complex/Combined Arms Collective Training Facility and Digital Multi-Purpose Training Range Proposed Capabilities

A-10 30 mm and below	UAV Operations
F-16 20 mm and below	Joint, combined arms LFE
AH64 30 mm and below	Air-ground integration
All platforms .50 cal and below	Gunnery collective skills training
2.75-inch Practice Rocket	Precision-guided inert munitions
60-, 81-, 120-mm mortars	Hellfire Laser Carry Trainer
Indirect fire 105 mm, 155 mm	
Laser Operations	

Key: cal=caliber; LFE=live-fire exercise; mm=millimeter; UAV=unmanned aerial vehicle.

(Note that the requirements in [Table 2-11](#) are also applicable to the proposed action to expand R-2205 to include the DMPTR, as described in [Section 2.1.4](#).)

2.1.3.1.2 Alternative B (Preferred Alternative)

The proposed restricted area over the BAX and CACTF in DTA-East under this alternative would extend beyond the boundaries proposed for Alternative A in order to encompass the BAX and CACTF boundaries. This alternative was selected as the Preferred Alternative because it would provide the Army with additional restricted area expansion to meet both current and future needs for the expansion of the proposed new firing points, the protective surface danger zones (SDZs), range training impact areas, and targets required for this proposed action ([Figure 2-7](#)).

[Table 2-12](#) provides specific detail regarding the locations of the new firing points and the SDZs in accordance with each of the weapon systems to be employed for the training exercises to be undertaken within the proposed restricted area of the BAX and CACTF.

Table 2-12. New Firing Points to Targets by Weapon Systems

System	Firing Points	Target Points												
		T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Weapon Caliber: 60mm:Full Range Practice M769 (Ctg)	F1	x	x	x	x									
Weapon Caliber: 60mm:Full Range Practice M769 (Ctg)	F2	x	x	x	x									
Weapon Caliber: 81mm:FRTR M879	F2	x	x	x	x									
Weapon Caliber: 81mm:FRTR M879	F1	x	x	x	x									
Weapon Caliber: 105mm:Illum M314	F3					x	x	x	x					
Weapon Caliber: 120mm:Full Range Practice XM931	F1	x	x	x	x									
Weapon Caliber: 120mm:Full Range Practice XM931	F2	x	x	x	x									
Weapon Caliber: 155mm:PROJ ilium	F4									x	x	x	x	
A10 2.75														x
A10 30mm														x
AH64 2.75														x
F16 2.75														x
F1620mm														x

AIRSPACE STRUCTURE

The proposed BAX restricted area under this alternative would be subdivided into three sectors: R-XXXXA (north), R-XXXXB (center), and R-XXXXC (south), as shown in [Figure 2-7](#). These subdivisions would be stratified in three layers: from the surface up to but not including 6,000 feet MSL; 6,000 feet MSL up to but not including 15,000 feet MSL; and 15,000 feet MSL up to 22,000 feet MSL (FL220) with most BAX activities being conducted in the lower strata approximately 60 percent of the training year as shown in [Figure 2-8](#).

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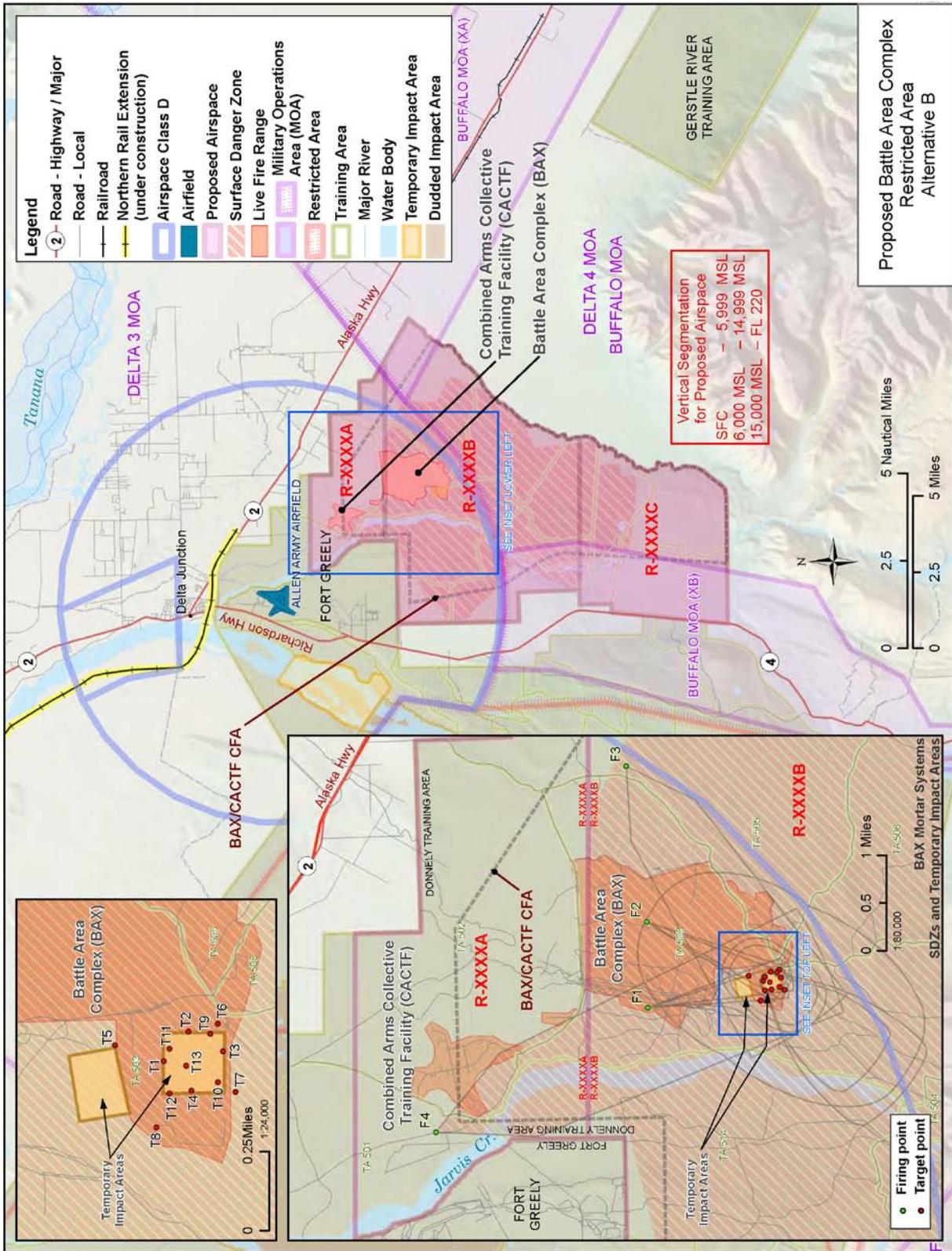


Figure 2-7. Proposed Battle Area Complex Restricted Area Alternative B

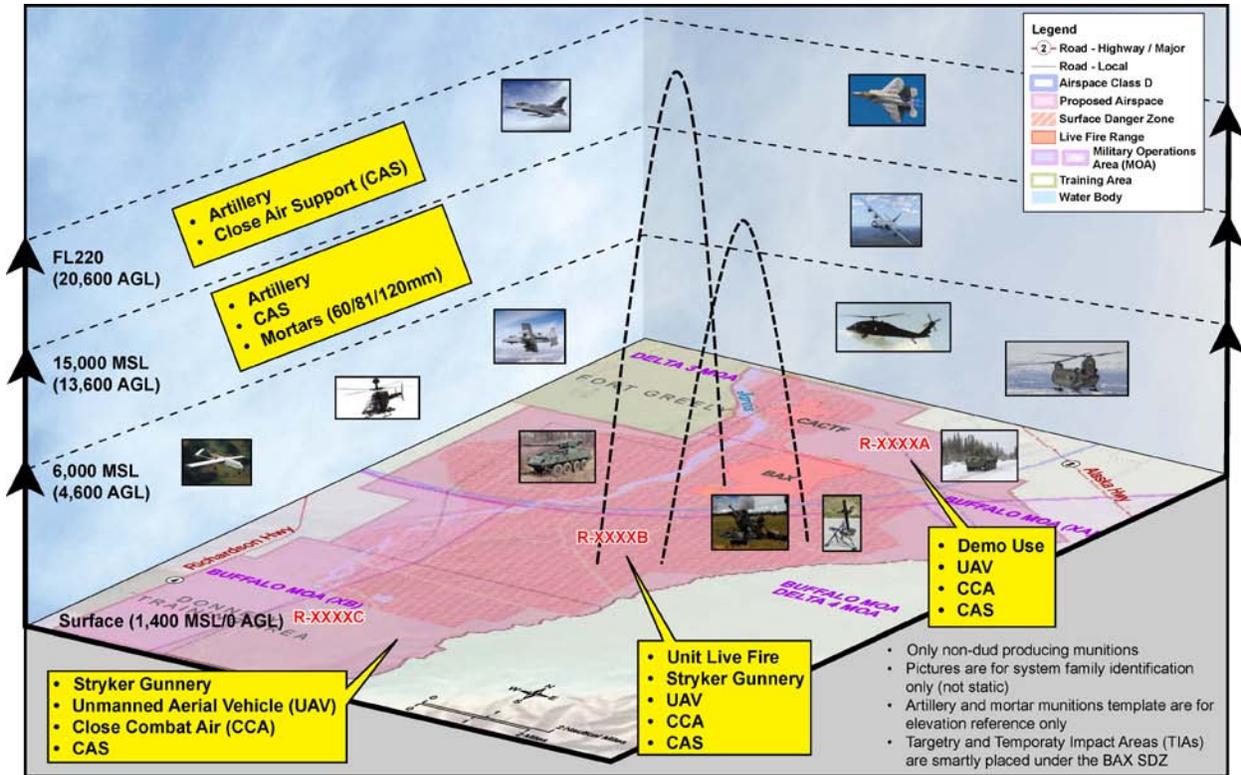


Figure 2-8. Battle Area Complex Vertical Segmentation

AIRCRAFT USE

The estimated use of R-XXXX A, B, and C would be 12 hours per training day up to approximately 238 days over the same daily timeframes described for Alternative A. Training frequencies and capability requirements within the restricted area would also be the same as outlined in [Table 2-10](#) and [Table 2-11](#). The scheduled use of the different sectors (A, B, and C) and altitudes layers needed to support individual BAX missions activities would be made available through the SUAIS.

2.1.3.2 No Action Alternative

Under the No Action Alternative, the existing CFA would remain in place without establishing any restricted area over the BAX in DTA-East. The lack of this capability involving the BAX would preclude realistic Joint, Interagency, Intergovernmental, and Multinational (JIIM) training with other forces critical to the JPARC vision, goals, and future concept of operations.

2.1.3.3 Alternatives Considered But Not Carried Forward

It has been determined that no other courses of action could provide for the required levels of JCALF training achievable through expansion of a restricted area over the BAX.

2.1.4 Expansion of Restricted Area R-2205

2.1.4.1 Proposed Action (Preferred Alternative)

Under the proposed action restricted area R-2205 would be expanded to include the Moose Creek Range Complex (also referred to as the DMPTR) area within the YTA, as well as the airspace currently designated as the CALFEX north and south CFAs which overlie the YTA and are used for small-arms

firing, artillery, ground-launched antitank guided missiles, and mortars. This airspace would be of sufficient area to encompass hazardous activities and weapons footprints for the types of ordnance proposed for use in this area. The action alternative requires expansion of the current R-2205 over the DMPTR and most of YTA to provide for a significant increase in more-realistic training in this important training area, thus providing more-effective support of joint training initiatives.

The proposed action was selected as the Preferred Alternative because it best provides the Army with an area of sufficient size to encompass hazardous activities, increase more-realistic training, and better support joint training initiatives.

The proposed restricted area would provide loitering airspace for helicopters and UAVs within controlled airspace in conjunction with training activities being conducted within the range impact areas. UAVs would be integrated into JCALF training from an adjacent airfield. UAVs currently can be operated from the Firebird Landing Zone and Husky Drop Zone (DZ). Airspace being proposed for the transit of UAVs from different locations to the restricted areas is addressed in Section 2.1.6. The restricted area and SDZs must be large enough to encompass the DMPTR.

The expansion of R-2205 involved consideration of similar criteria and siting requirements for the BAX restricted area addition discussed in Section 2.1.3. Important criteria for this proposed action is the anticipated savings on travel, fuel, energy, billeting, logistics, and similar costs due to YTA’s proximity to Fort Wainwright and Eielson AFB, as noted above.

AIRSPACE STRUCTURE

The R-2205 restricted area and subdivisions proposed for this proposed action are as depicted in Figure 2-9. The action aligns the outer restricted area boundary more precisely with the Army-controlled YTA lands to provide the expanded protective airspace needed for encompassing YTA hazardous activities. The proposed R-2205C extends within the Eielson AFB Class D airspace; therefore, the scheduled use of this subdivision would be closely coordinated among the different controlling and scheduling functions so that R-2205C activities do not conflict with Eielson air traffic operations. This restricted airspace would extend from the surface up to FL310 with only those subdivisions and altitudes being activated as needed to support individual UAV and other mission requirements.

AIRSPACE USE

The capabilities to be performed with the support of the expanded airspace within R-2205 would include the same ones shown in both Table 2-9 and Table 2-11 for the BAX/CACTF use. Projected use of the proposed R-2205 restricted area would be as described in Table 2-13. The USARAK Range Management Plan indicates an annual range use requirement for this range of 212 days, but future JJIM utilization plans would increase the annual use up to 300 days. Restricted area segment D, as shown in Figure 2-9, would be used primarily for UAV operations. Initial UAV hovering points at Husky, Firebird, B/C Batteries, DMPTR, and firing points would be contained within R-2205.

Table 2-13. Digital Multi-Purpose Training Range Projected Annual Use

Type of Training	Annual Number of Days
Digital Multi-Purpose Training Range	142
Air-Ground Integration Training	64
Aerial Gunnery	90

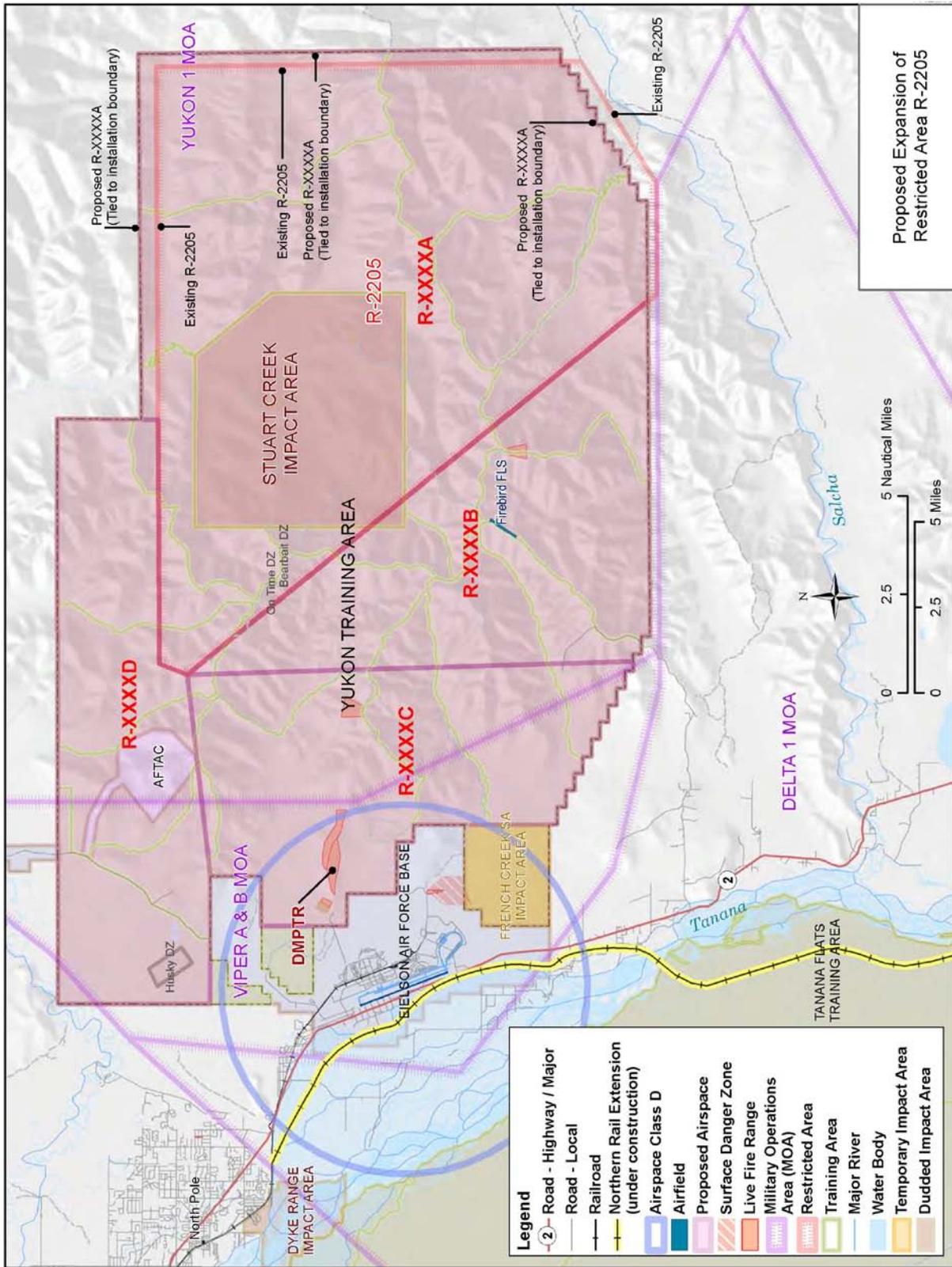


Figure 2-9. Proposed Expansion of Restricted Area R-2205

The airspace could be active 12 hours per day, 7:00 a.m. to 7:00 p.m. local time, Monday through Friday, and other times, as required and stipulated by NOTAM. As noted above, the scheduled use of this proposed restricted area would require that processes be outlined in procedures and agreements between the Army and Air Force to ensure cooperative and effective joint use of this airspace while having minimal effects on Eielson AFB airfield operations. Scheduled use of this airspace would be disseminated through the SUAIS.

2.1.4.2 No Action Alternative

Under the No Action Alternative, there would be no expansion of the restricted area R-2205, including over the DMPTR or the other proposed areas in the YTA. The lack of this capability would preclude realistic JJIM training with other forces critical to the JPARC vision, goals, and future concept of operations.

2.1.4.3 Alternatives Considered But Not Carried Forward

One other alternative was examined initially during the master planning and scoping process but was not carried forward for further consideration because it did not adequately meet the selection and requirements criteria regarding the purpose and need of this proposed action.

This alternative proposed subdividing the restricted area in R-2205 into selectively segmented and standardized blocks around a generalized boundary of YTA. This boundary would not have included all the restricted area needed for full coverage in the southwest sector of YTA. It would also have resulted in requiring restricted area beyond existing military-controlled land north of the existing far northeast quadrant of the YTA boundary line.

2.1.5 Night Joint Training

2.1.5.1 Proposed Action

The combination of Energy Policy Act of 2005 that extended the calendar days for daylight saving time into March and November, the limitations of the 1997 Record of Decision (ROD) for the *Final Environmental Impact Statement, Alaska Military Operations Areas*, and the necessity to conduct night training after nautical twilight severely limits the capability of the Air Force to conduct any night MFEs during the exercise season, as described in Section [1.3.1.4](#). This proposal would extend operating hours to allow the Air Force to more effectively meet night joint training requirements during March and October.

Key considerations and requirements applied for night joint training include the following:

- Extended hours would need to be available for both existing and proposed future military training SUA in JPARC.
- No infrastructure is needed for night flight training.
- Impacts on noise-sensitive areas would be minimized.
- Mitigations in the ROD for the *Final Environmental Impact Statement, Alaska Military Operations Areas*, issued in 1997, do not permit MFEs during September, December, and January, which limits overall night training opportunities for joint Air Force, Navy, and/or Marine Corps flying exercises to the months of February, March, October, and November (Air Force 1997-1). The proposed action does not limit the ability or capabilities of the Army to conduct night flying training exercises as currently undertaken.

- Night ordnance use by the Air Force would take place during one RED FLAG exercise in a given year at JPARC as part of this proposed action. For a 2-week RED FLAG exercise, night bombing would be undertaken during 9 nights. It is planned that Air Force CAS training activities would be included during night ordnance use. The ordnance use exercises could continue as late as midnight, with aircraft landing by 1:00 a.m. local time. The ordnance would be composed of both live and inert types. The ordnance would be expended in the existing Stuart Creek Impact Area within R-2205 in YTA and the Oklahoma Impact Area in R-2202 in DTA-West. It is proposed that equal ordnance amounts would be expended in each impact area. The rounds proposed to be fired after 10:00 p.m. for this proposal are currently being fired by the Air Force under baseline conditions, and this proposal would shift the firing time to after 10:00 p.m. [Table 2-14](#) provides representative types of ordnance and amounts to be expended during the night portion of a 2-week exercise.

Table 2-14. Night Ordnance Expended (typical)

Night Training Ordnance Types	Night Ordnance Utilization
MK-82(Inert)/BDU-50 (500 lb)	100
MK-82(Live) (500 lb)	12
MK-84(Inert)/BDU-56 (2000 lb)	9
MK-84(Live) (2000 lb)	4
GBU-12(Inert)/BDU-50 (500 lb)	22
GBU-24(Inert)/BDU-56 (2000 lb)	2
LGTR (Inert) (BDU-59)(89 lb)	24
30 mm rounds	2,000 (1,000 Inert/1,000 Live)
20 mm rounds	2,000 (1,000 Inert/1,000 Live)

Key: BDU=bomb dummy unit; GBU=Guided Bomb Unit; lb=pound; LGTR= Laser Guided Training Round; MK=mark; mm=millimeter.

2.1.5.1.1 Alternative A

The proposed action proposes to extend the JPARC MOA hours to allow MFE tactical operations until midnight and landing by 1:00 a.m., local time, during March and October. This would allow night training during these 2 months for a minimum of 1.5 hours to a maximum of 2.5 hours for each exercise. Such exercise sessions would typically occur up to 10 nights per year with the number of aircraft sorties participating in each session (50 plus) being somewhat less than each daytime session (up to 100). Both existing and proposed future SUA would be used to accommodate night training while continuing to ensure noise-sensitive areas are avoided during those later-hour operations.

2.1.5.1.2 Alternative B (Preferred Alternative)

Under this alternative, JPARC MOA hours would be extended to allow all MFE and routine tactical training operations until midnight and landing by 1:00 a.m., local time, during all months of the year and for all training by military users of the existing and proposed future JPARC SUA requiring night flight training.

Alternative B was selected as the Preferred Alternative because it provides the Air Force with the optimum capability to conduct routine night operations in addition to MFE night flying capability with no limitations during the year.

2.1.5.2 No Action Alternative

The No Action Alternative would continue to limit MOA hours to 10:00 p.m. during all months of the year. This would not compensate for the extended length of daylight saving time into March and November, which impedes training during these two months. Therefore, a night training exercise in March or early October would continue to be limited to less than 1 hour during those two months and, therefore, would not meet military tactical training needs.

2.1.5.3 Alternatives Considered But Not Carried Forward

The alternative not carried forward was to extend JPARC operating hours for all training purposes until 11:00 p.m. and landing by midnight, local time, during March and October. This option was not viable since night training requirements for training other than MFEs cannot be accomplished during other months of the year to provide sufficient hours of darkness to accomplish this training.

2.1.6 Unmanned Aerial Vehicle Access

UAVs have emerged as a viable platform for reconnaissance, surveillance, and other activities for the Army and Air Force. Integrating these activities with other forms of military training and exercise missions will ensure seamless operations. All military Services operate with UAVs in combat daily, from small hand-launched platforms like the Raven to globally operated intelligence platforms like the Global Hawk. Operators need UAV proficiency training, and strategists must learn the various ways that UAVs may be employed against enemy forces. Such training is also required for ground crews, Intelligence, Command and Control, and other functions having a role in UAV mission planning and operations. UAVs are currently used extensively by the Army in restricted areas. They often use Certificates of Authorization (COA) to transit the airspace between the runways and the restricted areas. The Air Force flies UAVs only to a limited extent in Alaska. Military planners predict that UAV use will continue to increase, compounding the need to accommodate further UAV training in existing range target areas. Expanding UAV access throughout the ranges and airspace will be required to fully replicate combat situations.

UAVs will need to be deployed from launch sites (such as airfields or landing zones) to every restricted area within JPARC. Currently, without the ability to sense and avoid, UAVs can only operate in a restricted area or other suitable airspace as determined by the FAA. Presently, a Certificate of Authorization (COA) must be granted by the FAA for operating a UAV outside of a restricted airspace with strict operating restrictions that include a requirement for a ground observer or an accompanying “chase” aircraft maintaining constant visual contact with the UAV to ensure those operations do not interfere with other aircraft. The FAA has authorized a COA for limited DoD UAV flight activities, however, this has not always provided the level of airspace access necessary to accomplish all mission activities. Any final decisions on establishing each proposed UAV corridor as either a restricted area, COA authorization, or other designation would be pursued through the appropriate proposal/application processes with a comprehensive operational and technical review by the FAA. Regardless of the airspace option and FAA application processes/criteria to be applied for these corridors, the EIS analyses examined the more restrictive impacts a restricted area designation may have on other airspace uses in the region. The FAA, DoD, and other agencies continue to collaborate on those near, mid, and long term solutions for integrating UAV operations and supporting ground elements into the National Airspace System while ensuring they present no threat to the general public and do not present any flight risks to other airspace users.

Connectivity is required between launch sites, restricted areas, and MOAs in JPARC. UAV access corridors will need to be located in controlled airspace, separated from civil air corridors, and be within

radar and radio coverage. UAVs need to be tracked and controlled from a central location through line-of-sight and beyond line-of-sight (satellite).

Seamless restricted area connections would need to be established between the launch sites and restricted areas as shown in [Figure 2-10](#), in order to conduct mission activities more representative of a combat environment. For instance, the Army could launch a UAV from Allen Army Airfield (AAF) into R-2202, conduct a mission activity within that restricted area, continue through the corridor to R-2211 where a second mission activity would be conducted, and then recover the UAV at Fort Wainwright. The alignment for each corridor represents the approximate centerline location of these 5- to 8-NM-wide corridors in most effectively linking the airfields and airspace listed in [Table 2-15](#). Each corridor is identified as a separate proposed action with the primary objective being to develop alternatives that would provide optimum, long-term flexibility for JPARC UAV capability. Each proposed action considers alternatives that would provide for the safest and the most direct and effective means of transiting UAVs between the individual launch sites and range training areas. It is estimated that UAV operations would be conducted twice weekly and up to four times each day during weekdays with other times stipulated by NOTAM. UAVs would operate both day and night to provide maximum joint training flexibility. These aircraft would operate at normal cruise speeds that are estimated to average 120 knots. The UAVs would be outfitted with a Mode-C transponder and FAA-approved lighting for radar tracking and visibility.

Table 2-15. Proposed Unmanned Aerial Vehicle Corridor Use and Dimensions

Uses common to all proposed actions and alternatives:		
Times of Use: 7:00 a.m.–7:00 p.m. daily, Monday–Friday, other times by NOTAM approximately 242 days annually		
UAV Types: MQ-1 (Predator), RQ-4 (Global Hawk), MQ-5B (Hunter), MQ-9 (Reaper), RQ-8B (Fire Scout), RQ-7B (Shadow), MQ-1C (Gray Eagle), BAT-MAV WASP III, gMAV, XM156 Class I, K-Max, A160T Hummingbird, and other future UAVs		
UAV Armaments: Lasers, GBU-12, Hellfire Laser Carry Trainer		
Proposed Actions and Alternatives¹	Proposed Width and Altitudes	
Corridor between Eielson Air Force Base and R-2211	Alternative A Restricted Area	8 NM wide; 1,200 feet AGL to 17,999 feet MSL, stratified in three layers
	Alternative B COA	Same as Alternative A
Corridor between Eielson Air Force Base and R-2205	Alternative A Restricted Area	5 NM wide; 1,200 feet AGL to 5,000 feet MSL
	Alternative B COA	Same as Alternative A
Corridor between Allen Army Airfield and R-2202	Alternative A Restricted Area	5 NM wide; 1,200 feet AGL to 5,000 feet MSL
	Alternative B COA	Same as Alternative A
Corridor between R-2202 and R-2211	Alternative A Restricted Area	8 NM wide; 1,200 feet AGL to 17,999 feet MSL, stratified in three layers
	Alternative B COA	Same as Alternative A
Corridor between R-2205 and R-2202	Alternative A Restricted Area	8 NM wide; 1,200 feet AGL to 17,999 feet MSL, stratified in three layers
	Alternative B COA	Same as Alternative A
Corridor between Fort Wainwright and R-2211	Alternative A Restricted Area	8 NM wide; 1,200 feet AGL to 17,999 feet MSL, stratified in three layers
	Alternative B COA	Same as Alternative A
Corridor between Fort Wainwright and R-2205	Alternative A Restricted Area	5 NM wide; 1,200 feet AGL to 5,000 feet MSL
	Alternative B COA	Same as Alternative A

¹ Alternative A is restricted or other suitable airspace as determined by the FAA.

Key: AGL=above ground level; COA=Certificate of Authorization; FAA=Federal Aviation Administration; GBU=Guided Bomb Unit; MSL=mean sea level; NM=nautical miles; NOTAM=Notice to Airmen; UAV=unmanned aerial vehicle.

2.0 – Description of Proposed Action and Alternatives
 2.1 Definitive Actions Evaluated in this EIS

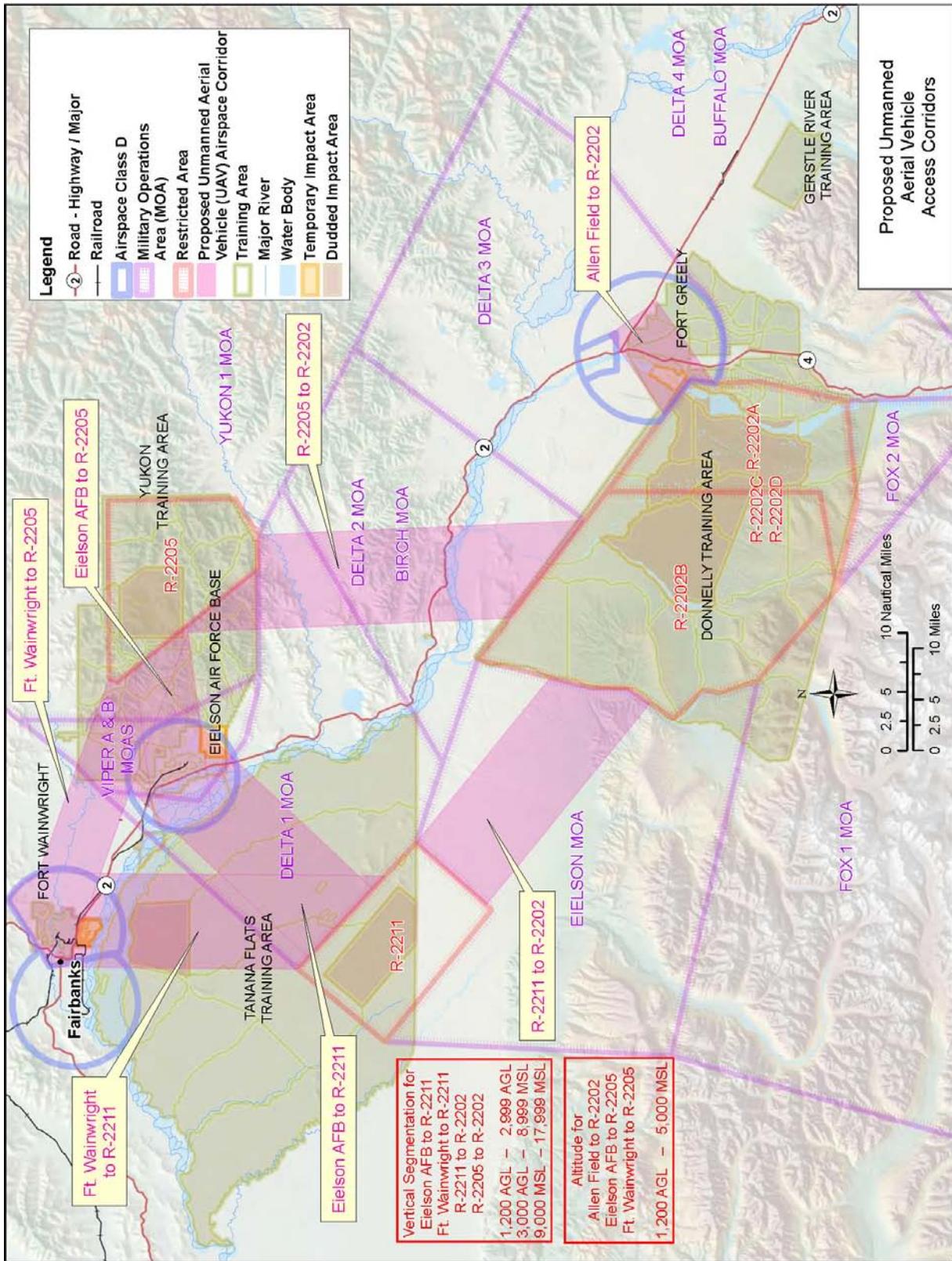


Figure 2-10. Proposed Unmanned Aerial Vehicle Access Corridors

Chapter [3.0](#), Affected Environment and Environmental Consequences, provides the description and annual use of the restricted areas associated with the alternatives. [Table 2-15](#) describes the proposed use of each alternative action for transiting UAVs within each of the indicated corridor proposals. The UAV armaments noted in this table would not be used within the corridors. Alternative A is a proposal to establish restricted or other suitable airspace as determined by the FAA, and Alternative B is a proposal to establish an area authorized by a COA for transiting the UAVs. Siting considerations for all alternatives are as follows: (1) the corridors must be in controlled airspace, (2) the expected impact on civil air traffic must be minimal, and (3) the corridors must be within radio and radar coverage.

2.1.6.1 Proposed Action – Establish Link Between Eielson AFB and R-2211

It is proposed that an FAA-approved UAV corridor be established to link Eielson AFB and R-2211, with consideration given to the following alternatives.

2.1.6.1.1 Alternative A (Preferred Alternative)

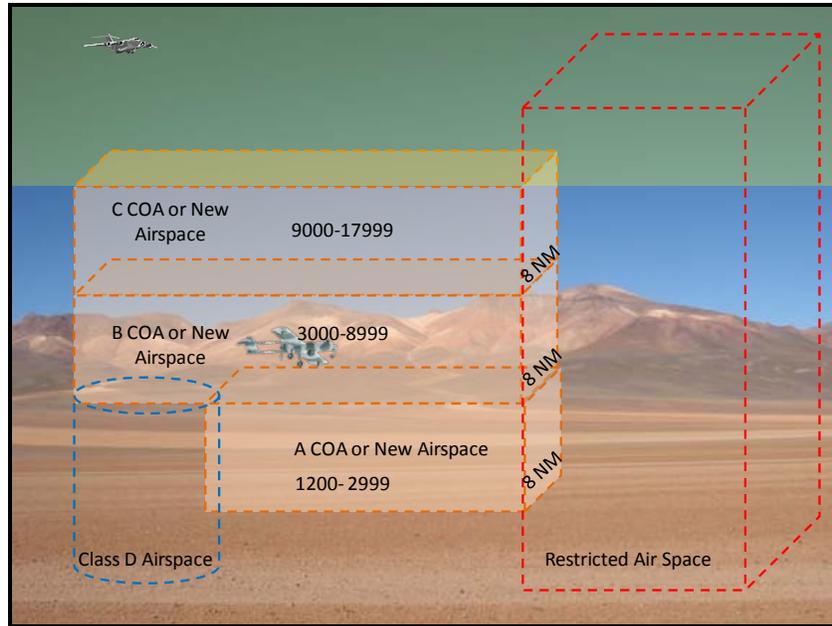
Alternative A was selected as the Preferred Alternative for this proposed action. Alternative A was selected as the Preferred Alternative because UAVs are a relatively new addition to U.S. airspace. With rapidly expanding technologies and employment practices, having the FAA engage in Rules Making procedures now will allow the Army and Air Force to practice employing UAVs during training events. Additionally, as the UAV industry produces new technologies and capabilities, having already established FAA rules for UAV airspace usage will allow the Army and Air Force the ability to employ these new technologies as they become available without having to engage in additional Rules Making procedures. (Note: for the same reasons, Alternative A for each respective UAV Access proposed action described in Sections [2.1.6.2](#) through [2.1.6.7](#) was selected as the Preferred Alternative.)

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between Eielson AFB and the R-2211 boundary, as depicted in [Figure 2-10](#). This restricted area corridor would be approximately 8 NM wide and extend from 1,200 feet AGL to 17,999 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate while launching to, and recovering from, training activities in R-2211. [Figure 2-11](#) provides a representative illustration of how the proposed UAV corridors would be segmented by altitude layers. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those daily times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

Training activities currently conducted by fighter, bomber, rotary-wing, and cargo-type aircraft in R-2211 include air combat training, basic fighter maneuvers, air combat maneuvers, intercept training, low-altitude air-to-air training, low-altitude step-down training, and simulated low-altitude surface attack tactics. Representative figures on annual baseline sortie-operations conducted within this restricted area are provided in Chapter [3.0](#), Affected Environment and Environmental Consequences.



Key: COA=Certificate of Authorization; NM=nautical miles.
Source: USARAK Aviation 2011.

**Figure 2-11. Unmanned Aerial Vehicle Corridor
Airspace Classification Segmentation**

2.1.6.1.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between Eielson AFB and R-2211 would be established via a COA. A COA is issued by the FAA Air Traffic Organization to an operator for a specific unmanned aircraft activity. This requires submittal of an application, followed by a comprehensive operational and technical review by the FAA to determine what provisions or limitations may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users.

AIRSPACE OPERATIONS

The projected use of the COA under this alternative is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.1.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between Eielson AFB and R-2211, thus preventing use of this airspace to conduct essential UAV training activities.

2.1.6.1.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking Eielson AFB and R-2211. No other alternatives were considered.

2.1.6.2 Proposed Action – Establish Corridor Between Eielson AFB and R-2205

It is proposed that an FAA-approved UAV corridor be established that links Eielson AFB and R-2205, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.2.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reason that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between Eielson AFB Class D airspace and the R-2205 boundary, as shown in [Figure 2-10](#). This restricted area corridor would be approximately 5 NM wide and extend from 1,200 feet AGL to 5,000 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate while launching to, and recovering from, training activities in R-2205. No activities would be conducted within the corridor that would require control of the lands beneath this proposed restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

Activities currently conducted in R-2205 include several different training operations using fighter, bomber, and helicopter aircraft types. CAS training, electronic warfare training, aerial gunnery, bombing, lights-out operations, and simulated downed-pilot exercises are conducted by A-10, F-16, F-18, F-22, and F-15 aircraft. C-17 and C-130 aircraft conduct bundle drops, combined search and rescue operations, and parachute drops not conducted in accordance with Federal Aviation Regulation (FAR) Part 105. CH-47, HH-60, UH-60, and OH-58 rotary-wing aircraft conduct aerial gunnery, sling load operations, fast rope in hot DZ, and electronic warfare training. UAV reconnaissance is also conducted in this restricted area. A description and representative figures on the annual baseline use of R-2205 are provided in Chapter [3.0](#), Affected Environment and Environmental Consequences.

The projected UAV use of this alternative is listed in [Table 2-15](#). This airspace would only be activated during those daily periods when UAV training activities are in progress.

2.1.6.2.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between Eielson AFB and R-2205 would be established via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine provisions or limitations that may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users in the corridor.

AIRSPACE OPERATIONS

The projected use of the COA under this alternative is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.2.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between Eielson AFB and R-2205, thus preventing use of this airspace to conduct essential UAV training activities.

2.1.6.2.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking Eielson AFB and R-2205. No other alternatives were considered.

2.1.6.3 Proposed Action – Establish Link Between Allen Army Airfield and R-2202

It is proposed that an FAA-approved UAV corridor be established that links Allen AAF and R-2202, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.3.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reasons that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between Allen AAF and the R-2202 boundary. This restricted area corridor would be approximately 5 NM wide and extend from 1,200 feet AGL to 5,000 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate while launching to, and recovering from, training activities in R-2202. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

Activities currently performed in R-2202 by various fighter, bomber, and helicopter aircraft include CAS, air-to-ground aerial gunnery, bombing, unmanned aerial reconnaissance, and air-to-air combat training. Chapter [3.0](#), Affected Environment and Environmental Consequences, includes a description and representative figures on the annual baseline use of this restricted area.

[Table 2-15](#) shows the projected UAV flights to be conducted in this proposed restricted area. UAV activities would be conducted intermittently, and the restricted area would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.3.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between Allen AAF and R-2202 would be established via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine provisions or limitations that may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users in the corridor.

AIRSPACE OPERATIONS

The projected UAV activities for the proposed COA is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.3.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between Allen AAF and R-2202, thus preventing use of this airspace to conduct essential UAV training activities.

2.1.6.3.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking Allen AAF and R-2202. No other alternatives were considered.

2.1.6.4 Proposed Action – Establish Link Between R-2202 and R-2211

It is proposed that an FAA-approved UAV corridor be established between R-2202 and R-2211, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.4.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reasons that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between R-2202 and R-2211. This restricted area corridor would be approximately 8 NM wide and extend from 1,200 feet AGL to 17,999 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate between these two restricted areas. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

The representative annual baseline use and activities performed in R-2202 and R-2211 are discussed above and shown in Chapter [3.0](#), Affected Environment and Environmental Consequences. The projected UAV use of the proposed restricted area corridor is described in [Table 2-15](#). UAV activities would be conducted intermittently, and the restricted area would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.4.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between R-2202 and R-2211 would be established via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine provisions or limitations that may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users in the area between these two restricted areas.

AIRSPACE OPERATIONS

The projected UAV activities for the proposed COA under this alternative is shown in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.4.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between R-2202 and R-2211, thus preventing interactive use of these two restricted areas for conducting UAV training activities.

2.1.6.4.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking R-2202 and R-2211. No other alternatives were considered.

2.1.6.5 Proposed Action – Establish Link Between R-2205 and R-2202

It is proposed that an FAA-approved UAV corridor be established that links R-2205 and R-2202, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.5.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reasons that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between R-2205 and R-2202. This restricted area corridor would be approximately 8 NM wide and extend from 1,200 feet AGL to 17,999 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate between these two restricted areas. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

The representative annual baseline use and activities performed in R-2205 and R-2202 are discussed above and provided in Chapter [3.0](#), Affected Environment and Environmental Consequences. The projected UAV use of the proposed restricted area corridor is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the restricted area would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.5.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between R-2205 and R-2202 would be established via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine possible impacts on other airspace users and provisions or limitations that may be imposed as

part of the approval to ensure that UAVs can operate safely with other airspace users in the area between these two restricted areas.

AIRSPACE OPERATIONS

The projected UAV activities for the proposed COA under this alternative are listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.5.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between R-2205 and R-2202, thus preventing interactive use of these two restricted areas for conducting UAV training activities.

2.1.6.5.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking R-2205 and R-2202. No other alternatives were considered.

2.1.6.6 Proposed Action – Establish Link Between Fort Wainwright and R-2211

It is proposed that an FAA-approved UAV corridor be established that links Fort Wainwright and R-2211, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.6.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reasons that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between Fort Wainwright and R-2211. This restricted area corridor would be approximately 8 NM wide and extend from 1,200 feet AGL to 17,999 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate between these two areas. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

The representative annual baseline use and types of training activities conducted in R-2211 are discussed above and shown in Chapter [3.0](#), Affected Environment and Environmental Consequences. The projected use of this restricted area corridor for UAV flights is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the restricted area would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.6.2 Alternative B

AIRSPACE STRUCTURE

The proposed action for this alternative is to establish a corridor between Fort Wainwright and R-2211 via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine the possible impacts on other airspace users in the vicinity specified in the COA and the provisions or limitations that may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users in the corridor.

AIRSPACE OPERATIONS

The projected UAV activities for the proposed COA are listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.6.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between Fort Wainwright and R-2211, thus preventing use of this airspace to conduct essential UAV training activities.

2.1.6.6.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking Fort Wainwright and R-2211. No other alternatives were considered.

2.1.6.7 Proposed Action – Establish Link Between Fort Wainwright and R-2205

It is proposed that an FAA-approved UAV corridor be established that links Fort Wainwright and R-2205, with consideration given to the following alternatives (see [Figure 2-10](#)).

2.1.6.7.1 Alternative A (Preferred Alternative)

Alternative A was selected as the Preferred Alternative for this proposed action for the same reasons that each respective Alternative A was selected as the Preferred Alternative for the other UAV Access proposed actions (see Section [2.1.6.1.1](#)).

AIRSPACE STRUCTURE

Under this alternative, a corridor of restricted or other suitable airspace, as determined by the FAA, would be established between Fort Wainwright and R-2205. This restricted area corridor would be approximately 5 NM wide and extend from 1,200 feet AGL to 5,000 feet MSL to provide sufficient lateral and vertical airspace for UAVs to operate between these two areas. Since restricted airspace would not be required at the ground level, control of the lands beneath this airspace would not be necessary to establish the restricted area. This airspace would only be activated during those times of use reflected in [Table 2-15](#) when UAV training activities are projected to occur.

AIRSPACE OPERATIONS

The current use and types of training activities conducted in R-2205 are discussed above and shown in Chapter [3.0](#), Affected Environment and Environmental Consequences. The projected use of this restricted area corridor for UAV flights is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the restricted area would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.7.2 Alternative B

AIRSPACE STRUCTURE

Under this alternative, a corridor between Fort Wainwright and R-2205 would be established via a COA. COA approval would require comprehensive operational and technical review of this proposal by the FAA to determine the possible impacts on other airspace users in the vicinity specified in the COA and the provisions or limitations that may be imposed as part of the approval to ensure that UAVs can operate safely with other airspace users in the corridor.

AIRSPACE OPERATIONS

The projected UAV activities for the proposed COA is listed in [Table 2-15](#). UAV activities would be conducted intermittently, and the COA would be activated only for the period that a UAV would be transiting this corridor.

2.1.6.7.3 No Action Alternative

The No Action Alternative would not provide any means of operating UAVs between Fort Wainwright and R-2205, thus preventing use of this airspace to conduct essential UAV training activities.

2.1.6.7.4 Alternatives Considered But Not Carried Forward

The alternatives identified for this proposed action are considered possible means for linking Fort Wainwright and R-2205. No other alternatives were considered.

2.2 PROGRAMMATIC ACTIONS EVALUATED IN THIS EIS

The following projects require additional planning, programming, and design.

- Enhanced Ground Maneuver Space (Army)
- Tanana Flats Training Area (TFTA) Roadway Access (Army)
- Joint Air–Ground Integration Complex (JAGIC) (Army)
- Intermediate Staging Bases (ISBs) (Army)
- Missile Live-Fire for AIM-9 and AIM-120 (Air Force)
- Joint Precision Airdrop System (JPADS) DZs (Air Force)

During this extended process, new information about requirements, the environmental baseline, and financial resources will emerge. This planning process will benefit from an environmental study in this EIS and a programmatic decision. The programmatic documentation in this EIS will provide baseline information, project site selection and development criteria, and requirements prompting either additional studies or studies tiered from the *JPARC Modernization and Enhancement EIS* to allow for site-specific NEPA analyses based on the best available information. This information will also assist in identifying the need for additional surveys, permits, consultation requirements, and mitigations.

2.2.1 Enhanced Ground Maneuver Space

2.2.1.1 Proposed Action Alternative

The Army has four brigade equivalents in Alaska: SBCT, Airborne Brigade Combat Team (ABCT), Combat Aviation Brigade (CAB), and Engineer Brigade. While the current focus of each brigade is to support Army Force Generation for current operations, all of the brigades, except the CAB, have training requirements for a brigade-sized, non-live-fire maneuver exercise. The maneuver area space for each brigade with combat enablers is listed in [Table 2-16](#).

Table 2-16. Brigade Maneuver Space Requirements

SBCT	ABCT	EN BDE	CAB
90,297 km ²	31,805 km ²	62,466 km ²	56,498 km ²

Key: ABCT=Airborne Brigade Combat Team; CAB=Combat Aviation Brigade; km²=square kilometers; EN BDE=Engineer Brigade; SBCT=Stryker Brigade Combat Team.

The current ground training areas that include TFTA, DTA, and YTA lack adequate Army access roads and training area circulation routes ([Figure 2-12](#)). Moreover, seasonal changes limit year-round use for transiting vehicles. This could be improved by increasing internal circulation, enhancing maneuver space, integrating the proposed ISBs, and providing other support infrastructure within these JPARC ground maneuver areas. This proposal would provide year-round accessibility, internal circulation, and enhanced maneuver space to support brigade-level events with battalion-size training occurring in TFTA, YTA, and DTA. Brigade units would interact with JIIM components in order to provide a realistic training environment. The training frequency at this time is planned to support seven combat maneuver battalions that would train within TFTA, DTA, and YTA. Each battalion would train for a 10- to 14-day event at least once per year per battalion. Additionally, JIIM utilization of the enhanced ground maneuver space can be up to 242 days annually. The ground maneuver area could be used to train a Stryker company outside of the hazard footprints of aerial ordnance or indirect fire.

Units will continue to transition through the Wasilla/Matanuska Valley en route to the Donnelly and Fort Wainwright Training Areas. All unit movements will comply with directives of the Alaska Department of Transportation and all Army regulations concerning unit movements along public transportation routes. The number of unit movements may increase as the training operations tempo adjusts from a war footing to an Army preparing to respond to National Command Authority directives. From time to time, the Army may utilize those areas for which it has agreements with the State to use lands currently withdrawn from public use. The Army will remain compliant with the Sikes Act to allow recreation on lands not being actively used to support military training events.

Site selection and development considerations used to develop the alternatives for enhancing ground maneuver space include the following:

- Minimize the cost of additional roads by using existing roads where possible.
- Locate the proposed new maneuver areas within a supportable distance from existing and proposed ISBs (20 miles would represent about 2 hours of transit time daily).
- Limit the impacts on current air routes and corridors.

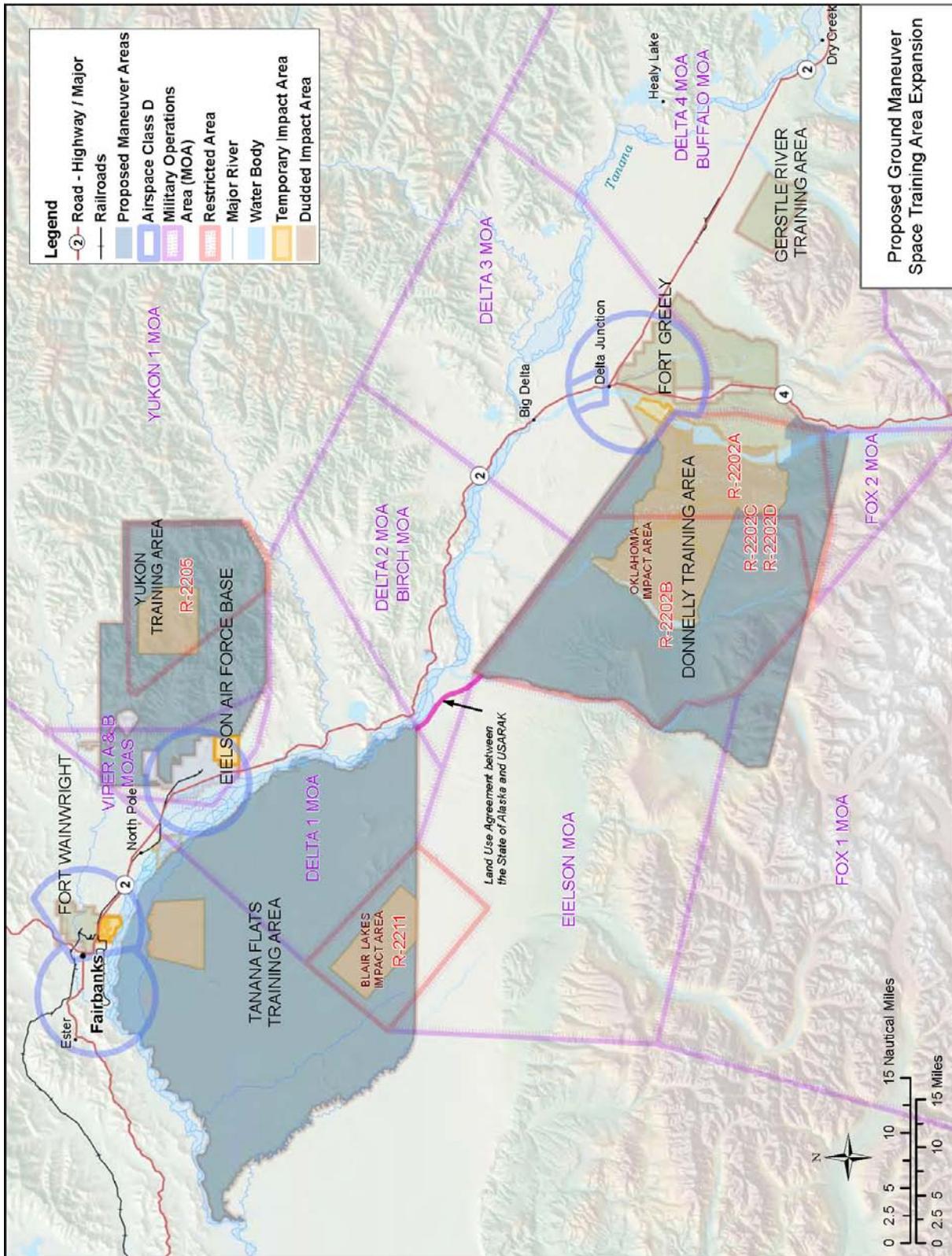


Figure 2-12. Proposed Ground Maneuver Space Training Area Expansion

- Minimize the impacts on cultural resources, wetlands, and critical habitat.
- Provide the SUA required for Air Cavalry training areas and the SBCT and ABCT in the maneuver areas.

Specific alternatives for direct access to DTA, YTA, and TFTA have not yet been developed to the point where a specific decision can be made. As such, year-round access, internal circulation, integration with proposed ISBs, and enhanced maneuver space in DTA, YTA, and TFTA will be treated in a programmatic manner in this EIS.

[Figure 2-12](#) depicts the existing maneuver training areas in DTA, YTA, and TFTA that are the focus of proposals for year-round accessibility, internal circulation routes, and enhanced and modernized Soldier maneuver space.

2.2.1.2 No Action Alternative

The No Action Alternative would not allow for the development, enhancement, modernization, and operation of year-round maneuver space in DTA, YTA, and TFTA. The Army has training requirements for a brigade-sized, non-live-fire maneuver exercise. The lack of year-round training capability would preclude realistic maneuver training, preventing the Army from meeting a required training component.

2.2.2 Tanana Flats Training Area Roadway Access

2.2.2.1 Proposed Action Alternative

The primary purpose of developing an improved and modernized circulation network within TFTA is to ensure year-round training access to the advantageous training areas on higher ground away from the Tanana River basin and from important TFTA training areas such as the Blair Lakes Impact Area ([Figure 2-13](#)).

Points of initial emphasis include: (1) transportation access across the Tanana River via the Alaska Railroad Corporation bridge near Salcha and (2) the identification of future access routes to the training areas. The bridge would connect the highway system to extensive military training grounds south of the river. It is part of a larger proposed eastward rail expansion of the Northern Rail Extension project. Northern Rail Extension project requirements also include, in addition to the rail line, new structures such as bridges, communications towers, and access roads for rail line construction and operation.

The desired road surface for primary roads would be an approximately 35-foot-wide aggregate surface that would permit the passage of two Stryker vehicles. The Strykers are a family of eight-wheeled, all-wheel-drive vehicles with a gross weight on the order of 18 to 20 tons or more, depending on equipment and armoring (Shannon and Wilson 2009). Further development of the TFTA roadway access proposal would provide for year-round access, internal circulation, expanded maneuver areas, ISBs, and supporting infrastructure, and thus marked improvement in Soldier maneuver exercises.

[Figure 2-13](#) shows the general study area for the TFTA access proposal, including the general west-southwesterly path of the roadway from a point near the future Northern Rail Extension Tanana River Crossing into the training area.

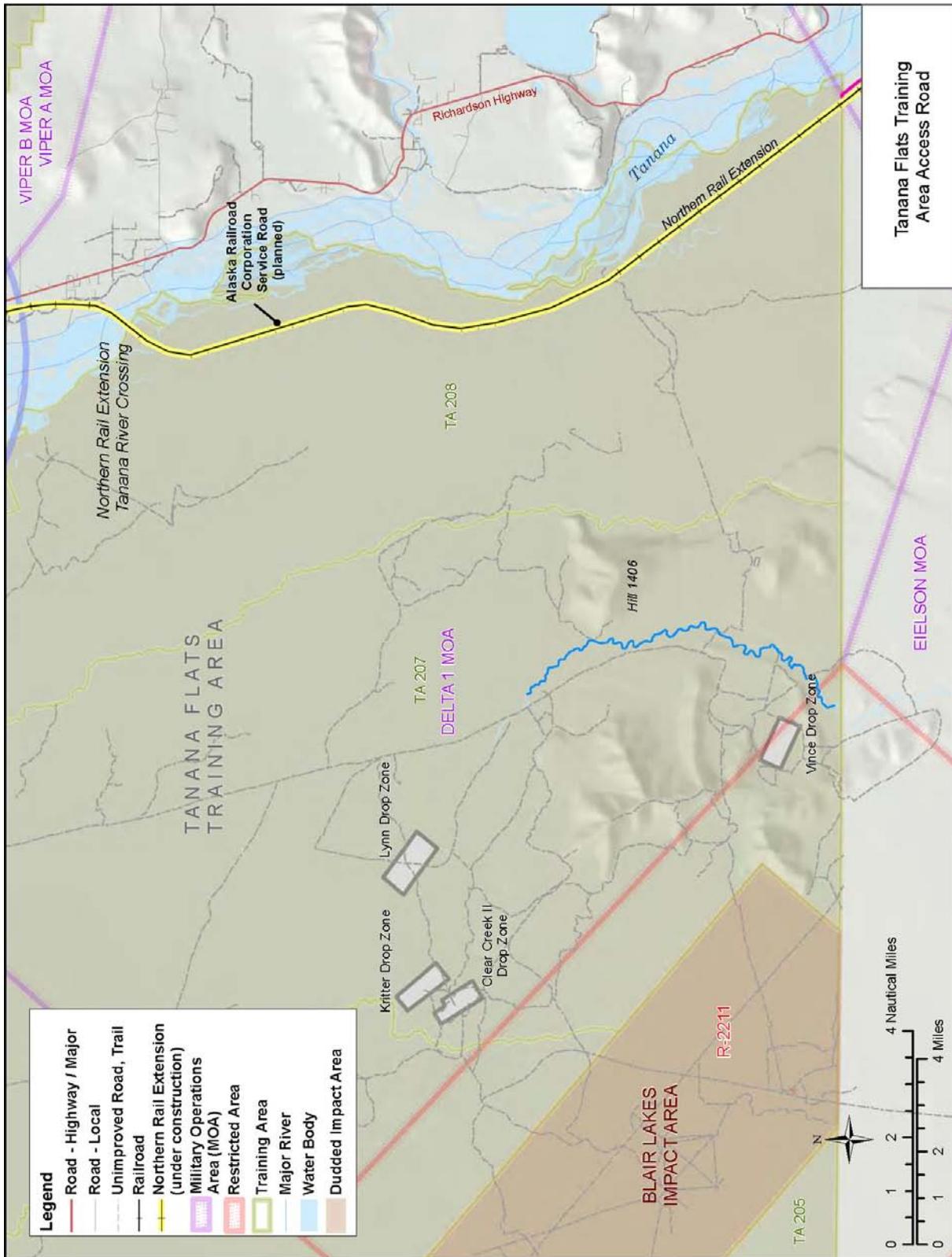


Figure 2-13. Proposed Tanana Flats Training Area Access Road

2.2.2.2 No Action Alternative

The No Action Alternative would not provide for the construction and operation of a year-round access road to provide maneuver space in TFTA. The Army has training requirements for brigade-sized, non-live-fire maneuver exercises in TFTA. The lack of year-round training capability would deny realistic maneuver training, preventing the Army from meeting a required training component and the ability to participate in joint training with the Air Force near the Blair Lakes Impact Area.

2.2.3 Joint Air–Ground Integration Complex

2.2.3.1 Proposed Action Alternative

The JAGIC is a proposed JPARC capability for JIIM and combined live-fire training (see [Figure 2-14](#)). The JAGIC would allow Army combined arms capabilities to jointly operate with the Air Force, Navy, and Marine Corps air-to-air and air-to-ground capabilities, along with Special Operations Forces (see Section [1.5.1.10](#)).

The JAGIC would consist of target arrangements with service roads, range support buildings, parking area, range tower, convoy live-fire route, urban centers, and an area for Service rocket training. Most of the targets, the convoy live-fire route, and the urban facilities would be concentrated in a 9- by 12-kilometer (km) area within the range, and the remainder would serve as a maneuver area. The JAGIC would support aerial target engagements with onboard weapons, aerial reconnaissance, joint tactical engagements, door gunnery training, convoy operations, and training against targets located in an urban environment.

The JAGIC is designed to support at least battalion-size training events interacting with Air Force components. At this time, the training program is designed to support seven combat maneuver battalions training independently of one another. Each battalion would train for a 10- to 14-day event at least once per year. Additionally, JIIM utilization of the JAGIC can be up to 242 days annually. The ground maneuver area for the range could be used to train a Stryker company outside of the hazard footprints of aerial ordnance or indirect fire. The proposed training is not routine, but realistic live-fire training includes more training requirements than the standard Army Digital Air–Ground Integration Range. Urban village centers and adjacent rural areas would be configured to permit simultaneous, integrated operations by Airmen and ground-based forces.

Air Force and Army aircraft would deploy modern weapons using realistic altitudes and speeds at targets downrange from the ground maneuver area without interrupting the surrounding, nonparticipating air traffic. [Table 2-17](#) provides the basic ordnance required for training exercises—exercises that are not, however, limited to these munitions. The intent of this table is to include force multipliers such as lasers, shape charges, breaching charges, and similar munitions in support of JAGIC integration with existing and proposed joint training and exercises.

UAVs would utilize nearby airfields or landing zones. Aircraft targets would require deconfliction by time and would be spatially separated from indirect fire targets for artillery and mortars. All targets would be visible from an observation post within the range.

An existing dud-producing range is planned for use. It would abut a previously contaminated impact area so as not to contaminate new land, such as a temporary impact area. Included in the ground maneuver area is an SBCT/ABCT company assault avenue of approach. The range should be rather flat with few wetlands and central to maneuver areas that provide for avenues of approach in combat scenarios.

Table 2-17. Types of Munitions Utilized in the Joint Air–Ground Integration Complex

Stryker .50 cal 105 mm MGS TOW-2B	All Small Arms 40 mm TPT 5.56 mm 7.62 mm .50 cal	Indirect Fire 60 mm, 81 mm, 120 mm 105 mm 155 mm
<u>Army Aviation</u> .50 cal 30 mm 2.75-inch Practice Rocket 7.62 mm Hellfire Laser Carry Trainer Other Lasers	Aerial Ordnance GBU-10, 12, 16, 24 at FL200–FL240 GBU-31, 32, 38 at FL200–FL240 GBU-32 at FL400–FL500, 1.5M	

Key: cal=caliber; FL=flight level; GBU=Guided Bomb Unit; M=mach; MGS=mobile gun system; mm=millimeter; TOW=tube-launched, optically-tracked, wire-command data link, guided missile; TPT=target practice tracer.

The restricted area and MOA airspace required to support a JAGIC must be of sufficient size and configuration to permit aircraft to maneuver prior to deploying ordnance on the target areas and to encompass the ordnance safety footprints during ordnance delivery. The existing R-2202, R-2205, and R-2211 areas each encompass sufficient lateral and vertical restricted airspace to contain ordnance footprints for the respective range target areas. The surrounding MOA airspace—Eielson, Birch, Buffalo, Yukon, and Fox MOAs—also provide sufficient maneuvering airspace to support JAGIC flight operations. The nature and use of these restricted areas and MOAs are described in detail in Sections [2.1.1](#) (Fox 3/Paxon MOA proposal) and [2.1.6](#) (UAV access proposal).

Current use of the restricted areas is shown in Chapter [3.0](#), Affected Environment and Environmental Consequences.

The range would feature realistic targets, an effective scoring system, and maintenance access by road or air. Power for scoring may be provided by generators or power lines, and communications may be transmitted by microwave or fiber optic cable. The targets should be integrated into an air defense system. While the range itself would be modeled on the standard Army Digital Air–Ground Integration Range, it would also include an integrated live-fire Military Operations on Urban Terrain (MOUT) complex. The ground range would need power and fiber lines and road access. The range should be close to a railhead or road to minimize the travel distance for ground forces and also have an ISB for administrative support.

Due to the operational requirements of the JAGIC, this range could dominate the training area and associated airspace whenever it is active during training exercises. Specifically, the complex urban terrain activities and live aerial ordnance delivery could satisfy other individual requirements; however, placing the burden on a single range and airspace with multiple requirements could limit overall training area utilization by setting up a competition for range time. Additionally, the size of this range could impact training and testing on surrounding infrastructure.

The following siting requirements were used to develop the proposed action:

- The restricted areas must be large enough to contain all of the hazard areas and UAV loitering areas.

- The location should fit into MFE tactical scenarios and be centrally located to the Yukon and Fox MOAs.
- Travel distance for ground and air forces should be minimized.
- The range needs to adjoin an existing dudged impact area.
- Impacts on nonparticipating air traffic should be minimized.
- The range must have UAV access from an airfield or landing zone.
- The ground area must be large enough to support JAGIC training land requirements. It is estimated that the overall complex footprint should be at least 12 by 18 kilometers (km), with the actual range area at 9 by 12 km.
- Construction of new roads and power and fiber optic lines should be minimized.
- The site should be close to ISBs and administrative facilities.
- Utilities needed for scoring would require operations and maintenance support.
- Locations that would affect wetlands and critical or sensitive habitats should be avoided to the extent possible.

JAGIC PROPOSED ACTION STUDY AREAS

Donnelly Training Area–West

One study area involves locating the JAGIC in the central area of DTA-West near the western boundary of the Oklahoma Impact Area. The complex would include the use of the live-fire village at the end of the fire line under the existing R-2202, from the Control Tower to the west. The complex would be able to use existing supporting infrastructure and access roads. However, if designed or used improperly, this complex could degrade Air Force investments in the Oklahoma Impact Area.

Yukon Training Area

A second study area is the Stuart Creek Impact Area within YTA. Use of Stuart Creek is feasible, but extensive unexploded ordnance (UXO) clearance could be a prerequisite for unimpeded ground maneuverability. Stuart Creek is already heavily used and could present scheduling challenges for other training exercises; coordinated scheduling and effective management of Stuart Creek use would be essential.

Tanana Flats Training Area

A third study area is the Blair Lakes Impact Area near the southern boundary of TFTA under the existing R-2211. There is already robust targetry in the Blair Lakes Impact Area. It also overlays the location for the firing observation point. Additional analysis is required to determine if this site has the ability to meet key training requirements, such as the requirement for offensive as opposed to defensive training.

JAGIC STUDY AREA ELIMINATED FROM FURTHER STUDY

Donnelly Training Area–East

This area, originally studied in the JPARC Master Plan, was located in the east side of DTA-West near the southeast boundary of the Oklahoma Impact Area. Since it would require the removal of the CRTIC activities in this area and this site presents the characteristics of a defensive location, it was not considered feasible to meet the key JAGIC siting and operational requirements.

2.2.3.2 No Action Alternative

The No Action Alternative would not provide for the creation and operation of the JAGIC. The lack of a joint air-to-ground integration training capability would deny realistic training, preventing the military from implementing a critical training component that fulfills the vision, goals, and objectives of the JPARC future joint training mission.

2.2.4 Intermediate Staging Bases

2.2.4.1 Proposed Action Alternative

The ISBs proposed to support Soldier training and maneuvers within JPARC would be used to house, maintain, and stage forces before insertion into the combat training area (Army Manual FM 100-5, Operations, Chapter 3.0, Force Projection). An ISB is normally located near but outside the training area. Components to be built would include permanent barracks, large parking areas for storage of truck and vehicular equipment, dining facilities, ammunition storage points, a petroleum-oil-lubricant area, and maintenance facilities. Existing utilities or generators would be used for energy.

The ISB may include an airfield for staging forces. The ISB airfield may be the initial theater reception and staging facility, making it the hub of Army aviation movement into the training area. Deploying forces would depart the ISB by rail, road, or air in preparation for missions in the training area. Onward movement from the ISB to the combat zone may require some level of reassembly in the training area.

The concept of siting ISBs (see [Figure 2-15](#)) near key insertion points locates the Soldiers closer to training areas. They would also provide maintenance and logistics support away from main cantonment areas. Four ISBs with a combined capacity for up to 2,500 Soldiers are needed, one ISB supporting 1,000 Soldiers and three supporting 500 Soldiers each. Each ISB, approximately 110 acres in size, would support large-scale exercises and other training involving combinations of units, including Brigade Combat Teams, Maneuver Enhancement Brigades, and functional brigades.

Constructing and maintaining an ISB present several challenges. These include combining personnel and equipment in a controlled area; scheduling units and material for movement; managing real estate; and providing communications infrastructure. Sizing the ISB to the training space will determine the requirement for the ISB. YTA would need a battalion-size ISB to support a battalion-size maneuver force. Each ISB would also need digital communications connections.

Key siting considerations and implementation options used to develop alternatives for the proposed ISBs include the following:

- Locate the ISB near the existing transportation system serving the parent installation.
- Locate the ISB near key range roads and points of access into training areas.
- Colocate the ISB with planned bridge crossings.
- Position ISB sites to provide proximity to more training land and ranges.

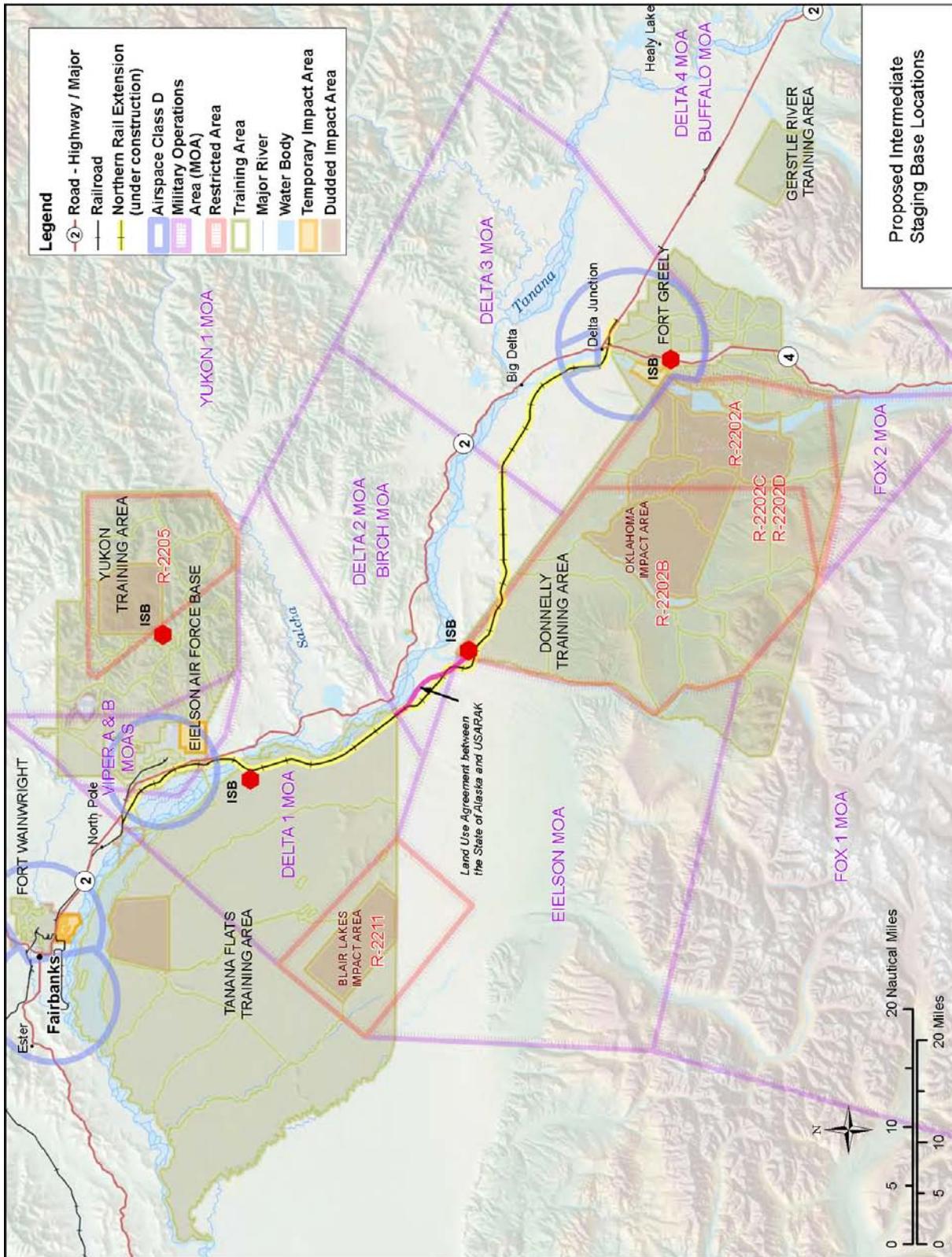


Figure 2-15. Proposed Intermediate Staging Base Locations

The ISBs will be evaluated as part of the proposed actions to provide enhanced ground maneuver space and the TFTA road access alignments. The facilities would be for JIIM use, not Army use only. Proposals call for location of these ISBs at key points along the planned rail corridor close to the planned bridge crossings. As an example, an ISB could be located near the Fort Greely Ice Bridge with a direct road link to the planned rail bridge crossing. The optimum solution would be to have ISBs and staging facilities at key locations within major maneuver areas, instead of a single large facility at a single location.

2.2.4.2 No Action Alternative

Under the No Action Alternative, existing “relocatable” ISB facilities would continue to be used. These temporary facilities do not reflect real-world, deployed-training scenarios in which the ISBs play a critical role.

2.2.5 Missile Live-Fire for AIM-9 and AIM-120

2.2.5.1 Proposed Action Alternative

For the future, the Air Force needs a fully instrumented range, which would require considerable investment.

The proposal includes an additional 100 missile exercises to be undertaken in the Temporary Maritime Activities Area (TMAA) each year. Twenty-four would include AIM-9 Sidewinder missiles and 18 would include AIM-120 AMRAAM missiles. The Navy GOA EIS covers non-Navy participants in joint training exercises, such as the Air Force, but only when joint training activities are occurring that the Navy is participating in, since the Navy is the lead agency, prepared the EIS, and prepared and maintains the permits (U.S. Navy 2011).

The AIM-9 and AIM-120 missile systems are the main air-to-air armaments for the F-22 and other aircraft training in Alaska and equipped to fire this ordnance. Effective training with these systems requires live training shots executed as part of individual pilot training and in joint training exercises with other air and ground units, such as NORTHERN EDGE. Live ordnance delivery requires use of either restricted areas with range target areas or a warning area of sufficient size to contain the explosive hazard areas associated with these missile systems. Instrumentation would be needed to control drones, radar, radio relays, and weapon telemetry and termination equipment in support of this training activity. Additional study will be necessary to determine all requirements needed to support this proposed action. Sufficient information is currently not available to fully identify and evaluate these requirements.

AIRSPACE REQUIREMENTS

Under this proposed action, the existing TMAA and Warning Area 612 (W-612) in the Gulf of Alaska (GOA) would be used by the Air Force for live delivery of the AIM-9 and AIM-120 missiles by fighter aircraft. This proposal provides that the ordnance would land in W-612. The TMAA, as shown in [Figure 2-16](#), is approximately 300 NM long by 150 NM wide, situated south of Prince William Sound and east of Kodiak Island. It extends from the surface to FL600 and is currently scheduled for use by Alaskan Command (ALCOM) to support training conducted by Navy and joint forces aircraft for NORTHERN EDGE and other exercise activities. The TMAA includes surface and subsurface operations areas and overlies a portion of W-612, over the Blying Sound. W-612 extends from the surface to FL290, and the scheduling agency for this airspace is the 3rd Wing. When not included as part of the TMAA, W-612 is used by the Air Force to conduct training in anti-air warfare (AAW) and by the U.S. Coast Guard to fulfill some of its training requirements. Most Navy training activities occur in the TMAA (Navy 2011).

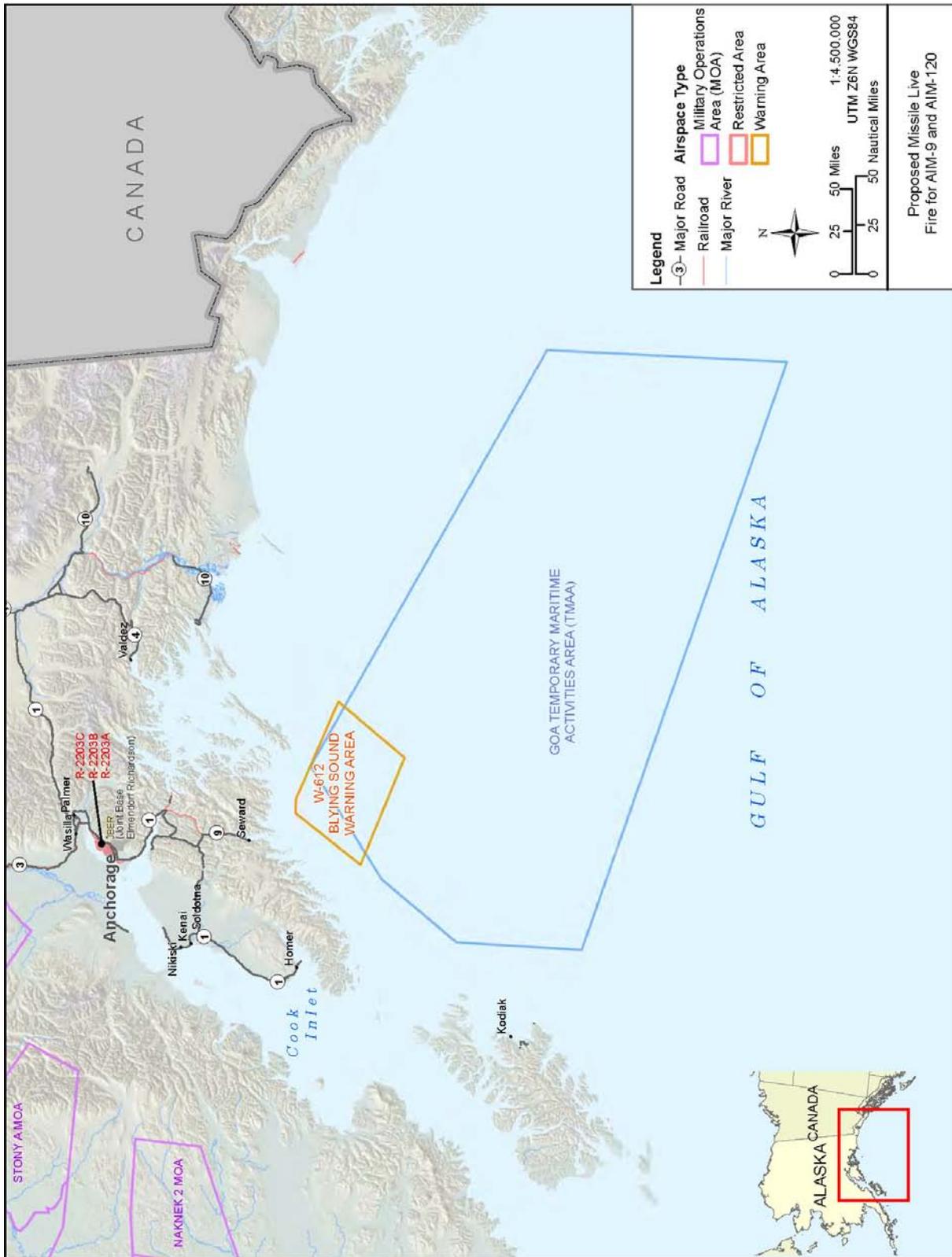


Figure 2-16. Proposed Missile Live-Fire for AIM-9 and AIM-120

AIRSPACE USE

Use of the GOA is described in the *Gulf of Alaska Navy Training Activities Final Environmental Impact Statement/Overseas Environmental Impact Statement*, which indicates training with AIM-9 and AIM-120 missile systems is conducted by FA-18, F-15, F-16, F-22, E-2C, EA-6B, and EA-18G aircraft during exercise activities (Navy 2011). The Air Force estimates that approximately 100 live-fire sorties with these systems would be conducted annually by the Air Force to meet training requirements.

2.2.5.2 No Action Alternative

The No Action Alternative would not allow for a location within Alaska in which to conduct training with the AIM-9 and AIM-120 missiles as described in the proposed action. Other locations, such as Tyndall AFB, Florida, may not prove to be effective or efficient in satisfying this training requirement.

2.2.6 Joint Precision Airdrop System Drop Zones

2.2.6.1 Proposed Action Alternative

The JPADS is revolutionizing the way the military delivers supplies and equipment to ground forces. JPADS includes an array of global positioning system (GPS) receivers and steerable parachutes to support aerial resupply training under varied, realistic conditions. JPADS is capable of hitting DZs from much higher altitudes than conventional parachute systems with critical resupply payloads. Those payloads are dropped from C-17 and C-130 fixed-wing aircraft by the Air Force.

A minimum drop altitude of 10,000 feet AGL—the optimum being at least 25,000 feet AGL—is required to give JPADS time to locate the guidance signal after the payload leaves the aircraft. Moreover, JPADS DZs require restricted areas or warning areas of sufficient size to accommodate a JPADS safety area and must comply with other risk management requirements of the Army Materiel Command. The land must also be reasonably unencumbered to ensure efficient, safe, and cost-effective equipment recovery operations in the unlikely event of equipment malfunction.

Aircrews need JPADS training under various, realistic conditions. Given the existing Army Materiel Command regulations, however, JPADS training exercises cannot be currently undertaken as part of the joint training activity at JPARC. This is due primarily to the small size of the restricted areas that currently exist at JPARC. Another problem is the cost of the dropsondes parachutes and support equipment, which limits local aircrew training to JPADS simulations. Alaska-based aircrews with the requirement to train at optimum JPADS capabilities must currently travel to Yuma Proving Ground, Arizona, to receive such training.

JPADS training should be an integral part of the JPARC joint training regimen, as a JPADS capability would modernize and otherwise enhance the conduct of joint resupply operations between the Air Force, Air National Guard, and Army. The Army has in fact already indicated a potential future requirement to employ JPADS from CH-47 rotary-wing aircraft and for parachute rigger training.

In this EIS, JPADS will be evaluated programmatically in order to better identify the relevant requirements and impacts. The evaluation will focus primarily on safety, airspace, reliability, cost, and recovery requirements. Such an evaluation will allow JPADS to be integrated into future JPARC MFEs and large joint exercises under conditions of optimum operational capability.

Key siting and training area considerations used to develop this proposal include the following:

- JPADS will primarily be used during large joint exercises in the northern training areas to resupply ground troops via Improved Container Delivery System (ICDS) and guided JPADS platforms when they become available; it will not be used for normal daily training.
- JPADS requires a restricted area (with a radius of 25 miles) for a maximum surface hazard zone.
- Training requires a landing zone that is clear of personnel and equipment because of the risk of an equipment malfunction.
- The landing zone must be located in a reasonably unencumbered area to allow for the safe, efficient, and cost-effective recovery of the JPADS-related equipment.
- The landing zone must be outside UXO-contaminated areas.
- The JPADS requirement would not require new airspace.
- No infrastructure would be required for this proposal.

JPADS PROPOSED ACTION STUDY AREAS

R-2205 in Yukon Training Area

One study area concerns the conduct of JPADS operations in R-2205 in YTA during MFEs and large joint exercises under conditions of optimum operational capability (see [Figure 2-17](#)).

R-2202 in Donnelly Training Area

A second study area concerns the conduct of JPADS operations in R-2202 in DTA outside of known duded impact areas during MFEs and large joint exercises under conditions of optimum operational capability (see [Figure 2-17](#)).

The key distinction between the alternatives is that R-2205 currently has more time available to accommodate JPADS training exercises.

2.2.6.2 No Action Alternative

The No Action Alternative would not provide the military an opportunity to undertake JPADS training exercises, which is an important part of the overall JPARC concept of operations.

2.0 – Description of Proposed Action and Alternatives
 2.2 Programmatic Actions Evaluated in this EIS

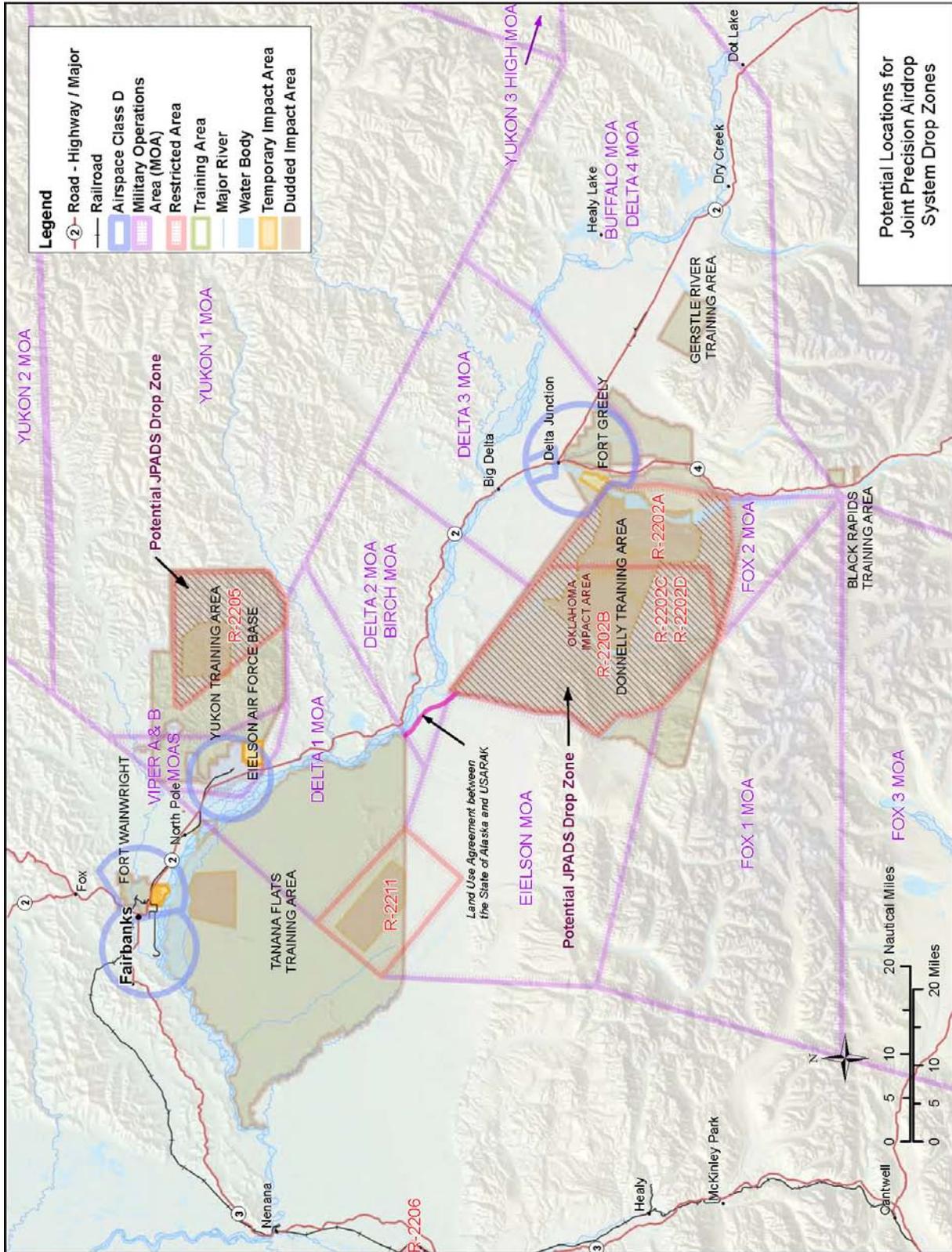


Figure 2-17. Potential Locations for Joint Precision Airdrop System Drop Zones

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