

**BY ORDER OF THE COMMANDER
NEVADA TEST AND TRAINING RANGE
(ACC)**



AIR FORCE MANUAL 13-212 VOLUME 1

**AIR COMBAT COMMAND
SUPPLEMENT**

NEVADA TEST AND TRAINING RANGE

Addendum A

24 JULY 2020

**Nuclear, Space, Missile, Command and
Control**

RANGE PLANNING AND OPERATIONS

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ACCESSIBILITY: Publications and forms are available on the e-Publishing web site at www.e-Publishing.af.mil for downloading.

RELEASABILITY: There are no releasability restrictions on this publication

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Pages: 178

This addendum complements AFMAN 13-212, Volume 1, *Range Planning and Operations*, and complements that manual as well as AFMAN 13-212V1 ACC Supplement; it supersedes AFI13-212V1_ACCSUP_NTTRSUP (30 May 18). It governs operations on the Nevada Test and Training Range (NTTR) and provides guidance for all range operations and applies to all range users. Range users and sponsoring agencies may amplify this Addendum with more restrictive guidance, as necessary, in order to provide direction to their organizations. All applicable Air Force Instructions (AFI), Federal Aviation Administration (FAA) Orders, and Federal Aviation Regulations (FAR) apply. This Addendum requires the collection and maintenance of information protected by the Privacy Act (PA) of 1974. The authority to collect and/or maintain the records prescribed in this instruction is 37 USC 301a. Privacy Act system notice F036 AF PC C, Military Personnel Records System, applies. Send comments and/or change recommendations via AF Form 847, *Recommendation for Change of Publication*, to NTTR/DO, 3770 Duffer Dr., Nellis AFB NV 89191-7001. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/>.

SUMMARY OF CHANGES

This publication includes a series of minor changes, including the removal of the 25th Space Range Squadron's attachment, and the classified attachment which is now centrally controlled by NTTR/RSO; updates to range access points; scheduling procedures for test targets; scheduling timelines as well as changes to scheduling requirements; and multiple format changes to align this addendum with Attachment 6 of the ACC supplement to AFMAN 13-212V1. Finally, this addendum officially completes the transition of EC South into Range 77A and 77B.

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Chapter 1

RESPONSIBILITIES

1.1. General Information. The Nevada Test and Training Range (NTTR) is designated a Major Range and Test Facility Base (MRTFB) resource by Department of Defense (DOD) Directive 3200.11, *Major Range and Test Facility Base*. The range is the United States' largest and most sophisticated instrumented battlespace for testing and training for US military and coalition forces. The range comprises 2.9 million acres of ground space and approximately 12,000 square nautical miles (NM) of airspace. Headquarters (HQ) NTTR (a named USAF unit responsible for managing the range) manages the range, working in close collaboration with the entire spectrum of range users. HQ NTTR provides an integrated battlespace, supporting air, space, and cyberspace testing, advanced training, and tactics development via live, virtual, and constructive environments.

1.1.1. IAW FAA Order JO 7400.8Y, the Nevada National Security Site (NNSS) Nevada Field Office (NFO) has been designated as the Using Agency of R-4808, which overlies the Nevada National Security Site (NNSS). Additionally, IAW the 1981 Memorandum of Understanding between the Department of the Air Force (DAF) and Department of Energy (DOE), the agencies agree to the cooperative use of the land and airspace of the NNSS. NTTR users who wish to use R-4808 airspace will coordinate their desires through the NTTR Scheduling Process to obtain NNSS/NFO and/or DOE approval.

1.1.2. IAW FAA Order JO 7400.8Y, the USAF Warfare Center has been designated as the Using Agency for R-4806, R-4807, and R-4809.

1.1.3. The lands that comprise the geographical NTTR were last renewed as a congressional withdrawal under the Military Lands Withdrawal Act of 1999 (PL 106-65, Title XXX). Off range there are major communication sites to include Angel Peak, Highland Peak, Mt Ella and Mt Irish.

1.1.4. Under a 2019 DAF permit, the NNSA/Sandia Field Office (SFO) has been granted non-exclusive use, operation, and occupancy of specified portion of the NTTR. The real property defined is referred as Premises with a Coordinated Use Area. There is a 13 Nov 19 Operating Agreement (OA) that defines the arrangement with SFO for combined operations and AF support. SFO supports Joint Test Assembly (JTA) testing for the nuclear stockpile stewardship mission. NNSA/NA-10 and AF/A10 have an MOA titled the *Joint Testing and Assessment of The Nuclear Weapons Stockpile*, dated 13 Aug 12, that defines JTA testing on the NTTR.

1.2. HQ NTTR Organization.

1.2.1. Commander, NTTR (NTTR/CC). NTTR/CC was designated the Range Operating Authority (ROA) for the NTTR in AFMAN13-212V1, para 2.9. The ROA is responsible for leading overall range management. This includes operating and maintaining range equipment, maintaining safety of personnel and material resources. The scope of the

geographical range area includes lands internal to the NTTR boundary and several off-range communication sites. The ROA coordinates the NTTR's Special Use Airspace with the 57 WG. The ROA manages range activities for Air Combat Command (ACC) as institutionally-funded and as project support as an MRTFB through user-funded means.

1.2.2. HQ NTTR Organization.

1.2.2.1. NTTR Plans and Programs Office (NTTR/XP) is responsible for advocating for long-term range requirements in development of the Program Objective Memorandum (POM) with HQ ACC. NTTR/XP ensures the NTTR is able to meet long-term test and training requirements as development and integration by working with multiple using activities and higher headquarters. NTTR/XP serves as the range liaison for agreements, land use, encroachment and environmental with 99 ABW units and off-base organizations. NTTR/XP works closely with state, county and federal agencies and notably focuses range coordination with the Bureau of Land Management (BLM) and the US Fish and Wildlife Service (USFWS).

1.2.2.2. NTTR Information Protection Office (NTTR/IP) is responsible for NTTR collateral security, access control, and advanced program security. Visitor requests will be coordinated through the NTTR/IP using the NAFB Form O-74, *NTTR Visit Request/Authorization*. NTTR/IP establishes procedures and assigns responsibilities governing visitor requests, visitor badges, sensitive equipment requests and vehicle requirements for personnel entering the range and its facilities. NTTR/IP establishes procedures and assigns responsibilities governing advanced program matters and coordinates with ACC/A58Z and other AP offices.

1.2.2.3. NTTR Safety Office (NTTR/SE) is responsible for overall range safety policies, developing Range Safety Assessments (RSA) for unique and emerging range uses, supporting the Weapon Danger Zone (WDZ)/Surface Danger Zone (SDZ) processes, managing laser, electromagnetic frequency and ionizing radiological safety, conducting safety review boards (SRB), and leading NTTR safety investigations.

1.2.2.4. NTTR Financial Management Office (NTTR/FM) is responsible for NTTR budgetary activities. NTTR/FM manages the Job Order Cost Accounting System (JOCAS) II interface and prepares wing-level budget documents. NTTR/FM assigns a Job Order Number (JON) that corresponds to the user's specific activity. Project coordination and funding (if applicable) will be conducted IAW the NTTR Business Management Process (BMP). NTTR/FM is the OPR for the NTTR Products and Services Catalog.

1.2.2.5. NTTR Program Management Office (NTTR/PM) is responsible for program management of the Range Support Services (RSS) contract across multiple sites (to include NTTR and Creech AFB). NTTR/PM oversees all aspects of RSS contract execution, including cost, schedule, performance, and proposals estimate coordination. NTTR/PM serves as the primary conduit to both the Contracting

Officer and the RSS contractor.

1.2.2.6. NTTR Range Support Directorate (NTTR/RS) is responsible for program management of the Joint Range Technical Services Contract (JTECH) II contract. NTTR/RS functions as the primary conduit between the Contracting Officer and the JTECH II contractor for NTTR JTECH functions, while the JPMO at Edwards AFB serves as the PM. NTTR/RS also manages NTTR Threat Systems (radio callsign ROULETTE), Air Combat Training System P5 pods, debriefing systems, communications, engineering support, and (through the NTTR Spectrum Management Office (SMO)) radio frequency (RF) spectrum management (IAW AFI 17-220 and/or CJCSM 3212.02). Threat scheduling is managed by the JTECH II Threat Scheduler.

1.2.2.7. NTTR Mission Support Directorate (NTTR/MS) is responsible for logistics support (supply, transportation, and fuel) and civil engineering management (operations, construction, and infrastructure) on the NTTR. NTTR/MS executes oversight and evaluation of contractor operations for the RSS contract.

1.2.2.8. NTTR Operations Directorate (NTTR/DO) is responsible for daily range management, planning, and maintenance management for the NTTR and is the focal point for operational requirements and flight safety (including airspace deviation processing). The Director of Range Operations leads NTTR/DO and is designated as the Range Operations Officer (ROO). The ROO serves as the Scheduling Authority (SA) for flight and ground operations on NTTR. The ROO is the NTTR deviation and waiver authority for this Addendum. Key organizational sections include:

1.2.2.8.1. NTTR Range Projects provides project support and execution of NTTR activities. Project managers support range users by serving as the primary point of contact (POC) between users and the various support agencies participating in the NTTR BMP.

1.2.2.8.2. NTTR Range Scheduling schedules activities on the NTTR and monitors range utilization rates. Range Scheduling utilizes the Center Scheduling Enterprise (CSE) software to collaborate with a wide variety of range stakeholders in scheduling NTTR activities.

1.2.2.8.3. NTTR Targets Management oversees target configuration, distribution, maintenance, remediation and ongoing use of range targets, including two Cluster Bomb Unit (CBU) targets and one Depleted Uranium (DU) strafe target. Additionally, NTTR Targets Management collaborates with the range support contractor to manage multiple target storage yards, including multiple DU storage yards. Finally, Targets Management supports the WDZ/SDZ processes.

1.2.2.8.4. NTTR Range Monitoring (i.e., BLACKJACK) is a contractor-staffed, range safety monitoring section that provides real-time range

scheduling (day prior and day of activity), ground party access approval for scheduled ground activities, personnel recovery coordination, and special test assistance.

1.2.2.8.5. NTTR Current Operations is responsible for the day-to-day management of the NTTR Range Operations Center (ROC). Specifically, through the NTTR Joint Data Network Cell (JDNC), it is responsible for all data link operations in support of NTTR test, tactic development, and advanced training events. NTTR Current Operations also submits Satellite Access Requests (SARs), when requested.

1.2.2.9. The NTTR hosts a Joint Staff/J7 provided JIOR Service Delivery Point (SDP) within the NTTR ROC. The JIOR SDP provides support to cyberspace and multi-domain testing, training, and tactics development.

1.3. 99th Air Base Wing.

1.3.1. The commander, 99th Air Base Wing (99 ABW/CC) is designated the Installation Command Authority (ICA) for the DOD lands withdrawn from public for use as the NTTR.

1.3.2. 99th Civil Engineer Squadron (99 CES) provides real property management support as the Base Civil Engineer (BCE), with NTTR/MS overseeing contracted civil engineer operations under the NTTR Range Support Services contract. Additionally, 99 CES provides range Explosive Ordnance Disposal (EOD) support to the range. Environmental coordination is supported by the 99 CES in collaboration with the Air Force Civil Engineering Center (AFCEC) and AF Installation and Mission Support Center (AFIMSC). Specific BCE responsibilities are further articulated in 99 ABW, AFCEC, and/or AFIMSC plans and publications.

1.3.3. 432nd Mission Support Group (432 MSG) provides base support for Creech AFB, including controlling and managing ground access to, and providing integrated defense for, Creech AFB.

1.3.4. 432nd Security Forces Squadron (432 SFS) provides physical security support to the NTTR and is the primary user of the Combined Arms Range Complex (CARC) within R-63C. Additionally, the 432nd SFS Base Defense Operations Center (BDOC) facilitates access to the southern ranges via the North Gate (providing transit between Creech AFB and Mile Range Road) and the South Gate (providing transit between Creech AFB and Box Canyon Road).

1.4. 57th Wing (57 WG).

1.4.1. 57th Operations Group (57 OG) directs and executes Air, Air Defense, Space, and Information Aggressor tactics on the NTTR.

1.4.2. 57th Operations Support Squadron Weather Flight (57 OSS/OSW) is the focal point for Nellis AFB weather services and is supported, via memorandum of agreement, by 25th Operations Weather Squadron (25 OWS).

1.4.3. 57th Operations Support Squadron Airspace Management Flight (57 OSS/OSM) is responsible, in conjunction with the FAA, for investigating deviations on the NTTR that involve the National Airspace System, as well as other airspace management functions as described in AFI 13-201, *Airspace Management*.

1.4.4. 57th Operations Support Squadron Airfield Operations (57 OSS/OSA) manages Nellis AFB air traffic control through the Nellis Tower and the Nellis Air Traffic Control Facility (NATCF), which encompasses both Nellis Approach and Nellis Control.

1.4.5. 57th Operations Support Squadron Scheduling (57 OSS/OSOS). 57 OSS/OSOS oversees the Nellis AFB and Creech AFB operations scheduling process and is the focal point for operations scheduling related issues. Additionally, the 57OSS/OSOS is responsible for operating and administering Patriot Excalibur (PEX) scheduling software.

1.5. Tonopah Test Range Operations Office (TTRO). TTRO acts as a liaison between the Air Force Test Center (AFTC) and HQ NTTR. TTRO manages the Tonopah Test Range (TTR) installation and airfield services, as well as providing physical security support to the northwestern portion of the NTTR.

1.6. Sponsoring Agencies. In addition to HQ NTTR, DOE, NNSS/NFO, and NNSS/SFO act as key sponsoring agencies for range activities.

1.7. Range Users. The range may be used by DOD (both local and off-station) units, other US government agencies, state and local governments, allied foreign governments, and commercial users. All users require expressed HQ NTTR approval to operate on range.

1.7.1. Local units. 57 WG, 432 WG, and Nellis/Creech AFB-assigned tenant units are considered local units.

1.7.2. Off-station units. IAW NAFBI 11-250 and CAFBI 11-250, a local host unit must be assigned and identified to facilitate range support for the off-station organization requesting range activity and launching from or recovering to Nellis/Creech AFB. Off-station requestor who will not launch from or recover to Nellis/Creech AFB are not required to have a host unit, however, their request must be managed through the NTTR BMP.

1.7.2.1. Off Station Ground Parties are required to have a local area briefing from a local host unit covering NTTR procedures prior to range activity. Deployed unit commanders will ensure their host unit is informed of any additional events the deployed unit will accomplish outside of their scheduled, approved activity. Nellis host unit will provide an entry access list (EAL) identifying all Foreign National participants in flight operations on the NTTR to NTTR/DO no later than 7 days prior

to range activity. All off-station ground party range activity must be managed through the NTTR BMP.

1.7.3. Use of the range by other US government agencies, state and local governments, allied foreign governments, and commercial users is carefully managed through the NTTR BMP.

1.7.3.1. Detailed organizational, programmatic, and operational information must be obtained from any prospective commercial user in order to assess any conflicts with NTTR core activities. Developmental commercial activity, in particular, will be subjected to rigorous review.

1.7.3.2. HQ NTTR will accomplish commercial organizational vetting, review proximity to sensitive activities, and assess possible Electromagnetic Interference (EMI)/Radio Frequency Interference (RFI) encroachment through the NTTR BMP.

1.7.4. Prior to operating on the range, all users must obtain the NTTR Orientation Briefing from NTTR/IP and conducted in the HQ NTTR building. Local host units are responsible for ensuring all off-station, hosted units receive the briefing. Additionally, host units will provide escort on-range and in controlled-access areas at all times and adhere to published restrictions and security guidelines.

1.8. Scheduling Policy. Competition for limited range resources is an ever-present fact on the NTTR. In addition to testing, training, and tactics development uses, range infrastructure maintenance, target maintenance, and EOD operations are fundamental range requirements that must be accommodated. These fundamental activities will be accomplished IAW applicable directives and as required to provide a safe and secure range environment. These fundamental requirements are carefully balanced with user requirements to ensure effective and efficient availability for all range users.

1.8.1. Scheduling Priorities. The following prioritized list, while authoritative, is not directive and requires judgment in application. Nevertheless, it provides range users and range decision makers a standard frame of reference with which to balance competing requirements. Scheduling will be accomplished through the NTTR Scheduling Process and scheduling conflicts will be resolved through NTTR Conflict Adjudication Process. Use of the range is prioritized as follows:

1.8.1.1. DOE.

1.8.1.2. NNSS/NFO.

1.8.1.3. NNSS/SFO.

1.8.1.4. DOD higher headquarters-directed, priority uses (including USAF operational testing of Office of the Secretary of Defense (OSD) Test and Evaluation (T&E) Oversight List systems; Exercise Red Flag; USAF Weapons School

Integration Phase (WSINT); Marine Aviation Weapons and Tactics Squadron One Final Exercise; and the Neptune Series Exercises.

1.8.1.5. ACC Test Priority List (TPL), exclusive of operational testing of OSD T&E Oversight List systems.

1.8.1.6. ACC formal training syllabus (exclusive of WSINT).

1.8.1.7. Other Nellis AFB and Creech AFB testing and operational training.

1.8.1.8. Other DOD uses.

1.8.1.9. Other US Government agency, state, and local government uses.

1.8.1.10. US-Allied military uses.

1.8.1.11. Commercial uses.

1.8.2. In addition to the above prioritized list, statutorily-driven uses (such as the Stonewall Mountain and Desert National Wildlife Refuge (DNWR) Bighorn Sheep hunts) will be supported to the maximum extent possible.

1.8.3. 432 SFS and 99 SFS normally have first priority among DOD users for use of the CARC on R-63C.

1.8.4. Late emerging requirements (i.e., post-NTTR Range War meeting) will be entertained to the extent feasible, however, the priority that would otherwise be attendant cannot be guaranteed. Late emerging requirements will be considered through the NTTR Scheduling Adjudication Process.

Chapter 2

DESCRIPTION OF RANGE AND MILITARY OPERATING AREAS

2.1. Basic Boundaries. The NTTR is comprised of Reville North, Reville South, the Desert Military Operations Areas (MOA), Air Traffic Control Assigned Airspace (ATCAA), and the restricted areas R-4806, R-4807, and R-4809. It provides Class B and Class C ranges that include Air-to-Surface, Electronic Combat, Surface-to-Air, and Air-to-Air, with Air Combat Training System instrumentation. Access to each area is allocated IAW the daily range schedule. Since R-4808 overlies the NNSS, NTTR users who wish to use R-4808 airspace will coordinate their desires through the NTTR Scheduling Process to obtain NNSS/NFO and/or DOE approval.

Figure 2.1. Basic Boundaries.

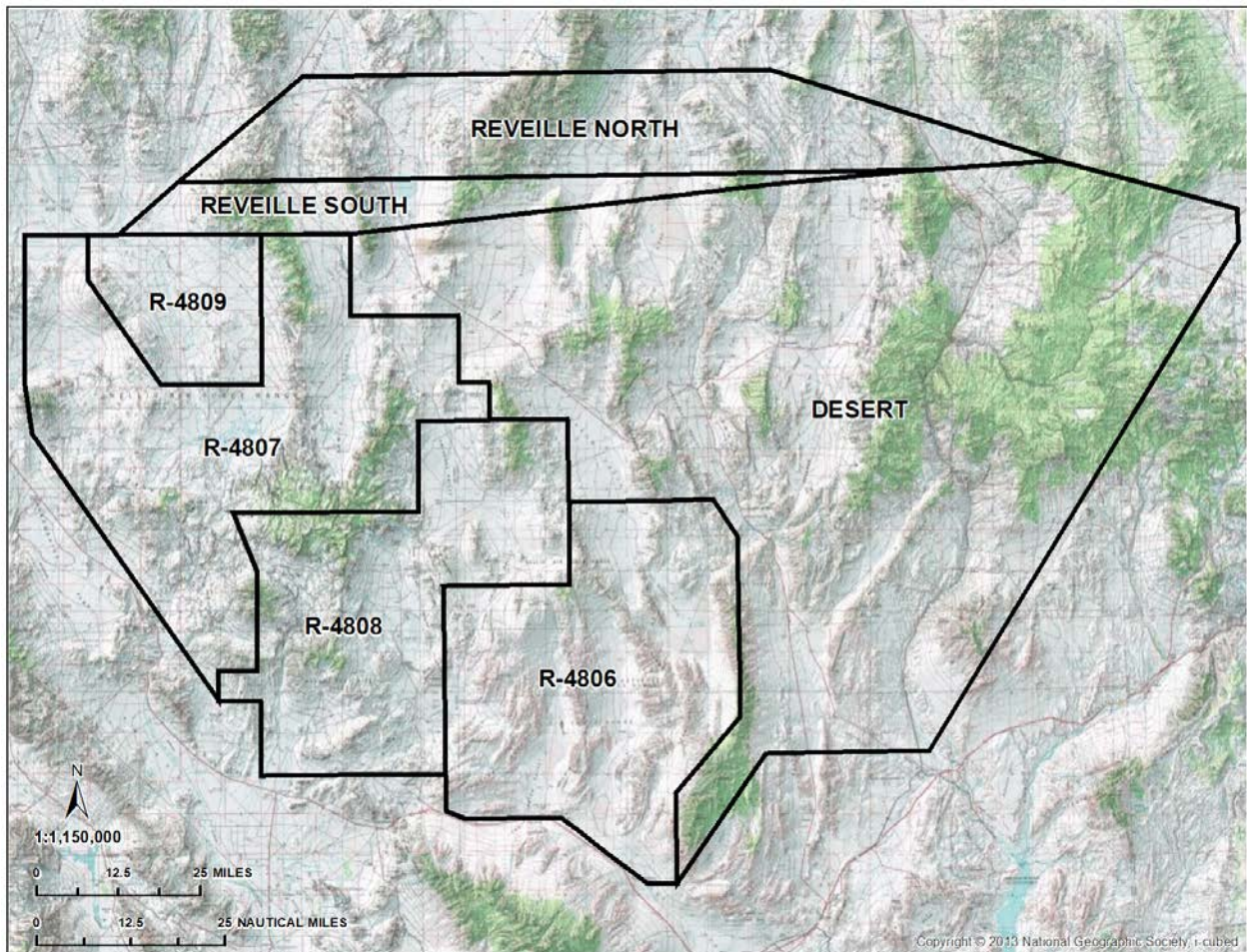


Table 2.1. FAA Designations and Associated Subranges.

FAA Airspace Designation	FAA Sub-Airspace Designation	NTTR Subrange Designations
R-4806	R-4806E	Alamo A/B/C ³
	R-4806W ^{2,3}	R-61A/B
		R-62A/B
		R-63A/B/C ⁴
		R-64A/B/C/D/E/F/G
		R-65A/B/C/D
R-4807	R-4807A	R-71N/S ⁵
		R-74A/B/C
		R-75E/W
		R-76 ⁵
		EC East ⁶
		R-4807A (Subset)
		R77A/B
	Tolicha Peak Electronic Combat Range (TPECR) ⁷	
R-4807B	Pahute A/B	
R-4808	R-4808N	R-4808A/B/C/D ⁸ /E
	R-4808S	NA
R-4809	EC West	EC West
	R-4809A	R-4809A ^{6,9}
	R-4809B	R-4809B
Reveille North MOA	Reveille North MOA and ATCAA	Reveille North
Reveille South MOA	Reveille North MOA and ATCAA	Reveille South ¹⁰
Desert MOA ¹	Desert MOA and ATCAA	Coyote A/B/C/D
		Caliente A/B/C
		Elgin
		Sally Corridor

Note 1: Although not part of the Desert MOA, an area to the southeast section of the MOA is identified as the "X-Ray Extension."

Note 2: Although not specified subranges, Creech Tower Airspace (CTA) lies within R-4806W as well as two USAF Aerial Demonstration Squadron (Thunderbirds) training areas.

Note 3: Although not a specified subrange, a corridor within Alamo A/B/C (FL190 to FL210) is identified as "Alamo Corridor."

Note 4: R-63B High overlies the southeast portion of R-63B, 7,000ft MSL to unlimited.

Note 5: No Impact Zone (NIZ) storage areas lay within R-71S and R-76 and may be manned.

Note 6: Although not specified subranges, three NNSS/SFO supersonic target entry cones lie within EC East and R-4809A.

Note 7: For scheduling and supersonic operations purposes, TPECR includes FAC A/B ground/airspace.

Note 8: Although not a specified subrange, an area in the north of R-4808D (above 2,500ft AGL) is identified as the "Gomer Triangle."

Note 9: Although not specified subranges, Silverbow Tower Airspace (STA) lies within R-4809A as well as an area south of N37 42.90 (above 500ft AGL) which is identified as the "Shelf."

Note 10: Although not a specified subrange, an area in the west of Reveille South is identified as the "Dorito."

2.3. Military Assumes Responsibility for Separation of Aircraft (MARSA). Military aircraft operating on the NTTR normally operate under MARSA rules and will use the Nellis AFB local altimeter setting. MARSA applies only between participating military aircraft and does not apply for separation from civil aircraft (except contractor aircraft participating in a DoD event). NATCF will not clear civil and military aircraft operating under IFR into a MOA and ATCAA unless they can provide IFR separation from participating aircraft and have NTTR Range Monitoring coordination. Advisory control to aircraft operating in NTTR-scheduled airspace is provided by Ground Control Intercept (GCI) controllers.

Table 2.2. Routine Civil Air Presence.

FAA Airspace Designation	Civil Presence
R-4806	Designated as Joint-Use through agreement with the FAA; available for non-military aircraft transition under NATCF control when not activated for NTTR-scheduled use.
R-4807	Designated as Joint-Use through agreement with the FAA; available for non-military aircraft transition under NATCF control when not activated for NTTR-scheduled use.
R-4808	Designated as Non Joint-Use through agreement with the FAA; not available for civil aircraft.
R-4809	Designated as Non Joint-Use through agreement with the FAA; not available for civil aircraft.
Reveille North MOA	IAW FAA regulations, civil air traffic may be present.
Reveille South MOA	IAW FAA regulations, civil air traffic may be present.
Desert MOA	IAW FAA regulations, civil air traffic may be present.

2.4. Air Traffic Control (ATC). Controlling Agency responsibilities for the NTTR are designated IAW FAA Order JO 7400.8Y. Key ATC agencies include Los Angeles Air Route Traffic Control Center (LA ARTCC) and Salt Lake City ARTCC (SLC ARTCC), Dreamland Approach Control (DML), and NATCF.

2.4.1. Specific NTTR ATC responsibilities are further delegated and designated through Letters of Agreement (LOAs) and Certificates of Authorization (COAs).

2.4.2. In addition to NTTR Range Monitoring, NNSS/NFO accomplishes independent R-4808 range monitoring through Birddog Operations (callsign BIRDDOG). Birddog Operations may be contacted at (702) 295-2467.

Table 2.3. ATC Responsibilities.

FAA Airspace Designation	FAA Sub-Airspace Designation	NTTR Subrange Designations	Controlling Agency ¹
R-4806	R-4806E	Alamo A/B/C	NATCF
	R-4806W	R-61A/B	NATCF
		R-62A/B	NATCF
		R-63A/B/C	NATCF
		R-64A/B/C/D/E/F/G	NATCF
		R-65A/B/C/D	NATCF
R-4807	R-4807A	R-71N/S	NATCF
		R-74A/B/C	NATCF
		R-75E/W	NATCF
		R-76	NATCF
		EC East	NATCF
		R-4807A (Subset)	NATCF
		R77A/B	NATCF
	TPECR	NATCF	
R-4807B	Pahute A/B	NATCF	
R-4808	R-4808N	R-4808A/B/C/D/E	DML
	R-4808S	R-4808S	LA ARTCC: FL280 and above NATCF: 11,000ft MSL to FL270 DML: Surface to 10,000ft MSL
R-4809	EC West	EC West	NATCF
	R-4809A	R-4809A	NATCF
	R-4809B	R-4809B	NATCF
Reveille North MOA	Reveille North MOA and ATCAA	Reveille North	SLC ARTCC: 100ft AGL to FL600 ²
Reveille South MOA	Reveille South MOA and ATCAA	Reveille South	SLC ARTCC: 100ft AGL to FL600 ²
Desert MOA	Desert MOA and ATCAA	Coyote A/B/C/D	NATCF
		Caliente A/B/C	NATCF
		Elgin	NATCF
		Sally Corridor	NATCF
<p>Note 1: DML serves as the controlling agency for aircraft operating in DOE-scheduled airspace that is otherwise NATCF controlled. NATCF, by LOA, provides ATC services for NNSS/NFO when DML is unavailable.</p> <p>Note 2: NATCF serves as the controlling agency for aircraft operating in NTTR-scheduled Reveille North and Reveille South airspace that is otherwise SLC ARTCC controlled.</p>			

2.5. Concurrent-Use Operations. Defined as two or more military air operations performed at the same time and scheduled in the same NTTR range space. Participating flight leads assume equal responsibility for aircraft separation and weapons delivery deconfliction amongst all participating aircraft and ground parties.

2.5.1. To provide close air support training, ground parties are placed in close proximity to impact areas at pre-surveyed Observation Posts (OPs). To prevent weapons deliveries on manned sites, aircrew working in the vicinity of an OP must be familiar with all safety restrictions/considerations and adhere to planned weapons delivery parameters.

Table 2.4. Pre-Surveyed OPs.

OP	Coordinates		OP	Coordinates	
Alpha	N37 21.83	W116 47.83	Seahawk	N37 21.95	W116 52.28
Bravo	N37 21.42	W116 42.33	Sierra	N36 54.32	W115 35.79
Charlie	N37 33.09	W116 16.87	Steeler	N37 28.22	W116 22.45
C3	N36 51.31	W115 28.50	Viking	N37 26.57	W116 49.60
Delta	N37 25.41	W116 34.21	Viv	N36 53.50	W115 37.52
Hill	N36 39.81	W115 46.88	Whisky	N36 46.59	W115 25.82
Jack	N36 45.12	W115 26.22	X-Ray	N36 46.84	W115 26.42
Jill	N36 37.30	W115 31.53	Zulu	N37 23.07	W116 50.11
Romeo	N36 49.63	W115 28.28			

2.5.2. Participating Joint Terminal Attack Controllers (JTAC), when present, will assume overall responsibility of the operation.

2.6. Vertical obstructions (towers, antenna, etc.) exist on the NTTR and must be considered throughout mission planning and execution. It should be noted that Chart Updating Manual (CHUM) data used to construct navigational charts does not address obstructions below 200ft AGL. Aircrews will use all applicable Area Planning, Military Training Routes (North and South America) (AP/1B) guidance and Mission Design Series (MDS) directives while operating on the NTTR.

2.6.1. Aircrews should assume obstructions extending from the surface to 50ft AGL throughout the NTTR and employ appropriate “see and avoid” techniques. Obstructions of greater than 50ft AGL up to 200ft AGL will be reflected on daily range schedule Graphical Range Restrictions (GRR) regarding the restricted areas, but not the MOAs. Aircrews should refer to the National Geospatial-Intelligence Agency (NGA) website (<https://aerodata.nga.mil/AeroBrowser>) to obtain all FAA reported obstructions that extend to 200ft AGL or higher.

Table 2.5. Vertical Obstruction Summary.

FAA Airspace Designation	≤ 50ft	50-200ft	> 200ft
R-4806	See and Avoid	Reflected on GRR	NGA website
R-4807	See and Avoid	Reflected on GRR	NGA website
R-4808	See and Avoid	Reflected on GRR	NGA website
R-4809	See and Avoid	Reflected on GRR	NGA website
Reveille North MOA	See and Avoid	See and Avoid	NGA website
Reveille South MOA	See and Avoid	See and Avoid	NGA website
Desert MOA	See and Avoid	See and Avoid	NGA website

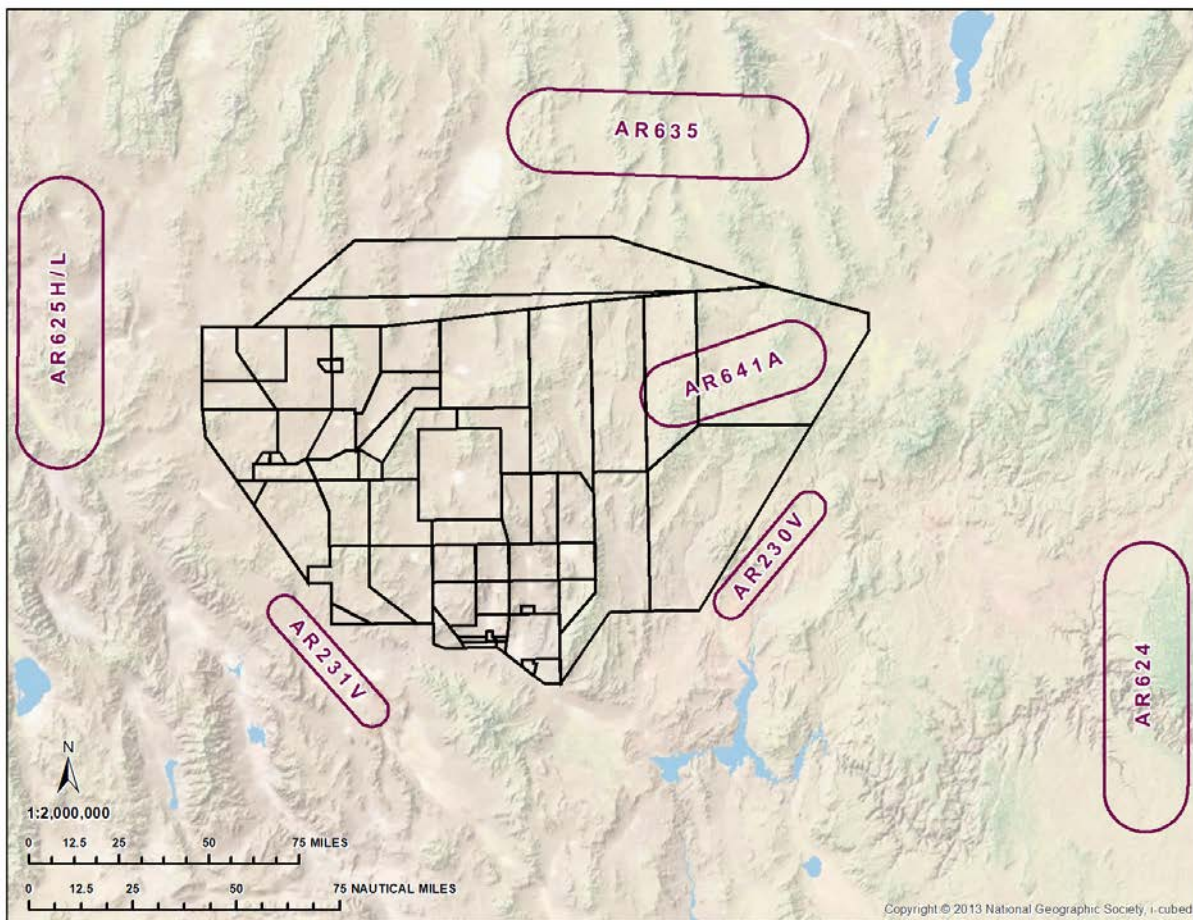
2.7. Routes. VFR/IFR Military Training Routes (VR/IR). Refer to NAFBI and CAFBI 11-250 (as applicable) for more information.

2.8. RPA Operating Areas. The NTTR includes multiple transit corridors and transit routes designated for RPA use.

2.9. NTTR/Utah Test and Training Range (UTTR) Transition Corridor. A transition corridor (normally FL190 to FL250) has been established for the purpose of allowing military aircraft to transition unrestricted and without delay, to and from the NTTR and UTTR.

2.10. Air Refueling (AR) Tracks. Access to AR-641A is obtained by scheduling the Caliente MOA through the NTTR Scheduling Process. Access to AR-624, AR-625, and AR-635 is obtained through the 57 OSS/OSOS scheduling process. Helicopter air refueling may be conducted on VFR helicopter air refueling tracks AR-230V and AR-231V or on “ad hoc” on-range refueling tracks coordinated between the tanker and receivers.

Figure 2.3. AR Tracks.



2.11. Drop Zones (DZs) and Landing Zones (LZs). DZs, LZs, and Helicopter Landing Zones (HLZs) are available on range. Use of these zones will be IAW AFI 13-217, *Drop Zone and Landing Zone Operations*, and coordinated through the NTTR/DO. Refer to the NTTR Mission Planning websites or HQ Air Mobility Command (AMC) Zone Availability Report (ZAR) for a current/approved list of zones and associated restrictions. Users will confirm coordinates and check for any zone changes/updates or local restrictions prior to submitting requests to NTTR/DO.

2.11.1. There are several HLZs available on the NTTR. Helicopter landing operations within the NTTR will be accomplished IAW all published wing and squadron guidance as well as applicable 11-2MDS publications and IFGs. All landing operations are conducted at the aircrew's own risk. All landing areas should be visually surveyed before use. Landings are not permitted in certain areas known to contain unexploded ordnance hazards. For current maps with all associated hazard areas, reference the NTTR targets webpage.

2.11.2. Public Facility/Land Use. BLM requires 60 days advance notice of intended use of public facilities/lands in order to notify other users. Therefore, range users will contact NTTR/DO at least 60 days in advance of use of public or private lands within the NTTR

boundary.

2.11.3. Range users desiring use of the following civilian airstrips/airports will contact NTTR/DO at least 60 days in advance:

2.11.3.1. Alamo Landing Field, NV (L92)

2.11.3.2. Beatty Airport, NV (BTY)

2.11.3.3. Desert Rock Airport, NV (NV65)

2.11.3.4. Lincoln County Airport, NV (1L1)

2.11.3.5. Tonopah Airport, NV (TPH)

2.12. Forward Area Refueling and Arming Points. Forward Area Refueling Point (FARP) operations, as well as Forward Area Arming Point (FAARP) operations are available at various locations across the NTTR. These operations must abide by the requirements listed in AFI 13-217, *Drop Zone and Landing Zone Operations*, and must be coordinated through the NTTR/DO. For a list of approved FARP and FAARP locations, refer to the documents section on the NTTR Mission Planning website.

2.13. Range Capabilities. The range includes a variety of capabilities that may be used to present a high-fidelity, integrated battlespace. Range capabilities include targets, threats, feedback systems, and the NTTR ROC supporting Blue and Red command and control (C2).

2.13.1. Targets. The range presents over 150 target arrays and more than 2,400 Desired Points of Impact (DPIs). Main target sets include the Urban Operations Complex (UOC), armored convoys, operational and simulated airfields, moving vehicles, and various tactical complexes. Targets are categorized for live ordnance, inert-only, and no-drop targeting. Refer to the NTTR Mission Planning websites for the latest mission planning information and weapons employment restrictions. Access to space and cyberspace targets may be provided through the 25 SRS space test and training range and/or the JIOR.

2.13.1.1. The range does not contain targets that are artificially illuminated at night.

2.13.1.2. IR Enhanced Targets. Numerous targets are enhanced to provide a realistic IR signature. Refer to the NTTR Mission Planning websites. Unit schedulers should request these targets IAW the NTTR Scheduling Process.

2.13.1.3. High-Speed Moving Target (HSMT). Target Complex 6208, also known as the High-Speed Moving Target complex or the "Fast Track," is a 250ft wide by 2.6NM long dirt "highway" cut into the Dog Bone dry lake bed in R-62A and R-62B. The HSMT is a day or night maneuvering target capable of speeds up to 70 mph and the only moving target on the NTTR capable of supporting live/inert ordnance

employment in a moving target scenario. Refer to the NTTR Mission Planning websites for additional details on how to coordinate moving target operations.

2.13.2. Threats. Threat emitters provide an electronic warfare (EW) environment designed to simulate enemy threats in a realistic combat scenario. The range includes fixed manned and unmanned threat emitters and mobile threat emitters. Refer to the NTTR Mission Planning websites for further information.

2.13.2.1. Simulators. NTTR/RS manages a variety of threat simulators. They include manned and unmanned threats that simulate SA-2/3/6/8/13/15, Air Defense Artillery (ADA) and Early Warning/Acquisition (EW/ACQ) threats, as well as mobile ROLAND threats. Both transportable (trailer) and movable (truck mounted) Unmanned Threat Emitters (UMTE) systems are located on range, each consisting of remote emitter units (REU) that provide an electronic threat environment while normally being controlled remotely from Point Bravo. Up to three UMTE's can be used in the UMTE-M configuration mounted on a truck and operated remotely or manually depending on customer requests and the limits of site configurations. Additionally, high-power, transportable, remotely-operated Joint Threat Emitters (JTE) are located on the range capable of emulating SA-2, SA-3, SA-6, SA-13 (ACQ only), and ADA threats. Electronic Warfare Infrastructure Improvement Program (EWIIP) high and low power phased array systems are available and capable of simulating a variety of real-world threats. The Radio Electronic Combat Systems (RECS) provides communications jamming and spoofing capabilities. Mobile Radio Electronic Combat System (M-RECS) is a one, two or three man locally or remotely operated system. M-RECS is a standalone Electronic Warfare (EW) unit comprised of direction finding hardware, communication disruption, and electronic countermeasure/targeting simulation (ECM/TS) equipment. The High Power Noise Jammer (HPNJ) simulator is an electronic (actively-scanning) array noise jammer. Digital Radio Frequency Memory (DRFM) is a trailer-mounted, mobile radar jamming and spoofing threat (two systems, one transportable the other fixed). Synthetic Aperture Radar (SAR) Jammer is a Man Portable, Vector Modulator-based SAR Jamming System

2.13.2.2. Battlefield Communication Simulator System (BCSS). The range maintains two BCSS vehicles, both equipped with an advanced suite of communications software providing advanced signal generation. Refer to the NTTR Mission Planning websites for further information. The BCSS is an exploitable and attackable opposing force command and control simulation system. The system provides automated communications simulations to support DoD training exercises as well as a variety of analog and complex digital communications signals. The system is designed to develop battlefield scenarios.

2.13.2.3. Feedback systems. The range offers three primary feedback systems: The NTTR Air Combat Training System (NACTS) paired with the Individual Combat Aircrew Display Station (ICADS) and the Television Ordnance Scoring System (TOSS). Additionally, NTTR/DO can facilitate access to the ACC-sponsored

untethered Integrated Tactics Assessment Software (ITAS). Vehicle Tracking System (VTS) is a radio network that provides the means to track ground vehicles on the Nevada Test and Training Range (NTTR) southern (60 series) and northern (70 series) ranges. Requests for feedback systems are made through the NTTR BMP. Refer to the NTTR Mission Planning websites for further information.

2.13.3. NTTR ROC. The ROC provides a venue for Blue force weapons control, Link-16, and Situational Awareness Data Link (SADL) use. Red forces utilize the ROC to simulate aspects of an Integrated Air Defense System (IADS). The NTTR ROC provides multiple secure work areas, to include space and cyber vaults.

2.13.3.1. ROC-controlled systems include radar simulators with opposing force early warning (EW) and GCI radars, SAM acquisition, fire control, missile guidance radars, and ADA fire control radars. Realistic training is further augmented through echelon command and control, communications jamming, interception/exploitation, deception, intrusion, and radar jamming. Tailored data collection and mission debriefing products and services are available to include tracking, detection/launch or fire data, aircrew tactics commentary, and video replay of radar and optical engagements.

2.13.4. Surrogates provide training of cognitive skills to live air crews. They replicate the physical threat representative multi-spectral signatures (Electro-optical, Infrared [IR], and Radar Cross Section [RCS]) located in close proximity to a radar signal emitter. Surrogates are transportable and can be located on or off the range.

2.13.5. AAA Visual Simulator provides four independent, standalone systems that provide visual simulation of real world AAA threats. The AAA Visual Simulator employs a series of strobe lights, spaced in a rectangular formation, which sequentially flash to imitate the firing of an anti-aircraft artillery weapon. Since the AAA Visual Simulator only emits visible light, it will be difficult to detect. Strobe rates of ZPU-1, ZPU-2, ZPU-4, and ZSU-23-4.

Chapter 3

OPERATIONS/WEAPONS DELIVERY PROCEDURES

3.1. Operations. The following provides general procedures for range operations. Detailed procedures are provided as attachments to this publication. Users should refer to the NTTR Mission Planning website, daily range schedule, and GRR for current range restrictions and status. NTTR Range Monitoring will relay GRR updates upon check-in. Aircrew must comply with MDS-specific instructions and technical orders, NAFBI and CAFBI 11-250 (as applicable), and applicable In-flight Guides (IFG).

3.1.1. Range Procedures.

3.1.1.1. Aircraft Range Entry/Exit/Holding. To request range entry, users will contact NATCF and NTTR Range Monitoring (in order). To request NTTR exit, aircrew will contact NTTR Range Monitoring and NATCF (in order). Refer to the NTTR Mission Planning websites for assigned frequency clearances. If holding is required, aircrew will hold in adjacent ranges if scheduled, hold VFR off-range, or hold IFR off-range under ATC control. Departures should be planned as to enable on-time range arrival at scheduled range start time.

3.1.1.2. Ground Party Range Entry/Exit and transition between subranges. The NTTR ground environment includes areas of relative safety through which authorized users may move with limited oversight and other areas that include a variety of hazards (including housing strikeable targets) that require specific scheduling and access monitoring. To request scheduled range entry, users will stop at the range boundary entry point and contact NTTR Range Monitoring. To notify NTTR Range Monitoring of range exit, users will stop at the range boundary entry point and contact NTTR Range Monitoring.

3.1.1.3. Ground Party Range Entry/Exit To/From Unmanned Systems. The NTTR ground environment includes unmanned threat system site locations that have the potential for high power radio frequency (RF) radiation hazard and movement hazard. To request entry to unmanned sites, users will hold at the site entrance sign and contact NTTR Range Monitoring for instructions. Unless otherwise informed, if active system lights (solid or flashing) or any system movement (platform spinning, vertical or horizontal system movement, etc.) are observed when approaching an unmanned system, return immediately to the site entrance sign and contact NTTR Range Monitoring for instructions. To notify NTTR Range Monitoring of site exit, users will contact NTTR Range monitoring when past the site entrance sign.

3.1.1.4. Incidents wherein aircraft intrude into airspace for which they are not scheduled (i.e., deviate from the published schedule) are reviewed by the ROO for the purpose of gathering relevant facts to help ensure safety and security. DOE and/or NNSS/NFO will be notified of airspace deviations in R-4808. The deviating/host unit plays a key role in gathering deviation information and assigning

appropriate corrective actions, and may be called upon to brief senior USAFWC and interagency leaders on the facts of the incident. Deviation information is shared with all affected range entities and may result in restrictions being placed on individuals and organizations regarding their use of the NTTR.

3.1.2. All aircraft are required to monitor Guard (243.0 MHz or 121.5 MHz) while operating within NTTR boundaries.

3.1.3. Transponder Identification. Unless specifically authorized, all aircraft will have an operational identification friend or foe (IFF) system, and will squawk Mode C and a tactical Mode 3 (non-1200 squawk) on all missions on range.

3.1.4. Reference Attachment 17 of this Addendum for Lights-Out flying operations.

3.1.5. Airspace Recall. Emergency situations, including extreme weather or operational requirements, may demand the recall of previously-scheduled airspace.

3.1.6. Supersonic Operating Areas. Supersonic flight is approved within designated areas based on the requirement for realistic testing and training. Aircrew will conduct supersonic flight only when necessary to accomplish the mission. In order to avoid public impact, and to the maximum extent possible, aircrew should avoid supersonic flight over populated portions of the range.

3.1.7. Altitude Restrictions. Aircrews must comply with MDS-specific instructions and technical orders, NAFBI and CAFBI 11-250 (as applicable), and the daily range schedule. For vertical/short takeoff and landing (V/STOL) aircraft, fixed-wing altitude restrictions apply when in forward flight, helicopter altitude restrictions apply when in vertical flight. Low-level helicopter operations are defined as flight below 1,000ft AGL with operating altitudes as low as 10ft AGL during hover, observation, and weapons employment.

3.1.8. Manned Site Overflight Restrictions. All aircraft must avoid all manned sites and ground parties by at least 500ft, vertically and laterally. R-4808 B/C/D/E are to be considered continually manned.

3.1.9. Target Maintenance and/or EOD Ground Party Overflight Restrictions. Range cleanup periodically requires range closures and altitude restrictions for the mutual protection of aircraft, aircrew, and ground parties. During range cleanup, EOD personnel may detonate ordnance in place. The daily range schedule will reflect the range closures and altitude restrictions.

3.1.9.1. Noise associated with overflight can create serious hazards to personnel working in an Unexploded Ordnance (UXO) environment. To preclude overflight hazards to ground parties, aircrews must remain aware of all range restrictions associated with ground party activity. EOD overflight restrictions are published in the daily range schedule. NTTR Range Monitoring will advise aircrew of range restrictions, as required.

3.1.9.2. When ground parties are on range conducting Target Maintenance and/or EOD operations, and demolition operations are not taking place, aircraft shall fly no lower than 3,000ft AGL at subsonic speeds, and no lower than 5,000ft AGL at supersonic speeds. When demolition operations are taking place, aircraft shall fly no lower than 10,000ft AGL at any speed, unless more specific guidance is provided by EOD and relayed through Range Monitoring.

3.1.10. When Small Unmanned Aerial Systems (SUAS) are utilized in conjunction with target maintenance, EOD, and/or other ground parties, the necessary airspace will be scheduled through the NTTR Scheduling Process and reflected on the GRR. SUAS will be operated IAW AFI 11-502, Volumes 1-3, *Small Unmanned Aerial Systems Training, Standardization/Evaluation, and Operations*.

3.1.11. Aircraft will not fly within 1,250 feet of the munitions storage area (MSA) nor the explosive material storage facilities located at N37 50.77 W116 42.62 in R-4809A.

3.1.12. Use of any laser or directed energy weapon (DEW), regardless of the mode of operation, may be potentially hazardous to air and ground personnel utilizing the NTTR. Use of lasers in combat mode is expressly forbidden unless reflected on the daily range schedule.

3.1.13. Range users will adhere to NAFBI and CAFBI 11-250 (as applicable), regarding noise-sensitive range activities.

3.1.14. Night Vision Devices (NVDs). Use of NVDs on range will be IAW MDS-specific instructions and technical orders, and NAFBI and CAFBI 11-250 (as applicable). Ground parties using NVDs will adhere to NTTR/IP security procedures for sensitive equipment on range.

3.1.15. NTTR Specific safety and security restrictions may be annotated in CSE under "Reports," "Block Restrictions" and must be strictly adhered to:

Table 3.1. Specified CSE Safety and Security Restrictions.

Restriction	Description
No Ground Party	Ground personnel are not authorized on the specified NTTR ranges and sub-ranges.
Sanitization	<p>Powered on maintenance activities of site equipment is strictly prohibited on the specified NTTR ranges and sub-ranges. Ground personnel may be present at an emanating, collection, or optical support site, system, or sub-system but are not authorized to enter into or apply power to the equipment.</p> <p>System maintenance activities are prohibited. Personnel are allowed to perform external ground maintenance activities that do not require the system to be powered on or the system to be entered.</p> <p>(Examples: corrosion prevention, weed abatement, picking up discharged Smokey SAMs, maintaining grounds and painting.)</p>
Down and Quiet	<p>Maintenance activities that require transmission or radiation are prohibited. Ground personnel may be present at and enter the system to perform diagnostic or ground maintenance activities; dummy load and/or open air transmissions are prohibited. All system optics and/or cameras shall be turned off or disabled.</p> <p>Note: Exceptions to the Down and Quiet restriction shall be coordinated with the organization that scheduled the restriction and applicable O&M Section.</p> <p>Ground communications, such as LMR communications with NTTR Range Monitoring, are excluded from this restriction.</p>
Evacuate	Ground personnel are not authorized on R-4807, EC West, 4809B, or the Forward Air Control (FAC) A/B portions of TPECR. Scorpion security will move to the TPECR gate.
TPECR Containment	Any ground personnel within the confines on TPECR must remain indoors while the restriction is active. Ground personnel are not authorized on FAC A/B portions of TPECR. The TPECR access road will be closed during TPECR containment.
Modified TPECR Containment	Any ground personnel within the confines on TPECR shall remain indoors and are not authorized on FAC A/B portions of TPECR. Personnel are authorized to be outdoors for brief periods of time, as required. (Examples: travel between buildings, restroom breaks, smoke breaks, etc.)
No Optics	Visual enhancement devices used by ground personnel are prohibited on the specified NTTR ranges and sub-ranges.
No Cameras	Photography is prohibited by ground personnel while on the specified NTTR ranges and sub-ranges.

3.1.16. May through October are typically seasonally dry months in Nevada and pose the greatest fire hazard on range.

3.1.16.1. Ordnance delivery and range operations may be negatively impacted by fire code restrictions. Fire codes will be depicted on the NTTR Mission Planning websites and the GRR. Aircrew must report all fires on the range to NTTR Range Monitoring as soon as possible.

3.1.16.2. Flares and chaff may be utilized only on specified areas of the range IAW specific safety procedures.

3.1.17. Preservation of Wildlife. Range users, both aircrew and ground parties, will not harass any wildlife including desert tortoises, wild horses, or burros and will avoid animal concentrations and watering holes.

3.1.17.1. The 99 ABW publishes an Integrated Natural Resource Management Plan (Plan 126-4) that details wildlife management on the NTTR. Environmental management activities also occur within R-4808 and may require coordination between multiple agencies.

3.1.17.2. Portions of the NTTR (Alamo A/B/C, R-61A/B, R-62A/B, R-63A/B/C, R-64A/B/C/D/E/F/G, and R-65A/B/C/D) overlie the DNWR. Aircraft will remain above 2,000ft AGL in these areas unless a lower altitude is required for tactical training and IAW the daily range schedule.

3.2. Weapons Delivery Procedures. The range can support a wide variety of live, inert, and training ordnance for air-to-ground and ground-to-ground operations. Refer to the NTTR Mission Planning website for the authorized ordnance delivery profiles for specific targets. In all cases, aircrew should avoid overflight of populated areas when carrying ordnance and must positively identify the target prior to expending any ordnance. Transit of manned ranges with live ordnance is permitted if armament switches are in a SAFE/SIM/TRAINING/OFF position.

3.2.1. Transit with hung, live ordnance should be avoided whenever feasible. If transit with hung, live ordnance is required, an in-flight emergency (IFE) will be declared and armament switches will remain in the SAFE/SIM/TRAINING/OFF position. Aircrew carrying internally loaded ordnance (live or inert) will not open aircraft bomb bay doors while transiting manned ranges (except in support of NNSA/SFO-sponsored missions). Transit of R-4808B/C/D/E with hung, live ordnance is forbidden.

3.2.2. Minimums, foudls, and attack axes are IAW applicable publications and AFI 11-214, *Air Operations Rules and Procedures*.

3.2.3. Before releasing ordnance on range, each aircrew member will accomplish a range familiarization flight to be familiar with range boundaries, location of manned sites (e.g., threat systems, work facilities, etc.), and assigned target area. Aircrew members that have flown on range within the past 12 months will be exempt from this requirement.

3.2.4. WDW/SDZ. The WDW/SDZ Tool is used for each weapon safety footprint on each target on range. When weapon safety footprints are not supported by WDW/SDZ, an RSA is performed using System Program Office (SPO) or test data in which severity and probability of risk is analyzed.

3.2.4.1. Approval levels are tied to the assessed risk:

3.2.4.1.1. Unlikely: No lower than NTTR/SE approval.

3.2.4.1.2. Low: No lower than ROO approval.

3.2.4.1.3. Medium: No lower than ROA approval.

3.2.4.1.4. High: No lower than USAFWC/CC approval.

3.2.4.2. Normally, WDW profiles must be contained within the boundaries of the scheduled subrange(s) in order to employ live/inert weapons. Extreme caution must be exercised when utilizing segmented hazard areas (i.e., when a desired profile extends into a subrange that contains scheduled ground parties). Detailed coordination with, and approval of, the segmented operations must be provided by the ground party host unit. Moreover, specific NTTR/DO approval for segmented operations must be obtained. Segmented operations will be annotated on the daily range schedule and GRR.

3.2.5. Aircrews are prohibited from expending ordnance, except chaff and flares, on any electronic combat (EC) range. There are no DOD strikeable targets within the EC ranges (EC West, EC East, and TPECR) or in the Alamo and Pahute ranges. Transit of EC ranges with live ordnance is permitted if armament switches are in a SAFE/SIM/TRAINING/OFF position. Transit with hung live ordnance should be avoided whenever feasible. If transit with hung live ordnance is required, an in-flight emergency will be declared and armament switches will remain in the SAFE/SIM/TRAINING/OFF position. Aircrew carrying internally loaded ordnance (live or inert) will not open aircraft bomb bay doors while transiting EC ranges (except in support of NNSS/SFO-sponsored missions).

3.2.5.1. There are no DOD strikeable targets within R-4808B/C/D/E. Transit of these ranges with live ordnance is permitted if armament switches are in a SAFE/SIM/TRAINING/OFF position. Transit of R-4808B/C/D/E with hung, live ordnance is forbidden.

3.2.6. Cluster Bomb Units (CBU). CBU-87/103 deliveries are restricted to targets 62-01 and 75-46. Random delay fuse settings are not authorized. A 200 CBU canister limit is imposed on CBU targets between EOD range clearances. To control CBU expenditures, a CBU authorization number is required to authorize employment. Contact the NTTR Targets office (ntr.dos.targets@us.af.mil) to obtain a CBU authorization number. CBU-105 deliveries are restricted to target 63-12 and must be coordinated through the NTTR

Targets office.

3.2.7. DU ammunition is only authorized for use on Target 63-10. Use of DU ammunition must be conducted IAW the Radioactive Material Permit and the annual expenditure of DU rounds is controlled through NTTR/SE. A DU authorization number must be obtained through the NTTR targets office prior to employment.

3.2.8. The majority of site support vehicles, vehicle shelters and threat simulators on range are painted white to distinguish them from targets. To further aid in identification, manned sites are marked by flashing white strobes (daytime) and steady white lights and/or infrared strobes (night). Aircrew will not deliver ordnance or make practice attacks with releasable ordnance on any structure or location painted white or marked with steady or flashing lights. Captive carry air-to-air and air-to-ground missiles, internally loaded weapons with bomb doors closed and mechanically-safe guns are not considered releasable ordnance.

3.2.9. Two Unmanned Threat Emitters (UMTE) systems are normally located on R-75 in order to provide an electronic threat environment collocated with strikeable targets in order to provide as realistic a combat environment as possible. Additionally, there is an EWIP site (pads ECS05A and 2-T1) located approximately 2 NM south west of target 77-02 in R77A. Each UMTE/EWIP site is surrounded by white concrete bunkers or white sea-land containers. Aircrew should exercise extreme caution not to expend ordnance on UMTEs/EWIIPs. Refer to NTTR Mission Planning website for further information.

3.2.10. TOSS is currently active on several strikeable ranges. Aircrew will avoid expending ordnance on TOSS towers. Refer to the NTTR Mission Planning website for further information on TOSS capabilities and locations.

3.2.11. Armament switches will be in the SAFE/SIM/TRAINING/OFF position when aircraft are not on the ranges of intended employment. For a combined load of captive, training, inert or live ordnance, aircrew will not select armament switches that could possibly induce the inadvertent release of any ordnance. Captive training ordnance may be selected at any time.

3.2.12. Armament Safety Procedures. Prior to first release when carrying expendable ordnance (live, inert, or training), final switch configuration for weapon release will not be accomplished until the aircraft is in such a position that any accidental release will be contained within the range. After completing final weapons delivery, each flight member will perform a weapons system safety check.

3.2.13. An armament safety check will be completed after ordnance delivery and all armament switches are returned to the SAFE/SIM/TRAINING/OFF position. The aircrew or wingman must also confirm the release of all ordnance by visually scanning the aircraft. It is not necessary to verify with NTTR Range Monitoring that this procedure has been accomplished.

3.2.14. Aircraft with externally loaded ordnance will accomplish an ordnance check before

exiting the range. Upon recovery, aircrew will fly a hung ordnance pattern as defined in NAFBI and CAFBI 11-250 (as applicable) if ordnance status cannot be positively verified.

3.2.15. UXO avoidance. UXO awareness is required on range to protect aircraft from inadvertent damage when employing ordnance. Aircrew will employ safe escape parameters assuming a 2,000 lbs. UXO detonation.

3.3. Target Identification. To ensure correct targets are identified prior to expending any munitions, all air and ground range users intending to employ munitions on the NTTR are required to obtain imagery and maps for every intended target (including secondary targets) to ensure correct targets are identified prior to expending any munitions.

3.3.1. Aircrew will not drop ordnance on ranges occupied by ground parties unless specifically authorized by NTTR/DO.

3.3.2. Aircrew will report operations resulting in unauthorized ordnance deliveries over manned sites or closed ranges. If this occurs, NTTR/SE will conduct a safety investigation and will determine the reportable mishap category. Local organizations may conduct supplemental investigations as necessary to support the primary investigation.

3.3.3. Aircrew must be aware that ground parties may be located on bomb impact ranges adjacent to a range scheduled for air to ground operations. Flight Leads assume flight lead control responsibilities IAW AFI 11-214, and Joint Pub 3-09.3. Flight Leads must know and brief positions of ground parties to their flight members. Ground parties may be mistaken for range targets, therefore caution should be exercised at all times. Aircrew will advise NTTR Range Monitoring of their intentions to deliver live, inert, or training ordnance prior to entering the range.

3.3.4. Aircrew will not perform simulated or mock attack passes on ground parties or manned sites with releasable ordnance. Captive carry air-to-air missiles, air-to-ground missiles, and mechanically-safe guns are not considered releasable ordnance.

3.4. Emergency Procedures (EPs). EPs will be handled IAW with MDS-specific instructions and technical orders, NAFBI and CAFBI 11-250 (as applicable), and applicable IFGs. The reporting of NTTR range incidents is mandatory. Personnel operating on the NTTR (aircraft or ground parties) will notify NTTR Range Monitoring following major accidents/incidents such as crashes, off-range munitions impacts, inadvertent releases/dropped objects, fires or personal injuries and provide information requested.

3.4.1. In addition to Nellis AFB and Creech AFB, TTR Airfield (TTRA) and Desert Rock Airport (no services available) are readily available emergency airfields. Additional information is available in Flight Information Publications (FLIP) and NAFBI and CAFBI 11-250.

3.4.2. Dropped Object and Inadvertent Release. For any accidental weapons release or dropped object on range, the following applies:

3.4.2.1. UNINTENTIONAL. Aircrew induced accidental release on range is not considered a malfunction. Continue at FAC/flight lead discretion.

3.4.2.2. INADVERTENT. System induced accidental release on range is considered a malfunction.

3.4.2.3. Off-Range (Unintentional or Inadvertent).

3.4.2.3.1. Safe armament switches.

3.4.2.3.2. Return to base immediately. If the dropped object resulted from an inadvertent release, declare an IFE, treat remaining stores as hung ordnance and fly hung ordnance procedures IAW the applicable IFG. If practical, the incident aircraft will be escorted to the base. No further releases will be attempted.

3.4.2.3.3. Record switch positions at the time of release.

3.4.2.3.4. Attempt to determine if the dropped object caused any injury or damage.

3.4.2.3.5. Contact NTTR Range Monitoring or NATCF as appropriate and provide the following information:

3.4.2.3.5.1. Aircraft call sign, number, and type.

3.4.2.3.5.2. Time and location of incident.

3.4.2.3.5.3. Description of dropped object.

3.4.2.3.5.4. Location of impact.

3.4.2.3.5.5. All known circumstances.

3.4.2.3.6. Contact the Nellis Command Post as soon as possible after landing and give the information above. Contact aircrew unit leadership and 57 WG/SE ASAP after landing.

3.4.2.3.7. Aircrew will notify NTTR Range Monitoring of any weapons release that does not impact in the vicinity of the target. Provide the best estimated location of the impact point.

3.4.3. Hung Ordnance and Unsafe Gun Procedures IAW NAFBI and CAFBI 11-250 (as applicable).

3.4.4. Jettison Procedures IAW NAFBI and CAFBI 11-250 (as applicable).

Chapter 4

ELECTRONIC WARFARE RANGES

4.1. Electronic Warfare Ranges. The NTTR electronic warfare ranges consist of EC West, EC East, and TPECR. Systems include radar simulators with opposing force early warning and GCI radars, SAM acquisition, direct control, missile guidance radars, and ADA fire control radars. EC ranges and resources are scheduled through the NTTR Scheduling Process. Refer to the NTTR Mission Planning websites for current resource availability.

4.1.1. The EC ranges have manned sites that may consist of shelters and vehicles, and associated threat systems. Manned sites may have Smokey Surface-to-Air Missile (SAM) launchers collocated at the site to provide visual launch cues to aircrew.

4.1.2. Adversary tactics are simulated through input from the 507th Air Defense Aggressor Squadron (ADAS). EC simulations can provide scenarios ranging from individual signals under user control to the full combat array of opposing air defense forces. Simulators are sited and positioned IAW current opposing force deployment doctrine, topography, range safety, and fiscal constraints. For questions regarding adversary tactics simulation, contact 507 ADAS.

4.1.3. Feedback from threat emitters is accomplished through either the 507 ADAS or Nellis AFB debriefing systems. 507 ADAS provides threat assessment for event participants. NACTS/ICADS or ITAS offer a threat debriefing capability for individual flights.

4.1.4. For a complete list of available threat systems, contact the NTTR RSO office at nttrsoallpersonnel@us.af.mil.

CHRISTOPHER J. ZUHLKE, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

14 CFR Part 73, *Special Use Airspace*, 4 November 2019
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FAA Order 7400.2M, *Procedures for Handling Airspace Matters*, 28 January 2019
FAA Handbook 7610.4V, *Special Operations* 5 July 2019
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DoDM 5200.01, *DOD Information Security Program*, 9 May 2018
NAFBI 11-250, *Local Flying Procedures*, 7 February 2019
NTTR OI 31-101, *Security Controlled Area Operating Procedures*, 12 March 2019
NTTR OI 16-1404, *Information, Personnel and Industrial Security Program*, 6 March 2019
NTTR Product and Service Catalog

Adopted Forms

DD Form 448, *Military Interdepartmental Purchase Request (MIPR)*
AF Form 847, *Recommendation for Change of Publication*
NAFB IMT 22, *Range Officers Report*
NAFB IMT 74, *Nevada Test and Training Range Visit Request/Authorization*

Abbreviations and Acronyms

AAR—After Action Report
ABG—Air Base Group
ABM—Air Battle Manager
ABW—Air Base Wing
ACC—Air Combat Command
ACM—Air Combat Maneuvering
ACQ—Acquisition
ADA—Air Defense Artillery
ADAS—Air Defense Aggressor Squadron
AFB—Air Force Base
AFCEC—Air Force Civil Engineering Center
AFI—Air Force Instruction
AFIMSC—Air Force Installation and Mission Support Center
AFMAN—Air Force Manual
AFOSH—Air Force Occupational Safety and Health
AFRIMS—Air Force Records Information Management System
AFTC—Air Force Test Center
AGL—Above Ground Level
AGM—Air-to-Ground Missile
AGRCO—Aerial Gunnery Range Control Officer
AGTS—Aerial Gunnery Target Sets
AI—Airborne Instrumentation
AMC—Air Mobility Command
AR—Air Refueling
ARTCC—Air Route Traffic Control Center
ATC—Air Traffic Control
ATCAA—Air Traffic Control Assigned Airspace
ATM—Asynchronous Transfer Mode
BCSS—Base Civil Engineer
BCE—Battlefield Communication Simulation System
BDOC—Base Defense Operations Center
BDU—Bomb Dummy Unit
BLM—Bureau of Land Management
BMP—Business Management Process
C2—Command and Control
CAFB—Creech Air Force Base
CAFBI—Creech Air Force Base Instruction
CARC—Combined Arms Range Complex
CBU—Cluster Bomb Unit
CES—Civil Engineering Squadron
CFA—Controlled Firing Area
CFR—Code of Federal Regulations
CHUM—Chart Updating Manual
CIS—Communications Instrumentation Subsystem

cm—centimeter
COA—Certificate of Authorization
CONOP—Concept of Operations
COP—Common Operational Picture
CS—Computation Subsystem
CSE—Center Scheduling Enterprise
CT—Continuation Training
CTA—Creech Tower Airspace
CTS—Combat Training System
CW—Continuous Wave
CWT—Combat Weather Team
DAF—Department of the Air Force or Device Assembly Facility
DEW—Directed Energy Weapon
DISA—Defense Information Systems Agency
DML—Dreamland Approach Control
DNWR—Desert National Wildlife Refuge
DOD—Department of Defense
DOE—Department of Energy
DPI—Desired Point of Impact
DU—Depleted Uranium
DZ—Drop Zone
EA—Electronic Attack
EC—Electronic Combat
EC East—Electronic Combat East
ECRS—Electronic Combat Range Scenarios
EC West—Electronic Combat West
ECR—Electronic Combat Range
ELINT—Electronic Intelligence
EMI—Electromagnetic Interference
EO—Electro Optical
EOD—Explosive Ordnance Disposal
EW—Electronic Warfare; Early Warning
FAA—Federal Aviation Administration
FAC—Forward Air Control
FAR—Federal Aviation Regulation
FCIF—Flight Crew Information File
FDO—Foreign Disclosure Officer
FEO—Foreign Exchange Officer
FLIP—Flight Information Publication
FLPC—Flight Limitation Profile Curve
FM—Frequency Modulation
FMV—Full-Motion Video
FORNAT—Foreign National
FORSCOM—US Army Forces Command
FP—Firing Point
FPID—Final Program Introduction Document

ft—Feet
FVR—Foreign Visit Request
FVS—Foreign Visit System
GBU—Guided Bomb Unit
GCI—Ground Control Intercept
GCS—Ground Control Stations
GIANT—Global Positioning System Interference and Navigation Tool
GIS—Geographic Information Systems
GPS—Global Positioning System
GIANT—GPS Interference and Navigation Tool
GRR—Graphical Range Restrictions
GTL—Gun-to-Target Lines
HDMI—High Definition Media Interface
HE—High Explosive
HLZ—Helicopter Landing Zone
HQ—Headquarters
HSMT—High-Speed Moving Target
IADS—Integrated Air Defense System
IAW—In Accordance With
IC—Interim Change
ICA—Installation Command Authority
IDL—Initialization Data Load
IER—Information Exchange Requirements
IFE—In-flight Emergency
IFF—Identification Friend or Foe
IFG—In-flight Guide
IFR—Instrument Flight Rules
IO—Information Operations
IPID—Initial Program Introduction Document
IR—Infra-Red
ITAS—Integrated Tactics Assessment Software
JDN—Joint Data Network
JDNC—Joint Data Network Cell
JICO—Joint Interface Control Officer
JIOR—Joint Information Operations Range
JOCAS—Job Order Cost Accounting System
JON—Job Order Number
JTAC—Joint Terminal Attack Controller
JTE—Joint Threat Emitter
JTECH—Joint Range Technical Services Contract
LA ARTCC—Los Angeles Air Route Traffic Control Center
LEP—Laser Eye Protection
LFE—Large Force Exercise
LMR—Land Mobile Radio
LO—Low Observable
LOA—Letter of Agreement

LMS—Live Monitor System
LZ—Landing Zone
MAJCOM—Major Command
MANPADS—Man-Portable Air Defense System
MARSA—Military Assumes Responsibility for Separation of Aircraft
MAST—Man-Portable Aircraft Survivability Trainer
MDS—Mission Design Series
MIPR—Military Interdepartmental Purchase Request
MOA—Military Operations Area
MOU—Memorandum of Understanding
MRTFB—Major Range and Test Facility Base
MSA—Munitions Storage Area
MSL—Mean Sea Level
MTN—Multi-Tactical Data Link Network
NACTS—NTTR Air Combat Training System
NAFB—Nellis Air Force Base
NAFBI—Nellis Air Force Base Instruction
NATCF—Nellis Air Traffic Control Facility
NDF—Network Design Facility
NAFC—Nevada Area Frequency Coordinator
NGA—National Geospatial-Intelligence Agency
NIZ—No Impact Zone
NLT—Not Later Than
NM—Nautical Mile
NNSS/NFO—National Nuclear Security Administration/Nevada Field Office
NOTAM—Notice to Airman
NPTEC—Nonproliferation Test Evaluation Complex
NTTR—Nevada Test and Training Range
NVD—Night Vision Device
OCR—Office of Collateral Responsibility
OD—Optical Density
OG—Operations Group
OI—Operating Instruction
O&M—Operations and Maintenance
OPR—Office of Primary Responsibility
OPTASKLINK—Operational Tasking Link
ORF—Operational Read File
OSD—Office of the Secretary of Defense
OSS—Operations Support Squadron
OT&E—Operational Test and Evaluation
OWS—Operations Weather Squadron
OTF—Over-the-Field
PEX—Patriot Excalibur
PID—Program Introduction Document
POC—Point of Contact
POM—Program Objective Memorandum

POV—Privately Owned Vehicle
PSP—Project Support Plan
RA—Resource Advisor
RCO—Range Control Officer
RDS—Records Disposition Schedule
RF—Radio Frequency
RFI—Radio Frequency Interference
ROA—Range Operating Authority
ROC—Range Operations Center
RON—Remaining Overnight
ROO—Range Operations Officer
RPA—Remotely-Piloted Aircraft
RPM—Reliability Prediction Model
RR—Restricted Range
RRU—Remote Range Unit
RS—Range Support & Reconnaissance Squadron
RSA—Range Safety Assessment
RSS—Range Support Services
RTB—Return to Base
RTO—Range Training Officer
RWMC—Radioactive Waste Management Complex
SAA—Satellite Access Authorization
SADL—Situational Awareness Data Link
SAM—Surface-to-Air Missile
SAR—Satellite Access Request
SDZ—Surface Danger Zone
SE—Safety
SFC—Surface
SFS—Security Forces Squadron
ShOC-N—Shadow Operations Center-Nellis
SIGINT—Signals Intelligence
SLC ARTCC—Salt Lake City Air Route Traffic Control Center
SMO—Spectrum Management Office
SFO—Sandia Field Office
SOC—Statement of Capability
SOF—Supervisor of Flying
SUAS—Small Unmanned Aerial System
SRB—Safety Review Board
SRS—Space Range Squadron
STA—Silverbow Tower Airspace
STTR—Space Test and Training Range
T&E—Test and Evaluation
TDES—Triple Date Encryption Standard
TEG—Test and Evaluation Group
TMG—Test Management Group
TOSS—Television Ordnance Scoring System

TP—Target Practice
TPECR—Tolicha Peak Electronic Combat Range
TPL—Test Priority List
TPT—Target Practice Tracer
TSDF—Time Slot Duty Factor
TSPI—Time, Space, and Position Information
TTR—Tonopah Test Range
TTRA—Tonopah Test Range Airfield
TTRO—Tonopah Test Range Operations Office
UAS—Unmanned Aerial System
UAV—Unmanned Aerial Vehicle
UHF—Ultra-High Frequency
ULM—Unit Link Manager
UMTE—Unmanned Threat Emitter
UOC—Urban Operations Complex
USAF—United States Air Force
USAFWC—United States Air Force Warfare Center
USAFWS—United States Air Force Weapons School
USFWS—United States Fish and Wildlife Service
USS—User Satisfaction Survey
UTC—Coordinated Universal Time
UTM—Universal Transverse Mercator
UTTR—Utah Test and Training Range
UXO—Unexploded Ordnance
VDZ—Vertical Danger Zone
VFR—Visual Flight Rules
VHF—Very-High Frequency
VR—VFR Route
VTS—Vehicle Tracking System
V/STOL—Vertical/Short Takeoff and Landing
WD—Weapons Director
WDZ—Weapon Danger Zone
WG—Wing
WSINT—Weapons School Integration Phase

Terms

Air Traffic Control Assigned Airspace (ATCAA) — Airspace with defined vertical/lateral limits, assigned by ATC, for the purpose of providing air traffic separation between the specified activities being conducted within the assigned airspace and other IFR air traffic. See FAA Order JO 7400.2, *Procedures for Handling Airspace Matters*, for further information.

Joint-Use — Term used to describe a restricted area procedure that provides for the operation of nonparticipating IFR and/or VFR aircraft within the area. Flight within the restricted area is controlled by the using agency except when the area has been released to the controlling agency. During such periods, the controlling agency may permit nonparticipating aircraft operations in

the restricted area. Implementation of joint-use in NTTR restricted areas has been established by assigning an ATC facility as the controlling agency and by executing a joint-use letter of procedure between the controlling and using agencies.

Military Operations Area (MOA) — Airspace designated outside of Class A/B/C airspace to separate certain non-hazardous military activities from instrument flight rules (IFR) traffic and to identify for visual flight rules (VFR) traffic where these activities are conducted. MOAs are designated to contain non-hazardous, military flight activities including, but not limited to, air combat maneuvers, air intercepts, low altitude tactics, etc. Special Use Airspace VFR aircraft are not restricted from transiting MOAs. See FAA Order JO 7610.4, *Special Operations*, for further information.

No-Drop Target — A no-drop target is defined as a target upon which neither live nor inert ordnance may be employed. A no-drop target may have previously been designated a live (i.e., available for live/inert ordnance employment) target, but may be designated as no-drop by HQ NTTR, regardless of current condition. A no-drop target may be reactivated as a live/inert target by HQ NTTR when: 1) all applicable range clearance actions have been accomplished for the target or 2) declared safe for weapons employment by qualified EOD personnel. Range clearance on no-drop targets are accomplished no later than five years since last completed.

Range Control Officer (RCO) — The person responsible for range operations and safety. Except in situations where the RCO delegates weapons release clearance to a qualified flight lead, individual pilot or forward air controller, or other briefed person.

Range Operating Authority (ROA) — The agency designated to operate and maintain the range. ROA may delegate the daily scheduling, management, and maintenance of the range to any appropriate subordinate unit.

Range Operations Officer (ROO) — The individual responsible for day-to-day operating activities.

Remotely-Piloted Aircraft (RPA) — A powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or nonlethal payload. Ballistic or semi-ballistic vehicles, cruise missiles, and artillery projectiles are not considered RPAs. Also referred to as Unmanned Aerial System (UAS) or Unmanned Aerial Vehicle (UAV).

Range Classification Service:

Class A — Range is manned, has a ground-based scoring capability, and has a RCO on the ground that controls aircraft using the range.

Class B — Range is either manned or unmanned, has a ground-based scoring capability, but does not have a RCO on the ground controlling aircraft. The flight lead, individual pilot, FAC, or other briefed person performs the RCO function.

Class C — Range is unmanned, with no scoring or aircraft control from the ground. The flight lead, individual pilot, FAC, or other briefed person performs the RCO function.

Class D — An instrumented air-to-air range, manned by a Range Training Officer (RTO) who maintains radio contact with aircraft on the range during air combat training, as required.

Restricted Area — A restricted area is airspace established under 14 CFR part 73, Special Use Airspace, provisions, within which the flight of civilian aircraft, while not prohibited, is subject to restriction. Restricted areas are established when necessary to confine or segregate activities considered hazardous to nonparticipating aircraft. Restricted areas can include: An area (land, sea or air) in which there are special restrictive measures employed to prevent or minimize interference between friendly forces or an area under military jurisdiction in which special security measures are employed to prevent unauthorized entry; airspace where the flight of aircraft, while not wholly prohibited, is subject to restriction. When not activated by the using agency, the controlling ATC facility may authorize IFR or VFR operations in the area. If joint-use is authorized, the name of the ATC controlling facility is annotated on the map; or an area that must contain all "Hazardous Activity" as defined by branch of service for specific type of aircraft using the range. See FAA Order JO 7610.4, *Special Operations*, for further information.

Site — A manned or unmanned, fixed ground location associated with a threat emitter/system, communications equipment, or scoring system.

Traditional Aircraft — Refers to directly manned aircraft, as opposed to RPAs.

Attachment 2

NTTR BUSINESS MANAGEMENT PROCESS (BMP)

A2.1. The NTTR BMP provides a procedural framework for the planning of range support to range events that are managed by HQ NTTR. As the HQ NTTR lead for the BMP, NTTR Range Projects provides the initial entry point for use of the NTTR. NTTR Range Projects conducts a biweekly synchronization meeting which includes project managers, Range Scheduling, Range Safety, Range Support Operations, NTTR/FM, DOE liaison, NTTR/PM, the JTECH II Threat Scheduler, and an RSS representative. Other agencies may participate based upon their project involvement. NTTR Range Projects provides routine updates on all range projects to the ROO.

A2.1.1. Nellis/Creech AFB users conducting activities (other than CT) and Non-local users will initiate their desired usage through the BMP.

A2.1.2. Local Nellis/Creech AFB users, coordinating CT sorties, will initiate their desired usage through the NTTR Scheduling Process, rather than the BMP.

A2.2. The NTTR BMP is segmented into five phases, each of which is further segmented into a time-phased sequence of milestones.

A2.2.1. Phase I: Requirements Definition. This phase begins with the identification of a new requirement, continues through the processing of the Initial Program Introduction Document (IPID) and ends with the completion of the Final Program Introduction Document (FPID)

A2.2.2. Phase II: Financial Commitment. This phase begins with the determination of the event's institutionally-funded or user-funded status and ends with the return of the Statement of Capability (SOC) by the user for institutionally-funded events or receipt of a certified funding document for user-funded events.

A2.2.3. Phase III: Support Tasking. This phase begins with the start of schedule coordination and ends with publishing of the Project Support Plan (PSP) or conduct of ROA brief, when required.

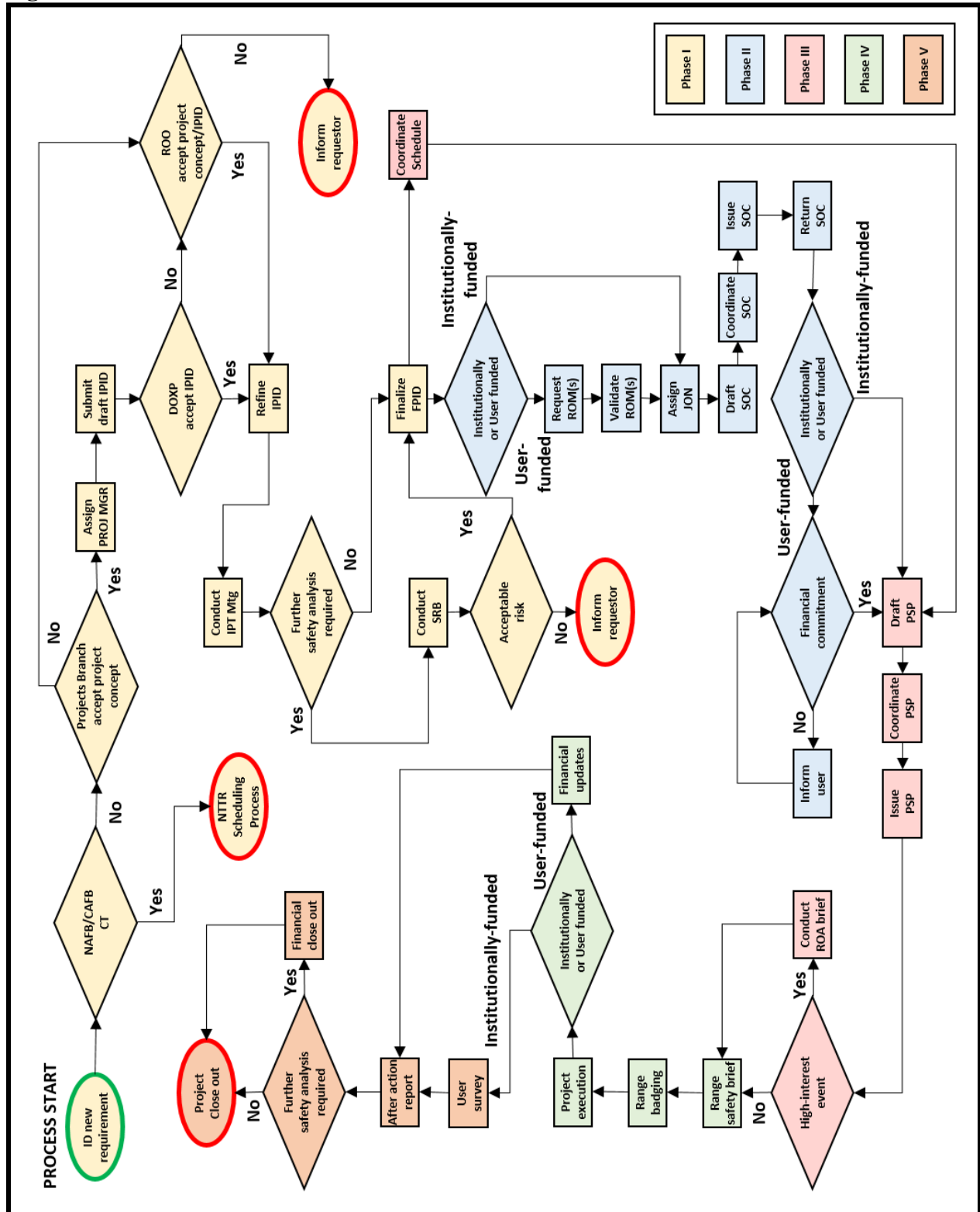
A2.2.4. Phase IV: Execution. This phase begins with the delivery of the range safety briefing to the user and ends with the completion of execution.

A2.2.5. Phase V: After Action. This phase begins with distribution of the user survey and ends with project close-out.

A2.3. Late submission of required products or funding may limit the support available for a given activity and/or may increase costs to the requestor. IPIDs received later than the BMP timeline suspense must be endorsed by the first O-6 (or equivalent) or higher in the chain-of-command of the requesting organization.

A2.4. The following figure provides a graphic description of the NTTR BMP:

Figure A2.1. NTTR BMP Phases and Milestones



A2.5. Phase I: Requirements Definition. During this phase, the potential event is considered for acceptance as an NTTR event; the IPID is drafted, submitted, and coordinated; the Integrated Product team (IPT) meeting is held; the SRB, if required, is conducted; and the FPID is finalized. The project manager will be assigned during this phase and will act as the direct interface for all user requirements. Local Nellis/Creech AFB users wishing to conduct CT sorties will be referred to the NTTR Scheduling Process.

A2.5.1. To be accepted onto the NTTR, at a minimum, events must fall within applicable safety and regulatory guidance; must not exceed NTTR's physical and logistical capabilities; and meet NTTR BMP timelines.

A2.5.2. The IPID and, eventually, the FPID, is a statement of project support requirements drafted by the prospective user, with the assistance of the project manager. The IPID and/or FPID formally documents the user's requirements. The level of detail will depend on the scope and complexity of project support requested. The project manager will coordinate the IPID and/or FPID with:

Table A2.1. Typical IPID and FPID Coordinating Agencies.

NTTR	External Agencies	Contractor Agencies
DO and associated Divisions FM MS and associated Divisions PM RS SE XP IP AP (if required)	DOE NNSS/NFO NNSS/SFO	JTECH II Operations Manager RSS Operations Manager

A2.5.3. IPID and FPID Response: Directors or designated representatives will staff the IPID and FPID through their organizations and respond based on their staff's recommendations. Once directorates provide feedback on project support requirements, the project manager will inform the user of any non-supportable requirements.

A2.5.4. The IPT meeting is a mandatory event chaired by the project manager. The IPT meeting is attended by the user, representatives from all HQ NTTR directorates, and subject matter experts. The IPT meeting provides the user a forum to directly discuss project requirements with support agencies. The IPT meeting allows NTTR directorates to identify supportability requirements and issues and determine available methods to meet user needs. Directorate representatives to the IPT meeting must be prepared to discuss any activity within their area of responsibility, and possess their directorate's decision-making authority. The project manager gathers additional information from the IPT meeting to include in the FPID.

A2.5.5. The IPT will determine if the project requires a SRB. If so, NTTR/SE will convene a SRB to determine whether the project risk is acceptable. NTTR Range Projects relays the SRB decision, any RSA results, and associated reason(s) for restrictions or project rejection to the requestor.

A2.6. Phase II: Financial Commitment. During this phase, institutional v. user funding source is determined; a proposal, if required, is developed; a JON is assigned; a SOC is developed and returned; and the user commits to providing any required funding.

A2.6.1. In support of user-funded events, a NTTR/PM will request a proposal estimate from the RSS contractor articulating required materials and labor and identifies any long-lead time articles. The contractor is expected to respond with a proposal estimate within 14 calendar days of the request.

A2.6.2. A JON is assigned for all events. The JON is an NTTR/FM-provided accounting code that allows for accurate tracking of billable activities. A JON must be assigned and funds in place before accountable expenditures are made in support of the event in question.

A2.6.3. The SOC formally details HQ NTTR's supportability response to the FPID, including cost factors. It includes a list of those items deemed unsupported. The project manager will coordinate the SOC with the same agencies who coordinated on the associated FPID.

A2.6.3.1. The SOC is approved and signed by the NTTR ROO and the user or agent authorized to commit project funding. Once the SOC is signed by these individuals, it becomes both a financial agreement to fund the project and the support contract to execute the project between the user and the HQ NTTR. The user's resource advisor (RA) and NTTR/FM will coordinate delivery of a certified funding document and funds transfer.

A2.6.3.2. Post-Approval Changes: The project manager will often need to address multiple project changes after the SOC has been approved, through to the end of project execution. The project manager will coordinate user needs with directorates for approval/supportability and keep all parties informed on changes. The project manager will keep a record (printed e-mails, network folder, etc.) of all requested changes for documentation and associated cost recovery. This record will include the level of change by the requestor (i.e., DO) as well as detailed SOC changes. SOC amendments and revised cost estimates may be required to satisfy additional project requirements and cost recovery.

A2.7. Phase III: Support Tasking. During this phase, the PSP is developed; scheduling is accomplished; and ROA coordination is accomplished, when required.

A2.7.1. The PSP formally tasks NTTR-supporting agencies with support to the event. The PSP provides the framework of services required for contractors and government support

agencies. The project manager will coordinate the PSP with the same agencies who coordinated on the associated SOC.

A2.7.2. Post-Approval Changes: The project manager will often need to address multiple project changes after the PSP has been approved, through the end of project execution. The project manager will coordinate user needs with directorates for approval/supportability and keep all parties informed on changes. The project manager will keep a record (printed e-mails, network folder, etc.) of all requested changes for documentation and associated cost recovery. This record will include the level of change by the requestor (i.e., DO) as well as detailed PSP changes. PSP amendments and revised cost estimates may be required to satisfy additional project requirements and cost recovery.

A2.7.3. Scheduling coordination responsibility through the NTTR Scheduling Process may fall to the project manager or the unit scheduler, and is agreed upon at the IPT.

A2.7.4. Within the two-week period prior to execution start, the project manager will submit/ coordinate user-provided personnel and sensitive equipment information to NTTR/IP to obtain range safety briefings, restricted area temporary badges, and sensitive equipment access approval. NTTR Range Projects may assign additional project managers to provide on-site, bed down and coordination support.

A2.7.5. The ROO will determine ROA coordination requirements for each event. Normally, LFEs require ROA coordination.

A2.8. Phase IV: Execution. During this phase, HQ NTTR monitors event execution and adjusts IAW user needs and organizational constraints.

A2.8.1. The project manager represents HQ NTTR for all aspects of project execution support during this phase. The project manager is responsible for resolving immediate execution support problems, providing broad, in-depth NTTR expertise and coordinating with directorates on support issues. Any change to the scope of effort that drives additional cost must be coordinated through project manager and NTTR/PM; NOT the contractor.

A2.8.2. Long-Duration Projects: For projects which exceed two months duration, the project manager will review NTTR/FM provided, JOCAS-based financial reports during the first week of each month to validate and update actual project costs and remaining funds on the project's account. The project manager will contact NTTR Range Scheduling and the user, as necessary, to reconcile project schedule/activity cost discrepancies. NTTR/FM will forward the financial reports to the user for their fiscal management planning. If the user requires a project's funds to be reallocated, the user's RA and NTTR/FM will coordinate funds transfer.

A2.9. Phase V: After Action. During this phase, HQ NTTR collects and analyzes feedback to help shape future activities as well as providing a final cost reconciliation to the user.

A2.9.1. The project manager will schedule a project-specific “hotwash” to discuss any significant issues identified during the project lifecycle. The hotwash participants will review identified issues, devise solutions, assign an OPR if necessary, and set a suspense date that is mutually agreed upon. Additionally, within two days upon completion of the project’s activity, the project manager will send a User Satisfaction Survey (USS) to the user to obtain feedback on all aspects of the HQ NTTR’s planning and execution support. The USS is a crucial tool utilized in informing the decisions that shape NTTR processes and systems. Users accept the obligation to complete the USS.

A2.9.2. The project manager authors the NTTR AAR (if necessary). The AAR captures data via the project manager’s observations while overseeing the project, hotwash, and USS feedback. The AAR summarizes issues and lessons learned throughout the project’s lifecycle, to include external inputs and internal action items. Once the AAR is complete, the project manager staffs the document to the interested NTTR directorates for review and comment, and obtains ROO approval of the report to close out the project. NTTR action items are referred to NTTR/XP for any required tracking and to support range capability requirements definition.

A2.9.3. The final step in the project is financial reconciliation. The user, project manager, and NTTR/FM will collaboratively arrive upon final, reconciled project costs and NTTR Range Projects will distribute a project closeout letter to NTTR Range Scheduling, NTTR/FM, NTTR/PM, the JTECH II Operations Manager and the RSS Operations Manager. NTTR/FM subsequently will close out all financial commitments with the user’s RA and close the JON.

A2.10. The following table lists key HQ NTTR BMP roles and responsibilities. It is not intended to be comprehensive, but rather it identifies those activities most commonly conducted as part of the NTTR BMP.

Table A2.2: NTTR/DO (Range Projects) Key BMP Roles and Responsibilities.

<ul style="list-style-type: none"> • Respond to initial contact by prospective users • Explain general BMP timeline requirements and flow • Provide users with PID template and assist in submitting necessary documents • Coordinate the IPID, FPID, SOC, PSP, and AAR with the NTTR directorates • Chair the IPT and manage the development of the FPID • Provide the user with the SOC and cost estimate for approval • Coordinate for the scheduling of air and ground space • Provide project brief to ROO and ROA • Review JOCAS-based monthly FM reports for project cost update • Schedule and chair hotwash meeting • Provide USS to users • Author the AAR, validate and assign action items and suspense dates • Provide execution oversight of the project • Meet with NTTR/FM and user to reconcile final project costs • Issue project closeout letter • Technically evaluate contractor proposals
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Table A2.3: NTTR/DO (Range Scheduling) Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Schedule air and ground space
- Provide NTTR Range Projects range utilization reports, if required
- Review the AAR for assigned action items

Table A2.4: NTTR/DO (Current Operations) Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Provide operational support for the project
- Review the AAR for assigned action items

Table A2.5: NTTR/DO (Targets Management) Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Provide operational support for the project
- Review the AAR for assigned action items

Table A2.6: NTTR/DO (ROO) Key BMP Roles and Responsibilities.

- Review and approve the SOC, PSP, and AAR
- When required, review project proposals for execution on NTTR

Table A2.7: NTTR/FM Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT (if required by the project manager)
- Issue a project JON to the project manager
- Coordinate user funds transfer with unit RA
- Provide project manager JOCAS-based monthly project charge reports
- Review the AAR for assigned action items
- Provide the project manager with the final project cost report
- Provide the user with the final project cost report
- Reconcile funding with unit RA

Table A2.8: NTTR/IP Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Provide support for the project IAW NTTR OI 31-101

Table A2.9: NTTR/MS Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Perform technical analysis/validation of cost estimates as needed
- Monitor NTTR Range Projects project-associated 332s to completion
- Review the AAR for assigned action items

Table A2.10: NTTR/PM Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR; Ensure the SOC and PSP address PID-required RSS support
- Participate in the IPT
- Provide RSS contractor interface for the project
- Process proposal estimate requests and validate proposal estimate costs
- Review the AAR for assigned action items

Table A2.11: NTTR/RS Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Provide JTECH II contractor interface for project
- Process ROM estimate requests and validate proposal estimate costs
- Ensure the SOC and PSP address IPID and/or FPID required JTECH II support
- Coordinate spectrum management clearances IAW the IPID and/or FPID
- Provide technical support throughout project execution
- Review the AAR for assigned action items

Table A2.12: NTTR/SE Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Conduct SRBs
- Develop RSAs
- Ensure weapon profiles are provided
- Review the AAR for assigned action items

Table A2.13: NTTR/XP Key BMP Roles and Responsibilities.

- Review the IPID, FPID, SOC, PSP, and AAR
- Participate in the IPT
- Consolidate, track and identify range capability shortfalls for POM input
- Review the AAR for assigned action items and HQ NTTR implications

A2.11. Two distinct BMP timelines are applied based upon the requesting user:

A2.11.1. External Requestors: A 90-day timeline is normally used to support non-Nellis/Creech based requestors.

A2.11.2. Internal Requestors: A 45-day timeline is normally used to support Nellis/Creech based requestors who are familiar with local operating conditions and HQ NTTR processes.

Table A2.14: Nominal BMP Timelines¹.

Milestone	External Timeline	Internal Timeline	NTTR OPR/OCR
HQ NTTR receive IPID ²	≥S - 90	≥S - 45	Range Projects
Assign project manager	S - 90	S - 45	Range Projects
Conduct IPT meeting	S - 85	S - 40	Range Projects
Finalize FPID	S - 85	S - 40	Range Projects
Determine SRB requirement	S - 85	S - 40	SE
Request JON	S - 69	S - 40	FM
Request proposal	S - 83	S - 40	PM/RS
Validate proposal	S - 69	S - 26	PM/RS
Begin SOC/ proposal e-coordination	S - 63	S - 25	Range Projects
Complete SOC/ proposal e-coordination	S - 60	S - 22	Range Projects
Provide SOC/ proposal to range user	S - 60	S - 22	Range Projects
Complete SRB	S - 30	S - 20	SE
Range user return SOC/ proposal	S - 30	S - 20	Range Projects
Begin PSP e-coordination	S - 23	S - 20	Range Projects
Complete PSP e-coordination	S - 20	S - 17	Range Projects
Provide PSP to range user	S - 20	S - 17	Range Projects
Conduct senior leader brief (ROO)	S - 14	S - 14	Range Projects
Receive certified funding document	S - 14	S - 14	FM
Technical evaluation	S - 14	S - 14	PM
Rescind JON (if funding not received)	S - 13	S - 13	Range Projects
Issue task order	S - 03	S - 03	PM
Conduct range safety brief	S - 01	S - 01	IP/SE
Conduct senior leader brief (ROA)	S - 01	S - 01	Range Projects
Project execution ³	-----	-----	-----
Send USS to range user	E + 02	E + 02	Range Projects
Hotwash	E + 07	E + 07	Range Projects
Range user returns USS	E + 23	E + 23	Range Projects
Begin AAR e-coordination	E + 30	E + 30	Range Projects
Complete AAR e-coordination	E + 40	E + 40	Range Projects
Distribute AAR	E + 40	E + 40	Range Projects
Finalize AAR and distribute	E + 45	E + 45	Range Projects
Validate final costs	E + 90	E + 90	FM/Range Projects

Reconcile final funding	E + 99	E + 99	FM
Provide project closeout letter	E + 99	E + 99	Range Projects
<p>Note 1: Expressed in Calendar Days, Plus/Minus Execution Days. "S" Day indicates the day of support start (which may not coincide with the start of event execution); "E" Day indicates the day of event execution end.</p> <p>Note 2: In support of the unique planning timelines associated with Exercise RED FLAG, the IPID is required NLT seven calendar days following the final planning event.</p> <p>Note 3: NTTR Range Projects will provide financial updates to the user, as required.</p>			

A.2.12. Support to commercial activities. All commercial activity conducted on the NTTR and/or R-4808 and managed by HQ NTTR must be specifically coordinated and approved through NTTR Range Projects. As part of the application of the NTTR BMP to commercial activities, special care must be given to ensure all key sponsoring agencies are provided the opportunity to consider the implications of the proposed activity.

A2.12.1. All commercial organization activity will be vetted through the Air Force Office of Special Investigation. It is crucial for the requesting agency to identify foreign-national ownership or participation in the requested activity.

A2.12.2. Operating restrictions on commercial activities may be imposed, and trained escorts may be required, based on proximity to sensitive range activities. Any data collection/distribution capabilities utilized as part of the proposed commercial activity must be identified and assessed with respect to risk to core NTTR sensitive range activities.

A2.12.3. Sensor payloads, flight test telemetry streams, command and control links, and other RF emanations, as well as any live, inert, and training ordnance associated with commercial activities must be fully reviewed for possible safety and security impacts to NTTR core missions.

A2.13. Commercial User Questionnaires. As part of the NTTR BMP, prospective commercial users must submit "Commercial User Questionnaires" (Tables A2.15-A2.19) in conjunction with the IPID and/or FPID IAW NTTR BMP timelines. Any questions that are not answered at the time of submittal may delay or preclude approval.

Table A2.15. Commercial User Questionnaire: General Description.

<ul style="list-style-type: none"> • Name of company requesting range access? • Event name and desired dates and times (if known)? • Event objective? For test events, provide test plan. • Commercial and Government Entity (CAGE) Code? • Company's primary address, telephone, and email address? • Company point of contact/principal officer? • Any foreign interest/investment involved in company, management, or proposed activity? If YES, explain. • Any foreign nationals involved in the execution of the event? If YES, explain. • Local host unit(s) (if any)? • Has the requesting user operated on the NTTR and/or R-4808 before? When? Why? • Will this event require a pre-visit/site survey? If YES, when, where, air/ground/both?
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Table A2.16. Commercial User Questionnaire: General Equipment.

- Individually list all mission equipment intended to be used. For each piece of equipment, provide name, type, specifications, manufacturer, and details of expected usage.
- Location of mission equipment on or near the NTTR supporting the event?
- Will it be necessary to erect towers/antennas?
- Can mission equipment be turned/powered on and off remotely?
- Is mission equipment required to be left overnight on the NTTR? If YES, describe desired safeguards.
- Will experimental equipment/software be used?
- What will be the disposition of mission equipment after the event is complete?
- Aircraft involved? If YES, type/model, call sign, and IFF Code.
- Will any type of unmanned system be involved? If YES, explain and provide type/model, call sign, and IFF Code (as applicable).
- Is space-based (commonly referred to as “overhead imagery”) and signals intelligence (SIGINT) collections intended as part of the event?

Table A2.17. Commercial User Questionnaire: Sensors and Dissemination.

- Are any imaging systems intended to be used? If yes, obtain sensitive equipment passes IAW Attachment 21 (Imagery Processes and Restrictions).
- Location of sensor equipment on or near the NTTR supporting the event?
- Can sensor equipment be turned/powered on and off remotely?
- Is sensor equipment required to be left overnight on the NTTR? If YES, describe desired safeguards.
- Will experimental sensor equipment/software be used?
- What will be the disposition of sensor equipment after the event is complete?
- Can the sensor(s) be turned on and off during the mission?
- Sensor(s) field of view?
- Sensor(s) field of regard?
- Sensor(s) resolution?
- Sensor(s) range?
- Where does sensor data flow after it is collected?
- Is it a live feed or will it be recorded/processed first?
- Is data downlinked to a ground station or retained on-board?
- If necessary, can the data be edited prior to distribution or storage?
- What is the final delivery and storage destination of the data?
- At what security level will the data be maintained?
- Will stored data be retained in it be encrypted format? If YES, at what encryption level?
- Will stored data be treated as “US Only?”
- Who will have access to collected data?
- How long will the data be retained after the event?
- Will FMV equipment to be used? If yes, submit FMV Questionnaire IAW Attachment 21, (Imagery Processes and Restrictions).

Table A2.18. Commercial User Questionnaire: EMI/RFI.

- Will equipment transmit RF signals? If YES, what are the operating frequencies and power levels?
- Does equipment require special assistance from spectrum management?
- Provide "Cease Buzzer" information and locations (if applicable).

Table A2.19. Commercial User Questionnaire: Ordnance.

- What live, inert, and/or training ordnance is intended to be utilized?
- Has the intended ordnance been operated on the NTTR and/or R-4808 by the requesting user before? When? Why?
- Is experimental ordnance intended to be utilized?

Attachment 3

SCHEDULING AND CONFLICT ADJUDICATION

A3.1. NTTR Range Scheduling ensures range activities are scheduled in a manner that safely optimizes coordinated range use. HQ NTTR schedules the following activities:

Table A3.1. Scheduled Air and Ground Activities Upon NTTR Subranges.

FAA Airspace Designation	FAA Sub-Airspace Designation	NTTR Subrange Designations	Air	Ground
R-4806	R-4806E	Alamo A/B/C	Yes	No
	R-4806W	R-61A	Yes	Yes
		R-61B	Yes	Yes
		R-62A/B	Yes	Yes
		R-63A/B/C	Yes ¹	Yes
		R-64A/B/C	Yes	Yes
		R-64D/E/F/G	Yes ²	No
		R-65B/C	Yes	Yes
R-65A/D	Yes	Yes		
R-4807	R-4807A	R-71N/S	Yes	Yes
		R-74A/B/C	Yes	Yes
		R-75E/W	Yes	Yes
		R-76	Yes	Yes
		EC East	Yes ³	No
		R-4807A (Subset)	Yes ³	No
		R-77A/B	Yes	Yes ¹⁰
	TPECR	Yes ⁴	No	
R-4807B	Pahute A/B	Yes	No	
R-4808	R-4808N	R-4808A	No ⁵	No
		R-4808B/C/D/E	Yes ⁶	No
	R-4808S	R-4808S	No ⁵	No
R-4809	EC West	EC West	Yes ⁷	No
	R-4809A	R-4809A	Yes	No
	R-4809B	R-4809B	Yes ⁷	No
Reveille North MOA	Reveille North MOA and ATCAA	Reveille North	Yes ⁸	No
Reveille South MOA	Reveille South MOA and ATCAA	Reveille South	Yes	No
Desert MOA	Desert MOA and ATCAA	Coyote A/B/C/D	Yes	No
		Caliente A/B/C	Yes	No
		Elgin	Yes	No
		Sally Corridor	Yes ⁹	No

Table A3.1. Scheduled Air and Ground Activities Upon NTTR Subranges (continued).

Note 1: The R-63C Extension Area will be activated whenever R-63C is active for .50 caliber machine gun use or during other mission requirements.
Note 2: R-64D/E/F/G are assigned to Creech Tower. Use of this airspace requires special coordination.
Note 3: For scheduling purposes, EC East includes R-4807A (Subset) ground/airspace.
Note 4: For scheduling and supersonic operations purposes, TPECR includes FAC A/B ground/airspace. FAC A/B includes the road leading to TPECR and are to be considered continually manned.
Note 5: R-4808A and R-4808S ground/airspace are not available through the NTTR Scheduling Process.
Note 6: R-4808B/C/D/E ground space is not available through the NTTR Scheduling Process; limited R-4808B/C/D/E airspace is normally available through the NTTR Scheduling Process.
Note 7: For scheduling purposes, EC West includes R-4809B ground/airspace.
Note 8: Reveille North above 30,000ft MSL, is only available through the NTTR Scheduling Process when released by SLC ARTCC.
Note 9: Sally Corridor is normally assigned to NATCF. Use of this airspace requires special coordination.
Note 10: Ground parties are not scheduled for R-77B.

Table A3.2. Scheduled Air and Ground Activities Upon NTTR Additional Specified Areas.

FAA Airspace Designation	NTTR Sub-Range Designation	Additional Specified Areas	Air	Ground
R-4806	Alamo A/B/C	Alamo Corridor	Yes	No
	R-63B	R-63B High	Yes	NA
		R-63C Extension Area	Yes	Yes
	R-64C	CTA	Yes ²	No
	R-64A ¹	Air-to-Air Gunnery Area	Yes	Yes
R-4808	R-4808D	Gomer Triangle	Yes	No
R-4809	R-4809A	STA	Yes ³	No
		Shelf	Yes	No
Reveille South MOA	Reveille South MOA	Dorito	Yes	No
Desert MOA	Desert MOA and ATCAA	X-Ray Extension	No ⁴	No

Note 1: Although centered within R-64A, the Air-to-Air Gunnery Area also includes portions of R-61A, R-62A/B, R-64A/B, and R-65A/B/C.

Note 2: CTA is assigned to Creech Tower. Use of the airspace requires special coordination.

Note 3: STA is assigned to Silverbow Tower. Use of the airspace requires special coordination.

Note 4: The X-Ray Extension is only available when released for use by NATCF. The request is made by the user directly to NATCF.

A3.1.1. NTTR Range Scheduling utilizes the Center Scheduling Enterprise (CSE), a computerized man-in-the-loop system, for the official scheduling of mission activities and generation of the daily range schedule. The daily range schedule reflects assigned range time in 15-minute increments.

A3.1.2. Local Nellis/Creech AFB users, coordinating CT sorties, will initiate their desired usage through the NTTR Scheduling Process, rather than the BMP.

A.3.1.3. Non-local users and Nellis/Creech AFB users conducting activities other than CT will initiate their desired usage through the BMP, rather than the NTTR Scheduling Process.

A3.2. NTTR Range Monitoring provides 24 hour support Monday through Friday and 10 hour per day support on Saturday and Sunday. Missions requiring NTTR Range Monitoring support beyond 10 hours (Sat-Sun) require ROO approval and may incur additional costs to the user.

A3.3. NTTR Scheduling Requirements. All units must submit their NTTR scheduling requirements to NTTR Range Scheduling through CSE or PEX squadron mission reports (also referred to as “pencils”). Units may modify pencils according to unit scheduling requirements but must include, as a minimum, the following:

- Range(s), range time(s).
- JON.
- Unit designation.
- Scheduler’s name and contact number.
- Adversary participants.
- Number and type of aircraft.
- Callsign(s).
- Identification friend or foe code.
- Ordnance type(s) and quantity (to include dynamic retargeting requirements), target if known.
- Desired foreign participation.

A3.3.1. CSE and GRR access is available upon request. Requests for new CSE user accounts may be submitted to NTTR Range Scheduling. The GRR website is an aircrew quick-reference mission planning tool with limited information that utilizes a latest version imperative for up-to-date coordination. Access to the GRR website does not require a CSE account. Users may gain direct access to the GRR website via <https://rkmf-as-cwpp.area52.afnoapps.usaf.mil/cse/GRR/GRRMain.aspx>. CSE can be accessed at <https://rkmf-as-cwpp.area52.afnoapps.usaf.mil/cse/>. Information required for NTTR scheduling as a minimum, includes the following:

A3.3.2. Laser operations. When combat mode laser operations are requested, NTTR Range Scheduling and NTTR Range Monitoring (as applicable) will annotate it in the daily range schedule. Additionally, a “No Combat Laser” mission restriction may be added to the daily range schedule as applicable. During combat laser operations, NTTR ground parties are required to wear laser eye protection (LEP) within all subranges where hazardous laser energy may terminate. “LEP required” will be annotated on the daily range schedule for the affected subranges (i.e. Range 62A, Range 63B, Range 77, etc.).

A3.3.3. Support requirements: NACTS; GCI; ITAS; TOSS; EC requirements; JDNC; HSMT; threat emitters; etc.

A3.3.4. Activities that include ground parties (i.e., JTACs, convoys, and mobile threats), require specific coordination and deconfliction.

A3.3.4.1. Items essential to the schedule building process (i.e., target identification and ordnance quantity and type) may realistically not be known and/or available at the weekly scheduling meeting. It is paramount that range users inform NTTR Range Scheduling at the earliest opportunity or NTTR Range Monitoring (within 48 hours of execution) so the daily range schedule can be updated and deconflicted.

A3.3.4.2. All personnel requiring NTTR range access for ground party activity must comply with established guidelines. Ground party activities on NTTR subranges that require scheduling (as indicated in Tables A3.1 and A3.2) must be approved through the NTTR Scheduling Process.

A3.4. The NTTR Scheduling Adjudication Process provides a standardized framework for thorough evaluation and administration of range user requirements of all air and ground activities conducted on the range whenever a range scheduling conflict exists.

A3.4.1. The NTTR Chief of Range Scheduling is responsible for the initial administration of the range adjudication process and is the first step for resolving scheduling conflicts. The Chief of Range Scheduling will conduct a comprehensive review of all dispute-related information; refer to standard range priorities and information such as established TPLs, operational tasking information, syllabi, tactics development, training requirements, and timeliness of information. The Chief of Range Scheduling may request an impact statement from the disputed parties to facilitate conflict resolution and mitigation.

A3.4.2. If either of the disputed parties is not satisfied with the adjudication decision, they may request an adjudication review at the group (or equivalent) level. All information gathered in the initial review will be forwarded and the process will continue, following the same adjudication procedures, until the issue is resolved. In the unlikely event that the issue cannot be resolved at that level, it will be referred to the wing (or equivalent) level and so forth until resolution is achieved.

A3.5. The NTTR scheduling timeline is organized into three progressive phases: planning, processing, and execution.

A3.5.1. The NTTR schedule planning phase is a collaborative and integrated undertaking that is led by the Chief of Range Scheduling. The NTTR schedule planning phase provides a method for consolidating long-term NTTR scheduling issues and requirements from all range users. The planning phase ranges from 12 months to 90 days prior to the month of execution.

A3.5.2. The NTTR schedule processing phase translates long-term requirements into an executable schedule.

A3.5.2.1. The NTTR schedule processing phase begins with the release of the scheduling “shell” by the Chief of Range Scheduling to DOE, no later than 90 days prior to the month of execution.

A3.5.2.2. Once DOE receives the shell, DOE, NNSS/NFO, and NNSS/SFO range requirements will be collectively submitted by DOE to NTTR Range Scheduling no later than 70 days prior to the month of execution.

A3.5.2.3. Once DOE mission requirements are reflected on the shell, NTTR Range Scheduling will collaborate with 57 OSS/OSO to identify any scheduling conflicts. NTTR Range Scheduling will release the shell to 57 OSS/OSO no later than 60 days prior to the month of execution.

A3.5.2.4. Once 57 OSS/OSO receives the shell, Nellis, Creech, and other ACC range requirements will be collectively submitted by 57 OSS/OSO to NTTR Range Scheduling no later than 45 days prior to the month of execution.

A3.5.2.5. 57 WG Range Integration meeting (45-day). The 57 WG Range Integration meeting is hosted by the 57 OSS/OSOS and conducted approximately 45 days prior to the month of execution, on the last Thursday of each month (unless published otherwise). The purpose of this meeting is for Nellis, Creech, and ACC range users to adjust the shell, and coordinate and confirm individual range requirements with 57 OSS/OSOS, while identifying and attempting to resolve potential scheduling conflicts prior to the 30-day NTTR Range War meeting. Once all requirements are reflected on the shell, the product is collectively referred to as the “spreadsheets.” Any changes to the spreadsheets post Range Integration and Pre Range War will be coordinated through the NTTR Chief of Scheduling, 57 OSS/OSOS and DOE.

A3.5.2.6. NTTR Range War meeting (30-day). The NTTR Range War meeting is hosted by NTTR Range Scheduling and conducted in the HQ NTTR building approximately 30 days prior to the month of execution on the first Friday of each month (unless published otherwise). The purpose of this meeting is for all NTTR range users and associated project managers to adjust the spreadsheets and coordinate individual range requirements with NTTR Range Scheduling, while identifying and attempting to resolve potential scheduling conflicts prior to the NTTR Pencil meeting. Although the spreadsheet is matured through the NTTR Range War meeting, it does not yet reflect the official schedule. It is further refined through the NTTR Pencil meeting before final entry into CSE as the official schedule.

A3.5.2.6.1. Post NTTR Range War meeting, previously unidentified user requirements are scheduled on a first-come, first-served basis.

A3.5.2.6.2. Any RPA full-motion video (FMV) requests will be provided to NTTR Range Projects and any foreign participation will be identified no later than the NTTR Range War meeting.

A3.5.2.7. Special Use Airspace meeting (21-day). When required, the NTTR Special Use Airspace meeting is scheduled by NTTR Range Projects and hosted by NTTR Range Scheduling prior to the execution of Large Force Exercises (LFE) utilizing R-4808B/C/D/E and R-4809A. The purpose of the Special Use Airspace meeting is to conduct interagency coordination and deconfliction for those areas. Representatives from the LFE host, the NTTR Range Projects, NTTR Range Scheduling, NNSS/NFO, and DOE must attend. Special Use Airspace coordination must be complete prior to the NTTR Pencil meeting.

A3.5.2.8. NTTR Pencil meeting (14-day). The NTTR Pencil meeting is hosted by NTTR Range Scheduling and conducted in the HQ NTTR building approximately two weeks prior to the week of execution at 1000L each Tuesday. The purpose of the Pencil meeting is for all NTTR range users and associated project managers to adjust the spreadsheets and schedule individual requirements through NTTR Range Scheduling for the week beginning 13 days later.

A3.5.2.8.1. All users with scheduling requirements must provide a representative to the Pencil meeting to confirm their requirements and coordinate on required changes. Non-local users may be represented by NTTR Range Projects and/or NTTR Range Scheduling. User representatives who cannot be present at the meeting will coordinate with NTTR Range Scheduling NLT 0930L the day of the meeting to confirm range requirements. Users who neither represent their requirements at the NTTR Pencil meeting nor coordinate their lack of attendance with NTTR Range Scheduling are presumed to no longer require the previously identified range access and may, therefore, default that time to other users.

A3.5.2.8.2. Users will submit a mission request via CSE or provide a pencil to ensure the mission requirements are processed into CSE after this meeting. Users will access CSE to review the daily range schedule for accuracy and coordinate corrections, if necessary, through NTTR Range Scheduling.

A3.5.2.8.3. NTTR Range Scheduling will distribute the final version of the spreadsheets and load that scheduling data into CSE NLT 1000L on the Thursday following the Pencil meeting. NTTR Range Scheduling will not accept changes to the post-NTTR Pencil meeting spreadsheets prior to that time. The scheduling spreadsheets remain a planning tool only; NTTR users must refer to CSE for official schedule information.

A3.5.2.8.4. Costs incurred due to user-requested schedule changes made after 1200L on the Tuesday following the release of the post-Pencil meeting spreadsheets may be charged to the scheduled user.

A3.5.3. Schedule Confirmation. The requesting unit has final responsibility to make sure the spreadsheets and CSE reflect their requirements and unit schedulers will confirm all

elements of their scheduled mission activity and airspace with NTTR Range Scheduling no earlier than three days prior to mission execution and no later than 1200L two days prior to mission execution. Host units will verify foreign participation as part of the schedule confirmation.

A3.5.4. The NTTR schedule execution phase allows for the execution of the published daily range schedule. 48 hours prior to execution, the daily range schedule is made available to NTTR Range Monitoring. NTTR Range Monitoring is responsible for same day and next day schedule changes.

A3.6. Threat Emitter Scheduling. Obtaining threat emitter support presents a specific scheduling challenge that prospective users must understand in order to obtain their desired support. Although threat emitter requirements must be submitted to begin the process, it is understood that requirements may change as the planning for an event matures. HQ NTTR will support these changes as practicable, however, there are limitations to the flexibility that can be applied to managing threat emitters.

A3.7. Local Nellis/Creech AFB Users Coordinating CT Sorties. Local Nellis/Creech AFB users, coordinating CT sorties, will initially identify their desired threat emitter support to the JTECH II Threat Scheduler no later than the NTTR Range War meeting (approximately 30 days prior to the month of execution) IAW the NTTR Scheduling Process. Routine changes will be provided to JTECH II Threat Scheduler through the NTTR Pencil meeting prior to the week of execution. Additional changes will be considered, but cannot be guaranteed, as follows:

A3.7.1. Relocation of transportable threat emitters: The time required to relocate transportable threat emitters can vary, however, relocation requests received no later than between four and two duty days prior to execution can normally be supported.

A3.7.2. Addition of threat emitters: No later than two duty days prior to execution.

A3.7.3. Deletion of threat emitters: Any time prior to execution.

A3.7.4. Reconfiguration of a threat emitter laydown: No later than 48 duty hours prior to execution.

A3.8. Non-local users and Nellis/Creech AFB Users Conducting Activities Other Than CT. Non-local users and Nellis/Creech AFB users conducting activities other than CT will initially identify their desired threat emitter support as part of the IPID and/or FPID IAW the NTTR BMP timelines (no later than 90 days for external users and no later than 45 days for internal users). Routine changes will be considered via SOC development, again at the NTTR Range War meeting, and finally at the Pencil meeting prior to the week of execution. Any desired changes identified after the NTTR Pencil meeting will be submitted to NTTR Range Projects for consideration and coordination with the JT4 Threat Scheduler. Changes will be considered, but cannot be guaranteed

A3.8.1. Any costs incurred by HQ NTTR in response to user changes after the FPID is submitted will be charged to the user, including costs for threat emitters initially requested (but subsequently deleted) from the overall requirement.

A3.9. Test and Unique Mission Scheduling. Test or other missions requiring unique targets other than existing targets require additional coordination within the NTTR. These situations will be identified when NTTR/DOXP notifies the NTTR Targets office of a customer's requirement through PID dissemination, and the Targets office determines no existing targets will meet the mission requirements. In these situations, and when a target is built with the intention of being targeted in an area that is not listed as targetable on the Mission Planning website, and is intended for a single or short-term use, the NTTR Targets office will notify NTTR/SE as well as the Geographic Information Systems (GIS) office.

A3.9.1. The NTTR Targets office will provide NTTR/SE with the centroid grid for the target area, munition employment information, and aircraft information. NTTR/SE will then build mission-specific profiles and forward them to the GIS office for inclusion on the Mission Planning website.

A3.9.2. The NTTR Targets office will provide the GIS office with a target centroid and description. The GIS office will create and load a new target, identified as XX-00 (XX being the range where the target is located) on the Mission Planning website. Upon completion of the mission, and at the discretion of the NTTR Targets office, the GIS office will delete the "00" target from the database and Mission Planning website. The GIS office will notify the Targets and Scheduling offices anytime "00" targets are loaded or deleted.

A3.9.3. The NTTR Safety office will load the "00" target into the CSE target database. The NTTR Scheduling or Projects office will assign it to the appropriate missions. Once notified by GIS that the targets have been removed from the Mission Planning website, the NTTR Safety office will delete the target from the CSE database.

A3.10. NTTR Scheduling Changes and Cancellations. Users who desire schedule changes after the NTTR Range War meeting, which affect other scheduled users, will coordinate their desires with all affected scheduled users. If the scheduled users approve the request, both the requestor and originally scheduled user will notify NTTR Range Scheduling (more than 48 hours prior to execution) or NTTR Range Monitoring (within 48 hours of execution) of the agreed upon changes via telephone and/or email. If any of the originally scheduled users do not approve the requested change, the change requestor may pursue further adjudication through NTTR Scheduling Adjudication Process.

Attachment 4

INDIVIDUAL RANGE DESCRIPTIONS

A4.1. Individual descriptions of the NTTR subranges and selected other NTTR specified areas follow. Users should review specific range information (available on the NTTR Mission Planning websites) for each subrange for a summary view and the NTTR Mission Planning websites for target availability, ordnance and delivery restrictions, etc.

Table A4.1. FAA Designations and Associated Subranges.

FAA Airspace Designation	FAA Sub-Airspace Designation	NTTR Subrange Designations	Description Page(s)
R-4806	R-4806E	Alamo A/B/C	61
	R-4806W	R-61A/B	62-63
		R-62A/B	63-64
		R-63A/B/C	64-67
		R-64A/B/C/D/E/F/G	67-72
		R-65A/B/C/D	73-75
R-4807	R-4807A	R-71N/S	75-76
		R-74A/B/C	76-77
		R-75E/W	78-79
		R-76	79
		EC East	80
		R-4807A (Subset)	80-81
		R-77A	81-82
		R-77B	82
	TPECR	82-83	
	R-4807B	Pahute A/B	83-84
R-4808N	R-4808A ¹ /B/C/D/E	84-86	
R-4808S	R-4808S ¹	NA	
R-4809	EC West	EC West	86-87
	R-4809A	R-4809A	87-88
	R-4809B	R-4809B	88
Reveille North MOA	Reveille North MOA and ATCAA	Reveille North	89
Reveille South MOA	Reveille South MOA and ATCAA	Reveille South	90
Desert MOA	Desert MOA and ATCAA	Coyote A/B/C/D	90-91
		Caliente A/B/C	91
		Elgin	91-92
		Sally Corridor	92-93
Note 1: No descriptive table is provided.			

Table A4.2. Additional Specified Areas.

FAA Airspace Designation	FAA Sub-Airspace Designation	Additional Specified Areas	Description Page(s)
R-4806	R-4806E	Alamo Corridor ¹	NA
	R-4806W	R-63B High	93
		R-63C Extension Area ¹	NA
		CTA	94
		Air-to-Air Gunnery Area	94-95
R-4808	R-4808N	Gomer Triangle ¹	NA
R-4809	R-4809A	STA	95
		Shelf ¹	NA
Reveille South MOA	Reveille South MOA and ATCAA	Dorito ¹	NA
Desert MOA	Desert MOA and ATCAA	X-Ray Extension	96

Note 1: No descriptive table is provided.

Table A4.3. Alamo A/B/C.

Range Type	Class C
Airspace	100ft AGL to unlimited
Highest Elevation	7,999ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountains exist throughout Alamo A/B/C.
Entry/Departure Info	Range entry and departure is normally conducted through Sally Corridor or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in Alamo A/B/C.
Ordnance Restrictions	There are no strikeable targets in Alamo A/B/C; aircrews are prohibited from expending ordnance in Alamo A/B/C.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Alamo A/B/C.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	1. Alamo A/B/C overlies the DNWR. Aircraft will remain above 2,000ft AGL in Alamo A/B/C unless a lower altitude is required for tactical training and IAW the daily range schedule. 1. Aircrew will avoid noise sensitive areas IAW NAFBI 11-250.
Additional Info	1. Alamo A/B/C may be scheduled as a whole or by individual subranges. 2. The Alamo Corridor lies within Alamo A/B/C at FL190 to FL210 and is schedulable.

Table A4.4. R-61A.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,952ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountains are located towards the west of R-61A.
Entry/Departure Info	<ol style="list-style-type: none"> 1. Fixed-wing aircraft will enter/exit R-61A along the northern border of Alamo A/R-61B or as directed by NATCF. 2. Helicopters will enter/exit R-61A through the valley between the northern end of the East Desert mountain range and southern end of Pahrnagat mountain range (N37 13.00 W115 22.00) in R-61B.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-61A.
Ordnance Restrictions	There are no strikeable targets in R-61A; aircrews are prohibited from expending ordnance in R-61A.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-61A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-61A unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. RPAs are prohibited from flying in R-61A.
Additional Info	None

Table A4.5. R-61B.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,096ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	A north-south mountain range bisects R-61B.
Entry/Departure Info	1. Fixed-wing aircraft will enter/exit R-61B along the northern border of Alamo A or as directed by NATCF. 2. Helicopters will enter/exit R-61B through the valley between the northern end of the East Desert mountain range and southern end of Pahranaagat mountain range (N37 13.00 W115 22.00) in R-61B.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-61B.
Ordnance Restrictions	There are strikeable targets in R-61B; however, aircrews are prohibited from expending ordnance on Targets 61-02, 61-98, and 61-99.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-61B overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-61B unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	None

Table A4.6. R-62A.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	6,040ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains surround Dogbone Lake on all sides and are approximately 6NM away from the target areas. 2. TOSS towers are located on and around the R-62A target impact area. 3. Target 62-01 is an active CBU grid, the only ground parties authorized on this target are EOD. 4. Inactive target 62-07 is an inactive CBU grid. Due to multiple UXO hazards, EOD personnel are the only authorized ground parties on this target.
Entry/Departure Info	Range entry and departure is normally conducted through Alamo B or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-62A.
Ordnance Restrictions	There are strikeable targets in R-62A.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-62A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-62A unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	<ol style="list-style-type: none"> 1. Multiple targets on R-62A are TOSS capable. 2. OP C3 is located in R-62A.

Table A4.7. R-62B.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	6,627ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains surround Dogbone Lake on all sides and are approximately 6NM away from the target areas. 2. TOSS towers are located on and around the R-62B target impact area.
Entry/Departure Info	Range entry and departure is normally conducted through Alamo C or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-62B.
Ordnance Restrictions	<ol style="list-style-type: none"> 1. There are strikeable targets in R-62B; however, aircrews are prohibited from expending ordnance on Targets 62-98, 62-99, OP Jack, OP Romeo, OP Whisky, and OP X-Ray. 2. Aircrew must exercise caution to avoid targeting remotely operated emitters while delivering ordnance. Emitter units are bunkered in the vicinity of strikeable targets. These emitters are painted white and have protective barriers utilizing concrete blocks to shield the systems from shrapnel. 3. There is a 3 mile long High Speed Moving Target (HSMT) track that runs north to south. At the south end there is a sea-land shelter painted white that is non-strikeable. 4. The UOC is in the south end of range 62B. All of the structures in the UOC are non-strikeable from aircraft with the exception of targets 62-11, 62-12, and 62-13 and 62-91.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-62B overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-62B unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	<ol style="list-style-type: none"> 1. Multiple targets on R-62B are TOSS capable. 2. OP Jack, OP Romeo, OP Whisky, and OP X-Ray are located in R-62B. 3. The UOC and Fester Airfield facilities are located on R-62B.

Table A4.8. R-63A.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	4,531ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountains are located west of the dry lake.
Entry/Departure Info	Range entry and departure is normally conducted through the southern border of R-63A or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-63A.
Ordnance Restrictions	There are no strikeable targets in R-63A; aircrews are prohibited from expending ordnance in R-63A
Flare Restrictions	Aircrews are prohibited from employing flares in R-63A.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-63A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-63A unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrew will not overfly R-63A below 500ft AGL.
Additional Info	<ol style="list-style-type: none"> 1. R-63A contains manned and remotely operated threat systems. 2. R-63A is a ground safety zone with a manned threat site, identifiable by a flashing strobe light, with facilities painted white. 3. R-63A is normally scheduled in conjunction with R-62B for activity in R-62B. However, non-participating ground parties can coordinate access into R-63A with the scheduled R-62B user.

Table A4.9. R-63B.

Range Type	Class B
Airspace	Surface to unlimited (See Additional Information block)
Highest Elevation	6,998ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located west of the dry lake. 2. The R-63C Extension will be activated whenever R-63C is active for .50 caliber machine gun use or other mission requirements. The R-63C Extension extends from surface to 10,000ft MSL. Aircrew will not overfly R-63C at or below 10,000ft MSL when the R-63C Extension is active. 3. TOSS towers are located on and around R-63B target impact area. 4. Target 63-10 is the Depleted Uranium (DU) target. It sits at the center of a 19k acre contaminated area. Stops on roads within the DU license area must be reported to NTTR Range Monitoring.
Entry/Departure Info	Range entry and departure is normally conducted through the southern border of R-63B or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-63B.
Ordnance Restrictions	There are strikeable targets in R-63B; however, aircrews are prohibited from expending ordnance on Targets 63-98, 63-99, OP Jill, the DU storage area, the threat pads in the southern portion of R-63B (Cine 9 at N36 32.70 W115 32.64 and Cine 7 at N36 32.13 W115 31.46), the Borrow Pit with Rock Crusher and white-painted structures in R-63B.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-63B overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-63B unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircraft must be aware of the RPA transit corridor in R-63B when it is active and take appropriate measures to avoid transiting RPAs. 3. Aircraft will not fly below 8,000ft MSL within a 2NM radius of Corn Creek Station (centered at N36 26.00 W115 22.00) within the boundaries of R-63B.
Additional Info	<ol style="list-style-type: none"> 1. The portion of R-63B that underlies R-63B High extends from the surface to 7,000ft MSL. 2. R-63B is primarily used for operational test and evaluation

	<p>(OT&E) missions, night conventional weapons training, and as a day conventional weapons delivery range. It will not normally be used for air-to-air tactics training when ordnance delivery is planned.</p> <ol style="list-style-type: none"> 3. R-63B contains the DU target set. 4. OP Jill is located in R-63B. 5. The Cine 9 and Cine 7 threat pads are located in the southern portion of R-63B. 6. Multiple targets on R-63B are TOSS capable.
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Figure A4.1. R-63C Extension Area Impact on R-63B.

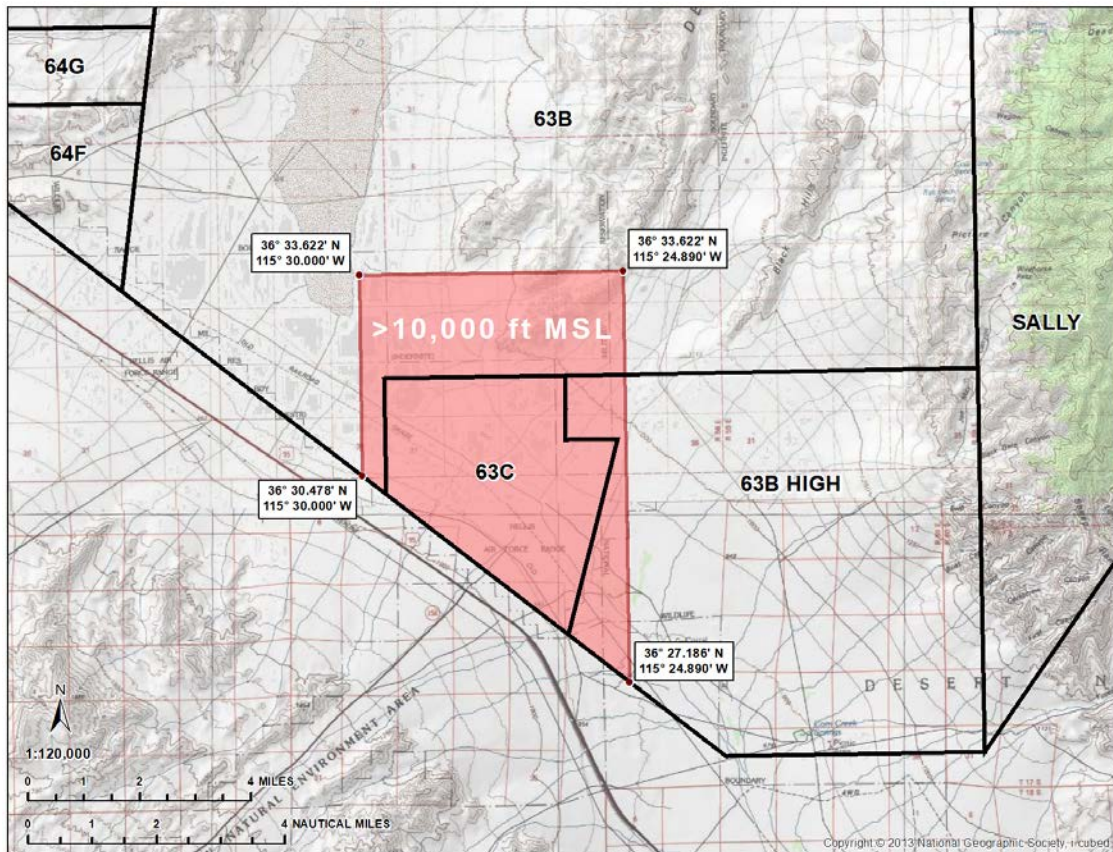


Table A4.10. R-63C.

Range Type	Class C
Airspace	Surface to 7,000ft MSL
Highest Elevation	3,264ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Essentially flat terrain exists throughout R-63C. 2. R-63C contains live, small arms ranges. Restrictions will be in place when the ranges are active. 3. The R-63C Extension will be activated whenever R-63C is active for .50 caliber machine gun use. The R-63C Extension extends from surface to 10,000ft MSL. Aircrew will not overfly R-63C below 10,000ft MSL when the R-63C Extension is active.
Entry/Departure Info	Range entry and departure is normally conducted through the southern border of R-63C or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-63C.
Ordnance Restrictions	There are no strikeable targets in R-63C; aircrews are prohibited from expending ordnance in R-63C.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-63C overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-63C unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	R-63C is located beneath R-63B High.

Table A4.11. R-64A.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,558ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountains are located on the eastern border of R-64A.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-64A.
Ordnance Restrictions	There are strikeable targets in R-64A; however, aircrews are prohibited from expending ordnance on OP Sierra and OP Viv.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-64A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64A unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	OP Sierra and OP Viv are located in R-64A.

Table A4.12. R-64B.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,772ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the eastern and western borders of R-64B. 2. The Thunderbirds routinely practice in R-64B from surface to FL180. Other aircraft may be approved use of R-64B at FL190 and above IAW the NTTR Scheduling Process.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-64B.
Ordnance Restrictions	<ol style="list-style-type: none"> 1. There are strikeable targets in R-64B; however, aircrews are prohibited from expending ordnance on Targets 64-98, 64-99, white-painted structures, the Checkerboard Building, and the Thunderbirds practice runway. 2. Aircrew will not expend ordnance on the Pintwater Cave historical site at N36 47.72 W115 34.03.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-64B overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64B unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	None

Table A4.13. R-64C.

Range Type	Class C
Airspace	Surface to unlimited (See Additional Information block)
Highest Elevation	5,879ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the northeastern and western borders of R-64C. 2. RPAs routinely operate in R-64D/E/F/G and CTA. 3. The Thunderbirds routinely practice in R-64C from surface to FL180. Other aircraft may be approved use of R-64C at FL190 and above IAW the NTTR Scheduling Process.
Entry/Departure Info	<ol style="list-style-type: none"> 1. Range entry and departure is normally from the south or as directed by NATCF. 2. Aircrew will avoid R-64D/E airspace when Creech Tower pattern is active. R-64D/E extends from surface to 7,000ft MSL. 3. Flight leads will call BLACKJACK 15 minutes prior to range entry to coordinate for the R-64D/E airspace. 4. BLACKJACK will then call Creech Tower to request R-64D/E airspace. 5. Creech Tower will release R-64D/E to BLACKJACK when Creech Tower-controlled aircraft are clear of R-64D/E. 6. Flights will check in again with BLACKJACK prior to range entry to confirm the status of the ranges and the R-64D/E airspace. 7. If the R-64D/E airspace is clear of Creech Tower-controlled aircraft, BLACKJACK will inform the flight on the R-64D/E airspace status - "Hog 1, BLACKJACK, Range 64 Delta/Echo is cold." 8. If the airspace is not clear BLACKJACK will inform the flight the airspace is "Hot" and the ETA until entry - "Hog 1, BLACKJACK, Range 64 Delta/Echo hot with Cyclops 1 - expect entry in 10 minutes." 9. When the scheduled aircraft enter the range, BLACKJACK will inform Creech Tower that R-64D/E airspace is going "Hot." 10. Flights utilizing R-64D/E airspace will pass a frequency that they can be reached at any time during their range period. 11. The "get well" frequency is required if winds or an emergency require the RPAs to momentarily take back the R-64D/E airspace for recovery to Creech AFB.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-64C.
Ordnance Restrictions	There are strikeable targets in R-64C; however, aircrews are prohibited from expending ordnance on the Thunderbirds practice runway and OP Hill.

Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-64C overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64C unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	<ol style="list-style-type: none"> 1. The southern portion of R-64C lies above R-64/D/E/F/G and CTA. 2. Aircraft using R-64C may not penetrate R-64D/E/F/G or CTA without prior authorization from Creech Tower. CTA is active from 0600 Monday through 0630 Saturday. For access outside these hours, contact BLACKJACK or NATCF. 3. The range schedule will reflect "RPA Transit Corridor One Active" for the portion of R-64C overlying R-64F when scheduled. 4. OP Hill is located in R-64C.

Table A4.14. R-64D.

Range Type	Class C
Airspace	Surface to 7,000ft MSL
Highest Elevation	4,741ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	1. Mountains are located on the southern border of R-64D. 2. RPAs normally operate in R-64D in conjunction with CTA.
Entry/Departure Info	Flight leads will call BLACKJACK 15 minutes prior to range entry to coordinate for the R-64D airspace.
Supersonic Restrictions	Supersonic flight is prohibited in R-64D.
Ordnance Restrictions	There are no strikeable targets in R-64D; aircrews are prohibited from expending ordnance in R-64D.
Flare Restrictions	Aircrews are prohibited from employing flares in R-64D.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	1. R-64D overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64D unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	1. RPAs operate in R-64D. 2. R-64D is located beneath the southern portion of R-64C. 3. R-64D is normally scheduled in conjunction with CTA but may be released to aircraft using R-64C through the NTTR Scheduling Process.

Table A4.15. R-64E.

Range Type	Class C
Airspace	Surface to 7,000ft MSL
Highest Elevation	3,392ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Non-mountainous terrain exists throughout R-64E. 2. RPAs normally operate in R-64E in conjunction with CTA. 3. The Thunderbirds routinely practice in R-64E (and R-64C above) from surface to FL180 north of N36 37.60. Other aircraft may be approved use of R-64C at FL190 (north of N36 37.60 in R-64C) IAW the NTTR Scheduling Process. 4. Other aircraft may be approved use of R-64E from surface to 7,000ft MSL south of IAW the NTTR Scheduling Process.
Entry/Departure Info	Flight leads will call BLACKJACK 15 minutes prior to range entry to coordinate for the R-64E airspace.
Supersonic Restrictions	Supersonic flight is prohibited in R-64E.
Ordnance Restrictions	There are no strikeable targets in R-64E; aircrews are prohibited from expending ordnance in R-64E.
Flare Restrictions	Aircrews are prohibited from employing flares in R-64E.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-64E overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64E unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	<ol style="list-style-type: none"> 1. RPAs operate in R-64E. 2. R-64E is located beneath the southern portion of R-64C. 3. R-64E is normally scheduled in conjunction with CTA but may be released to aircraft using R-64C through the NTTR Scheduling Process.

Table A4.16. R-64F.

Range Type	Class C
Airspace	Surface to 7,000ft MSL
Highest Elevation	3,579ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Non-mountainous terrain exists throughout R-64F. 2. RPAs normally operate in R-64F in conjunction with CTA. 3. RPA Transit Corridor One is 1.5NM wide (7,000ft MSL-12,000ft MSL) and lays over the top of CTA from the East edge of R-65D to the East edge of CTA, then extends southeast to R-63B High. The corridor allows RPAs to transition through R-64C and R-63B.
Entry/Departure Info	Flight leads will call BLACKJACK 15 minutes prior to range entry to coordinate for the R-64F airspace.
Supersonic Restrictions	Supersonic flight is prohibited in R-64F.
Ordnance Restrictions	There are no strikeable targets in R-64F; aircrews are prohibited from expending ordnance in R-64F.
Flare Restrictions	Aircrews are prohibited from employing flares in R-64F.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-64F overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64F unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	<ol style="list-style-type: none"> 1. RPAs operate in R-64F. 2. R-64F is located beneath the southern portion of R-64C. 3. R-64F is normally scheduled in conjunction with CTA but may be released to aircraft using R-64C through the NTTR Scheduling Process. 4. The NTTR Box Canyon salvage facility is in R-64F. Personnel and equipment routinely operate on R-64F during flying operations. 5. The range schedule will reflect "RPA Transit Corridor One Active" for the portion of R-64C overlying R-64F when scheduled.

Table A4.17. R-64G.

Range Type	Class C
Airspace	Surface to 7,000ft MSL
Highest Elevation	3,714ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	1. Mountains are located on the southern border of R-64G. 2. RPAs normally operate in R-64G in conjunction with CTA.
Entry/Departure Info	Flight leads will call BLACKJACK 15 minutes prior to range entry to coordinate for the R-64G airspace.
Supersonic Restrictions	Supersonic flight is prohibited in R-64G.
Ordnance Restrictions	There are no strikeable targets in R-64G; aircrews are prohibited from expending ordnance in R-64G.
Flare Restrictions	Aircrews are prohibited from employing flares in R-64G.
Laser Restrictions	Ground-based laser systems are prohibited on R-64G. Aircraft laser systems are only authorized to be fired upon the boresight target on R-64G, limited only to boresight activities, and must be annotated on the daily range schedule.
Other Restrictions	1. R-64G overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-64G unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	1. RPAs operate in R-64G. 2. R-64G is located beneath the southern portion of R-64C. 3. R-64G is normally scheduled in conjunction with CTA but may be released to aircraft using R-64C through the NTTR Scheduling Process.

Table A4.18. R-65A.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,985ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountainous terrain exists throughout R-65A with peaks in the east and west.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-65A.
Ordnance Restrictions	There are no strikeable targets in R-65A; aircrews are prohibited from expending ordnance in R-65A.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-65A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-65A unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. RPAs are prohibited from flying in R-65A.
Additional Info	None

Table A4.19. R-65B.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,237ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountainous terrain exists throughout R-65B with peaks rising in the southwest.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-65B.
Ordnance Restrictions	There are no strikeable targets in R-65B; aircrews are prohibited from expending ordnance in R-65B.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-65A overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-65A unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	None

Table A4.20. R-65C.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,253ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountainous terrain exists throughout R-65C with peaks rising in the southeast. 2. NNSS/NFO operates the Liquefied Gaseous Fuel Spill Test Facility and HAZMAT Spill Center located on Frenchman Flat dry lakebed along the western border of R-65C. 3. The Thunderbirds routinely practice in R-65C from surface to FL180, east of W115 46.84. Other aircraft may be approved use of R-65C at FL190, east of W115 46.84, IAW the NTTR Scheduling Process. 4. Other aircraft may be approved use of R-65C from surface to unlimited west of W115 46.84 IAW the NTTR Scheduling Process.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-65C.
Ordnance Restrictions	There are strikeable targets in R-65C; however, aircrews are prohibited from expending ordnance on Targets 65-98 and 65-99.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-65C overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-65C unless a lower altitude is required for tactical training and IAW the daily range schedule. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	None

Table A4.21. R-65D.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,066ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountainous terrain exists throughout R-65D with peaks rising in the northwest and southeast.
Entry/Departure Info	Range entry and departure is normally from the south or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R-65D.
Ordnance Restrictions	There are no strikeable targets in R-65D; aircrews are prohibited from expending ordnance in R-65D.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	R-65D overlies the DNWR. Aircraft will remain above 2,000ft AGL in R-65D unless a lower altitude is required for tactical training and IAW the daily range schedule.
Additional Info	R-65D is routinely used by for RPAs and helicopters and provides a transition area for aircraft into R-64C and R-65C during Thunderbirds training activity.

Table A4.22. R-71N.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	7,110ft MSL
C2/Communication	377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the east and western borders of R-71N. 2. "Double Track," a contaminated radiological area located at N37 42.36 W116 59.30, is posted with warning signs and must be avoided by ground parties.
Entry/Departure Info	Range entry and departure is normally conducted from the north or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-71N.
Ordnance Restrictions	There are no strikeable targets in R-71N; aircrews are prohibited from expending ordnance in R-71N.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. Aircrew will not drop or jettison any ordnance/ launchers on "Double Track" (N37 42.36 W116 59.30). 2. Other aircraft must be aware of the RPA transit corridor in R-71N when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	View Point Alpha (N37 41.15 W116 53.81) is located within R-71N.

Table A4.23. R-71S.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	6,591ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located towards the east of R-71S. 2. TOSS towers are located on and around R-71S target impact area.
Entry/Departure Info	Range entry and departure is normally conducted from the north or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-71S.
Ordnance Restrictions	<ol style="list-style-type: none"> 1. There are strikeable targets in R-71S; however, aircrews are prohibited from expending ordnance on Target 71-99. 2. A NIZ within R-71S is protected from all weapons profiles. The NIZ will be active when ground parties are present. The R-71S NIZ coordinates are: <ol style="list-style-type: none"> a. N37 34.00 W116 58.00 b. N37 34.00 W116 56.00 c. N37 33.00 W116 56.00 d. N37 33.00 W116 58.00 e. N37 34.00 W116 58.00
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. Aircrew will not drop or jettison any ordnance/launchers on "Double Track." 2. Other aircraft must be aware of the RPA transit corridor in R-71S when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	Multiple targets on R-71S are TOSS capable.

Table A4.24. R-74A.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	8,471ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	A north-south mountain range bisects R-74A.
Entry/Departure Info	Range entry and departure is normally conducted from adjacent range airspace or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-74A.
Ordnance Restrictions	There are no strikeable targets in R-74A; aircrews are prohibited from expending ordnance in R-74A.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	RPAs are prohibited from flying in R-74A.
Additional Info	None

Table A4.25. R-74B.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	8,547ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	A north-south mountain range bisects R-74B.
Entry/Departure Info	Range entry and departure is normally conducted from adjacent range airspace or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-74B.
Ordnance Restrictions	There are strikeable targets in R-74B; however, aircrews are prohibited from expending ordnance on Target 74-04.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	None
Additional Info	None

Table A4.26. R-74C.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	7,369ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	A north-south mountain range bisects R-74C.
Entry/Departure Info	Range entry and departure is normally conducted from adjacent range airspace or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-74C.
Ordnance Restrictions	There are strikeable targets in R-74C; however, aircrews are prohibited from expending ordnance on Targets 74-27, 74-29, 74-98, and 74-99.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	None
Additional Info	None

Table A4.27. R-75E.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	7,795ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the eastern border of R-75E. 2. Several contaminated radiological areas in Pahute B adjacent to the southern border of R-75E add an additional hazard during ejections. 3. TOSS towers are located on and around R-75E target impact area.
Entry/Departure Info	Range entry and departure is conducted from adjacent range airspace or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-75E.
Ordnance Restrictions	There are strikeable targets in R-75E; however, aircrews are prohibited from expending ordnance on Target 75-99 and OP Steeler.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	None
Additional Info	<ol style="list-style-type: none"> 1. Multiple targets on R-75E are TOSS capable. 2. OP Steeler is located in R-75E.

Table A4.28. R-75W.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	6,109ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the southern and northern borders of R-75W. 2. Several contaminated radiological areas in Pahute B adjacent to the southern border of R-75E add an additional hazard during ejections. 3. TOSS towers are located on and around R-75W target impact area.
Entry/Departure Info	Range entry and departure is conducted from adjacent range airspace or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-75W.
Ordnance Restrictions	There are strikeable targets in R-75W; however, aircrews are prohibited from expending ordnance on Target 75-98 and OP Delta.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	None
Additional Info	<ol style="list-style-type: none"> 1. Multiple targets on R-75W are TOSS capable. 2. OP Delta is located in R-75W.

Table A4.29. R-76.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	8,287ft MSL
C2/Communication	UHF 377.8 (BLACKJACK). For missions involving EC simulators, contact ROULETTE on UHF 293.5 or UHF 383.3.
Hazards	1. Mountains are located throughout R-76. 2. TOSS towers are located on and around R-76 target impact area.
Entry/Departure Info	Range entry and departure is normally conducted from the west or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 100ft AGL in R-76.
Ordnance Restrictions	1. There are strikeable targets in R-76; however, aircrews are prohibited from expending ordnance on Targets 76-98, 76-99, OP Seahawk, OP Viking, and OP Zulu. 2. Aircrew must exercise caution to avoid targeting remotely operated emitters on R-76. Emitter units are bunkered in the vicinity of strikeable targets. These emitters are painted white and have protective barriers utilizing concrete blocks to shield the systems from shrapnel. 3. A NIZ within R-76 is protected from all weapons profiles. The NIZ will be active when ground parties are present. The R-76 NIZ coordinates are: a. N37 33.00 W116 58.00 b. N37 33.00 W116 56.00 c. N37 31.00 W116 56.00 d. N37 31.00 W116 58.00 e. N37 33.00 W116 58.00
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	Other aircraft must be aware of the RPA transit corridor in R-76 when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	1. Multiple targets on R-76 are TOSS capable. 2. OP Seahawk, OP Viking, and OP Zulu are located in R-76.

Table A4.30. EC East.

Range Type	EC
Airspace	Surface to unlimited
Highest Elevation	8,809ft MSL
C2/Communication	UHF 377.8 (BLACKJACK). Aircrew may contact ROULETTE for threat coordination on UHF 293.5 or UHF 383.3. Authorized ground parties are not required to obtain additional clearance for movement once within EC East.
Hazards	A north-south mountain range bisects EC East with peaks in the south and center.
Entry/Departure Info	Entry and exit is normally conducted from adjacent ranges or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in EC East.
Ordnance Restrictions	There are no strikeable targets in EC East; aircrews are prohibited from expending ordnance in EC East.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	<ol style="list-style-type: none"> 1. Minimum altitude in EC East is 500ft AGL, except for USAFWS syllabus sorties and specifically approved test sorties requiring 100ft AGL maneuvers. 2. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of EC East. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight.
Additional Info	<ol style="list-style-type: none"> 1. There are multiple manned threat emitters along the eastern perimeter bordering R-74 and R-75. 2. OP Charlie is located in EC East.

Table A4.31. R-4807A (Subset).

Range Type	N/A
Airspace	Surface to unlimited
Highest Elevation	6,424ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountainous terrain exists to the north and east of R-4807A (Subset). 2. Multiple towers are located throughout R-4807A.
Entry/Departure Info	Aircrews will contact Silverbow Tower for entry into R-4807A (Subset).
Supersonic Restrictions	Supersonic flight in R-4807A (Subset) may be requested through the NTTR Scheduling Process and will be considered on a case-by-case basis. Once approved, supersonic flight will only be conducted above 5,000ft AGL. Other flight restrictions may apply and will be passed at the time of approval.
Ordnance Restrictions	There are no strikeable targets in R-4807A (Subset); aircrews are prohibited from expending ordnance in R-4807A (Subset).
Flare Restrictions	Aircrews are prohibited from employing flares in R-4807A (Subset).
Laser Restrictions	Air/ground users are prohibited from employing lasers in R-4807A (Subset).
Other Restrictions	Minimum altitude over R-4807A (Subset) is 500ft AGL.
Additional Info	<ol style="list-style-type: none"> 1. R-4807A (Subset).contains numerous buildings and ground party activity. 2. R-4807A (Subset) is scheduled as part of EC East.

Table A4.32. R-77A.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	7,411ft MSL
C2/Communication	UHF 377.8 (BLACKJACK).
Hazards	Mountainous terrain exists in the northern and southern areas.
Entry/Departure Info	Entry and exit is normally conducted from the south and west of the range or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R77.
Ordnance Restrictions	There is one strikeable target in R77A. There are several non strikeable targets in R77A, aircrew are prohibited from employing on targets 77-01, 77-03, 77-04, 77-05, 77-06, 77-07, 77-08, 77-09, 77-10, 77-11, 77-12, and 77-13.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of R77. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight. 2. There is an EWIIP site (pads ECS05A and 2-T1) located approximately 2 NM south west of target 77-02 in R77A. Each UMTE/EWIIP site is surrounded by white concrete bunkers or white sea-land containers. Aircrew should exercise extreme caution not to expend ordnance on UMTEs/EWIIPs. 3. Other aircraft must be aware of the RPA transit corridor in R77A when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	R77A is located along the southwest boarder of R-4807.

Table A4.33. R-77B.

Range Type	Class B
Airspace	Surface to unlimited
Highest Elevation	6,785ft MSL
C2/Communication	UHF 377.8 (BLACKJACK).
Hazards	Mountainous terrain exists throughout the area.
Entry/Departure Info	Entry and exit is normally conducted from the south and west of the range or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in R77B.
Ordnance Restrictions	There are no strikeable targets in R77B
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	<ol style="list-style-type: none"> 1. R-77B includes the Tolicha Peak access gate, buildings, and road running between highway 95 and TPECR. Aircrew with live/inert/training ordnance will have their master arm switches in SIM/SAFE/OFF anytime they are within R77B 2. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of R77B. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight.
Additional Info	R77B is located in the southernmost portion of R-4807.

Table A4.34. TPECR.

Range Type	EC
Airspace	Surface to unlimited
Highest Elevation	7,228ft MSL
C2/Communication	UHF 377.8 (BLACKJACK). Aircrew may contact ROULETTE for threat coordination on UHF 293.5 or UHF 383.3. Authorized ground parties are not required to obtain clearance for movement within TPECR.
Hazards	Mountains are located on the western and southern borders.
Entry/Departure Info	Entry and exit is normally conducted from adjacent ranges or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in TPECR.
Ordnance Restrictions	There are no strikeable targets in TPECR; aircrews are prohibited from expending ordnance in TPECR.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	<ol style="list-style-type: none"> 1. Minimum altitude in TPECR is 500ft AGL, except for USAFWS syllabus sorties and specifically approved test sorties requiring 100ft AGL maneuvers. 2. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of TPECR. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight.
Additional Info	<ol style="list-style-type: none"> 1. TPECR is a manned and remotely operated electronic combat threat simulator range. 2. TPECR includes the FAC A/B ground/air space. <ol style="list-style-type: none"> a. OP Alpha is located in the FAC A ground space. b. OP Bravo is located in the FAC B ground space.

Table A4.35. Pahute A/B.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	7,415ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located in the central and northern areas of Pahute A/B. 2. Tall towers are located throughout the Pahute A/B. Extensive construction and scientific work takes place on towers. 3. Helicopters routinely transit the range and flight patterns may extend up to 500ft AGL. 4. Contaminated radiological areas should be avoided to the maximum extent possible and foot traffic must heed posted warning signs. Contaminated radiological areas are located at the following coordinates: <ol style="list-style-type: none"> a. Palaquin: N37 16.81 W116 31.47. b. Cabriole: N37 16.85 W116 30.93. c. Schooner: N37 20.60 W116 34.00. 4. Pahute A/B contains live, small arms ranges. Restrictions will be in place when the ranges are active.
Entry/Departure Info	Entry and exit is normally conducted from the south and west of the range or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in Pahute A/B.
Ordnance Restrictions	There are no strikeable targets in Pahute A/B; aircrews are prohibited from expending ordnance in Pahute A/B.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Pahute A/B.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	<ol style="list-style-type: none"> 1. Minimum altitude in Pahute A/B is 500ft AGL, except for USAFWS syllabus sorties and test sorties requiring 100ft AGL maneuvers. 2. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of Pahute A/B. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight.
Additional Info	<ol style="list-style-type: none"> 1. NNSS/NFO has been granted use of airspace from surface to 500ft AGL by LOA. 2. The USAF retains overflight rights above 500ft AGL and may schedule from surface to unlimited if coordinated with NNSS/NFO.

	3. Pahute B has an electronic combat threat simulator which may be manned and remotely operated.
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Table A4.36. R-4808B/C/D/E.

Range Type	N/A
Airspace	Surface to unlimited.
Highest Elevation	7,684ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountainous terrain exists throughout R-4808B/C/D/E. 2. Helicopters and RPAs not under ATC control routinely operate in R-4808B/C/D/E surface to 10,000ft MSL. 3. Temporary restrictions are routinely scheduled throughout R-4808B/C/D/E.
Entry/Departure Info	Aircrews will contact DML or NATCF prior to entering.
Supersonic Restrictions	Supersonic flight in R-4808B/C/D/E is prohibited without approval of the NNSS/NFO through the NTTR Scheduling Process.
Ordnance Restrictions	There are no strikeable targets in R-4808B/C/D/E; aircrews are prohibited from expending ordnance in R-4808B/C/D/E.
Flare Restrictions	Aircrews are prohibited from employing flares in R-4808B/C/D/E.
Laser Restrictions	Air/ground users are prohibited from employing lasers in R-4808B/C/D/E.
Other Restrictions	<ol style="list-style-type: none"> 1. Minimum altitudes are: <ol style="list-style-type: none"> a. 2,500ft AGL for fixed-wing aircraft b. 500ft AGL for helicopters. 2. Overflying R-4808B/C/D/E with hung ordnance is prohibited. 3. Aircrews are prohibited from employing chaff in R-4808B/C/D/E. 4. Limited maneuvering (IAW AFI 11-214) is normally authorized in R-4808B/C/D/E. Unlimited maneuvering (IAW AFI 11-214) is only authorized with NNSS/NFO approval (coordinated through the NTTR Scheduling Process). 5. Aircraft must have an operational transponder to include Mode C. IFF OFF missions are prohibited without specific NNSS/NFO approval (coordinated through the NTTR Scheduling Process). 6. Lights-Out missions are prohibited without NNSS/NFO approval (coordinated through the NTTR Scheduling Process). 7. Air refueling missions over R-4808B/C/D/E are prohibited. 8. Imaging of R-4808B/C/D/E is prohibited without NNSS/NFO approval (coordinated through the NTTR Scheduling Process). 9. Targeting of ground sites is prohibited.

	<p>10. R-4808B/C/D/E No Fly Areas include:</p> <ul style="list-style-type: none"> a. Device Assembly Facility (DAF) (N36 53.89 W116 02.88) surface to 14,000ft MSL within a 1.25NM radius. b. Nonproliferation Test Evaluation Complex (NPTEC) (N36 48.15 W115 57.28) surface to 1,500ft AGL within 1NM radius. c. Radioactive Waste Management Complex (RWMC) (N36 51.53 W115 57.29) surface to 1,500ft AGL within 1NM radius. d. Mercury Controlled Firing Area (CFA) (N36 39.31 W116 00.45) surface to 6,000ft MSL within 1NM radius. <p>11. Other aircraft must be aware of the RPA transit corridor in R-4808C/D/E when it is active and take appropriate measures to avoid transiting RPAs.</p>
Additional Info	<ul style="list-style-type: none"> 1. IAW FAA Order JO 7400.8Y, NNSS/NFO has been designated as the Using Agency of R-4808, which overlies the NNSS. Additionally, IAW the 1981 MOU between DAF and DOE, the agencies agree to the cooperative use of the land and airspace of the NNSS. 2. NTTR users who wish to use R-4808 airspace will coordinate their desires through the NTTR Scheduling Process to obtain NNSS/NFO and/or DOE approval. 3. Foreign users are prohibited without NNSS/NFO approval (coordinated through the NTTR Scheduling Process). 4. Minimum schedulable altitude for NTTR users in R-4808B is normally 19,000ft MSL for traditional aircraft; RPAs may not operate in R-4808B. 5. Minimum schedulable altitude for NTTR users in R-4808C is normally 19,000ft MSL for traditional aircraft, 10,000ft MSL for RPAs. 6. Minimum schedulable altitude for NTTR users in R-4808D/E is normally 15,000ft MSL for traditional aircraft, 10,000ft MSL for RPAs.

Table A4.37. EC West.

Range Type	EC
Airspace	Surface to unlimited
Highest Elevation	7,602ft MSL
C2/Communication	UHF 377.8 (BLACKJACK). Aircrew may contact ROULETTE for threat coordination on UHF 293.5 or UHF 383.3.
Hazards	<ol style="list-style-type: none"> 1. Mountains are located on the western border. 2. High-trajectory field artillery firing is occasionally conducted on the range. 4. Contaminated radiological areas should be avoided to the maximum extent possible and foot traffic must heed posted warning signs. Three “Clean Slate” contaminated radiological areas are located at the following coordinates: <ol style="list-style-type: none"> a. N37 42.50 W116 39.45 b. N37 45.67 W116.36.87 c. N37 45.55 W116 40.87
Entry/Departure Info	Entry and exit is normally conducted from adjacent ranges or as directed by NATCF.
Supersonic Restrictions	Supersonic flight in EC West may be requested through the NTTR Scheduling Process and will be considered on a case-by-case basis. Once approved, supersonic flight will only be conducted above 5,000ft AGL. Other flight restrictions may apply and will be passed at the time of approval.
Ordnance Restrictions	There are no strikeable targets in EC West; aircrews are prohibited from expending ordnance in EC West.
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	<ol style="list-style-type: none"> 1. Minimum altitude in EC West is 500ft AGL, except for USAFWS syllabus sorties and specifically approved test sorties requiring 100ft AGL maneuvers. 2. All manned sites have white support buildings and white strobe lights (day) and steady white lights (night) to distinguish them from strikeable targets located outside of EC West. Aircrew will avoid overflight of manned sites consistent with aircraft maneuverability and safety of flight.
Additional Info	<ol style="list-style-type: none"> 1. Both manned and unmanned threat emitters operate in EC West. 2. IAW the DAF permit, the NNSS/SFO has been granted use, operation, and occupancy of specified property within EC West.

Table A4.38. R-4809A.

Range Type	N/A
Airspace	Surface to unlimited
Highest Elevation	7,447ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<ol style="list-style-type: none"> 1. Mountainous terrain exists along the western border. 2. Multiple towers are located throughout R-4809A. 3. A small arms, live-fire range, approximately 4NM southwest of the TTRA, exists in R-4809A at N37 44.25 W116 47.34. Use of the small arms range will be coordinated through NTTR/DO and will be scheduled in CSE when active. Once scheduled, aircrew will contact TTRA Base Operations or Silverbow Tower prior to entering STA to determine the live-fire range status.
Entry/Departure Info	Aircrews will contact NATCF for entry into R-4809A.
Supersonic Restrictions	Supersonic flight in R-4809A may be requested through the NTTR Scheduling Process and will be considered on a case-by-case basis. Once approved, supersonic flight will only be conducted above 5,000ft AGL. Other flight restrictions may apply and will be passed at the time of approval.
Ordnance Restrictions	There are no strikeable targets in R-4809A; aircrews are prohibited from expending ordnance in R-4809A.
Flare Restrictions	Aircrews are prohibited from employing flares over TTRA.
Laser Restrictions	Air/ground users are prohibited from employing lasers in R-4809A.
Other Restrictions	<ol style="list-style-type: none"> 1. Aircrew will not fly directly over TTRA with live ordnance. 2. Overflight of R-4809A by non USAFWC-assigned, Creech AFB-based RPAs is not authorized. 3. Aircraft must have an operational transponder to include Mode C. IFF OFF missions are prohibited without specific DOE approval (coordinated through the NTTR Scheduling Process). 4. Imaging of R-4809A is normally limited to traditional, USAFWC-assigned, Nellis AFB-based aircraft. 5. Imaging by USAFWC-assigned, Creech AFB-based RPAs must obtain specific approval. 6. Temporary Duty aircrews, excluding USAF Weapons School students, and visiting traditional aircraft are not authorized to image in R-4809A without specific approval. Visiting RPAs are not authorized to image in R-4809A. 7. Foreign users are prohibited without EOD approval (coordinated through the NTTR Scheduling Process)
Additional Info	1. Silverbow Tower controls airspace within a 5NM radius of TTRA up to, but not including, 2,500ft AGL. Aircrew will coordinate with NATCF for advisory to 500ft AGL when the

	<p>tower is inactive.</p> <p>2. NATCF directs all IFR traffic into TTRA.</p> <p>3. Aircraft will not overfly the MSA nor the explosive material storage facilities in the vicinity of N37 50.77 W116 42.62 in R-4809A.</p> <p>4. Requirements for R-4809A are scheduled through the NTTR Scheduling Process IAW applicable Memorandums of Understanding (MOU) (located on the NTTR Mission Planning websites).</p> <p>5. IAW the DAF permit, the NNSS/SFO has been granted use, operation, and occupancy of specified property within R-4809A.</p>
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Table A4.39. R-4809B.

Range Type	N/A
Airspace	Surface to unlimited
Highest Elevation	5,938ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<p>1. Mountainous terrain exists to the north and east of R-4809B.</p> <p>2. Multiple towers are located throughout R-4809B.</p>
Entry/Departure Info	NA
Supersonic Restrictions	Supersonic flight in R-4809B may be requested through the NTTR Scheduling Process and will be considered on a case-by-case basis. Once approved, supersonic flight will only be conducted above 5,000ft AGL. Other flight restrictions may apply and will be passed at the time of approval.
Ordnance Restrictions	There are no strikeable targets in R-4809B; aircrews are prohibited from expending ordnance in R-4809B.
Flare Restrictions	Aircrews are prohibited from employing flares in R-4809B.
Laser Restrictions	Air/ground users are prohibited from employing lasers in R-4809B.
Other Restrictions	Minimum altitude over R-4809B is 500ft AGL.
Additional Info	<p>1. R-4809B contains numerous buildings and ground party activity.</p> <p>2. R-4809B is scheduled as part of EC West.</p>

Table A4.40. Reveille North.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to FL600
Highest Elevation	10,164ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountain ranges exist throughout Reveille North.
Entry/Departure Info	Range entry and departure is normally conducted from Caliente or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in Reveille North.
Ordnance Restrictions	There are no strikeable targets in Reveille North; aircrews are prohibited from expending ordnance in Reveille North.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Reveille North.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	1. Aircrew will avoid noise sensitive areas IAW NAFBI 11-250. 2. Aircrew will avoid the towns of Reveille (N38 02.00 W116 10.17) and Adaven (N38 08.00 W115 36.00) by 1.5NM when below 1,500ft AGL.
Additional Info	1. Airspace requirements above FL300 must be specifically coordinated through the Nellis Airspace Management Office (57OSS/OSM) per the current FAA LOA. 2. Aircrew using Reveille North must remain alert for transiting civilian aircraft regardless of the altitudes scheduled. When operating in Reveille North, aircraft will squawk Mode 3/C at all times. 3. To ensure safety of non-participating aircraft, specific procedures for GPS testing within Reveille North must be coordinated between the requestor, the GPS test provider, and the FAA. a. Participating aircraft are normally authorized SFC-as scheduled from 2231L-0529L when GPS testing is active. b. Participating aircraft are normally authorized SFC-FL 300 from 0530-2230L when GPS testing is active. c. If participating aircraft are to operate above FL300 from 0530-2230L when GPS testing is active, the GPS testing agency, event sponsoring agency, and FAA must coordinate specific procedures for the transfer of airspace between ATC and ATCAA during the event.

Table A4.41. Reveille South.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to FL600
Highest Elevation	9,393ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountain ranges exist throughout Reveille South.
Entry/Departure Info	Range entry and departure is normally conducted from Caliente or as directed by NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in Reveille South.
Ordnance Restrictions	There are no strikeable targets in Reveille South; aircrews are prohibited from expending ordnance in Reveille South.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Reveille South.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	Aircrew will avoid noise sensitive areas IAW NAFBI 11-250.
Additional Info	Aircrew using Reveille South must remain alert for transiting civilian aircraft regardless of the altitudes scheduled. When operating in Reveille South, aircraft will squawk Mode 3/C at all times.

Table A4.42. Coyote A/B/C/D.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to unlimited
Highest Elevation	8,934ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountains ranges exist throughout Coyote A/B/C/D.
Entry/Departure Info	Range entry and departure is normally conducted through Coyote B via the north end of Sally Corridor (VFR) or as directed by NATCF. Aircraft that exit the range via Sally are not VFR until they are cleared for and accept one of the VFR recoveries from NATCF.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft AGL in Coyote A/B/C/D.
Ordnance Restrictions	There are no strikeable targets in Coyote A/B/C/D; aircrews are prohibited from expending ordnance in Coyote A/B/C/D.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Coyote A/B/C/D.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	1. Aircrew will avoid noise sensitive areas IAW NAFBI 11-250. 2. RPAs are prohibited from flying in Coyote A.
Additional Info	1. Coyote A/B/C/D may be scheduled as a whole or by individual subranges. 2. UMTEs may operate in Coyote A/B/C/D.

Table A4.43. Caliente A/B/C.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to unlimited
Highest Elevation	9,370ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountain ranges bisect Caliente Bravo from Caliente Charlie.
Entry/Departure Info	Range entry and departure is normally conducted through Caliente via the north end of Sally Corridor (VFR) or as directed by NATCF. Aircraft that exit the range via Sally are not VFR until they are cleared for and accept one of the VFR recoveries from NATCF.
Supersonic Restrictions	1. Supersonic flight is prohibited below 5,000ft AGL in Caliente A/B. 2. Supersonic flight is prohibited below 30,000ft AGL in Caliente C 3. The noise sensitive areas of Caliente, NV and the Lincoln County Airport are subsonic surface to unlimited.
Ordnance Restrictions	There are no strikeable targets in Caliente A/B/C; aircrews are prohibited from expending ordnance in Caliente A/B/C.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Caliente A/B/C.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	1. Aircrew will avoid noise sensitive areas IAW NAFBI 11-250. 2. Other aircraft must be aware of the RPA transit corridor in Caliente C when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	Caliente may be scheduled as a whole or by individual subranges.

Table A4.44. Elgin.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to unlimited
Highest Elevation	7,805ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	Mountain ranges exist throughout Elgin.
Entry/Departure Info	Range entry and departure is normally conducted through Elgin via the east end of Sally Corridor (VFR) or as directed by NATCF. Aircrew may request direct entry into Elgin from NATCF. Aircraft that exit the range via Sally are not VFR until they are cleared for and accept one of the VFR recoveries from NATCF.
Supersonic Restrictions	<ol style="list-style-type: none"> 1. Supersonic flight is prohibited below 5,000ft AGL north of a line from N36 52.00 W114 50.72 to N37 04.00 W114 33.00 to N37 04.00 W114 19.19. 2. Supersonic flight is prohibited below 30,000ft MSL south of a line from N36 52.00 W114 50.72 to N37 04.00 W114 33.00 to N37 04.00 W114 19.19. 3. Supersonic flight south of N36 48.00 is only permitted with magnetic headings of 259° clockwise to 079°.
Ordnance Restrictions	There are no strikeable targets in Elgin; aircrews are prohibited from expending ordnance in Elgin.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Elgin.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	<ol style="list-style-type: none"> 1. Aircrew will avoid noise sensitive areas IAW NAFBI 11-250. 2. Other aircraft must be aware of the RPA transit corridor in Elgin when it is active and take appropriate measures to avoid transiting RPAs.
Additional Info	None

Table A4.45. Sally Corridor.

Range Type	MOA/ATCAA
Airspace	MOA: Surface to 17,999ft MSL ATCAA: FL180 to unlimited
Highest Elevation	9,885ft MSL
C2/Communication	UHF 317.525 (NATCF East)
Hazards	Mountains are located towards the south and along the western and northern borders of the Sally Corridor.
Entry/Departure Info	Range entry and departure is direct to/from Nellis AFB.
Supersonic Restrictions	1. Supersonic flight is prohibited below 5,000ft AGL north of N36 52.00. 2. Supersonic flight is prohibited below 30,000ft MSL south of N36 52.00. 3. Supersonic flight south of N36 48.00 is only permitted with magnetic headings of 259°clockwise to 079°.
Ordnance Restrictions	There are no strikeable targets in Sally Corridor; aircrews are prohibited from expending ordnance in Sally Corridor.
Flare Restrictions	Aircrews are prohibited from employing flares below 5,000ft AGL in Sally Corridor.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	Aircrew will avoid noise sensitive areas IAW NAFBI 11-250.
Additional Info	Sally Corridor is controlled by NATCF and is the main transition route/corridor to the north. The Sally Corridor may be scheduled as the "Sally Buffer" if no other user will be transiting between the Northern or Southern Ranges and Nellis. The Sally Corridor airspace will revert to NATCF 15 minutes prior to the end of the scheduled Elgin time.

Table A4.46. R-63B High.

Range Type	Class C
Airspace	7,000ft MSL to unlimited
Highest Elevation	6,224ft MSL
C2/Communication	UHF 377.8 (BLACKJACK)
Hazards	<p>1. R-63B High airspace overlies R-63C and the southeast portion of R-63B.</p> <p>2. The R-63C Extension will be activated whenever R-63C is active for .50 caliber machine gun use in the CARC. The R-63C Extension extends from surface to 10,000ft MSL. Aircrew will not overfly R-63C at or below 10,000ft MSL when the R-63C Extension is active.</p>
Entry/Departure Info	Range entry and departure is normally conducted through the southern border of R-63 or as directed by NATCF. Aircrew should avoid R-63C and R-63B unless scheduled for that airspace.
Supersonic Restrictions	None
Ordnance Restrictions	N/A
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are restricted to laser operations approved IAW the NTTR Laser Range Certification issued by the 711 HPW. Target and subrange specific laser restrictions are noted on the NTTR Mission Planning website.
Other Restrictions	Aircraft will not fly below 8,000ft MSL within a 2NM radius of Corn Creek Station (centered at N36 26.00 W115 22.00) within the boundaries of R-63B High.
Additional Info	R-63B High is primarily used for RPA operations.

Table A4.47. CTA.

Range Type	N/A
Airspace	Surface to 7,000ft MSL
Highest Elevation	4,806ft MSL
C2/Communication	UHF 360.625/VHF 118.3 (Creech Tower)
Hazards	<ol style="list-style-type: none"> 1. Mountains are located along the eastern and western borders. 2. The Thunderbirds occasionally practice in CTA from surface to 7,000ft MSL as their Over-the-Field (OTF) training area.
Entry/Departure Info	As directed by Creech Tower control
Supersonic Restrictions	Supersonic flight is prohibited in the CTA.
Ordnance Restrictions	There are no strikeable targets in CTA; aircrews are prohibited from expending ordnance in CTA.
Flare Restrictions	Aircrews are prohibited from employing flares in CTA.
Laser Restrictions	Air/ground users are prohibited from employing lasers in CTA.
Other Restrictions	<ol style="list-style-type: none"> 1. Entrance into CTA without permission from Creech Tower is prohibited. 2. Aircrews must check NOTAMs to confirm the status of Thunderbirds training activity.
Additional Info	<ol style="list-style-type: none"> 1. RPAs operate in CTA. 2. CTA is located beneath the southern portion of R-64C. 3. CTA is active from 0600 Monday through 0630 Saturday. For access outside these hours, contact BLACKJACK or NATCF. 4. R-64D/E/F/G are normally scheduled in conjunction with CTA.

Table A4.48. Air-to-Air Gunnery Area.

Range Type	Class C
Airspace	Surface to unlimited
Highest Elevation	6,985ft MSL
C2/Communication	1. UHF 319.7. 2. Aerial Gunnery Range Control Officer (AGRCO), normally the flight lead, will provide airborne range control.
Hazards	Mountains throughout the area.
Entry/Departure Info	1. Aircrews will contact BLACKJACK prior to entering the Air-to-Air Gunnery Area. 2. Range entry and departure will be IAW BLACKJACK instructions.
Supersonic Restrictions	Supersonic flight is prohibited below 5,000ft in the Air-to-Air Gunnery Area.
Ordnance Restrictions	N/A
Flare Restrictions	Aircrews are prohibited from employing self-protection flares at altitudes that prevent burnout prior to 100ft AGL and illumination flares that prevent burnout prior to 500ft AGL.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	1. NTTR/SE will develop a RSA for all air-to-air gunnery missions/operations. Aircrew will comply with all requirements of the RSA. Aircrew will fly air-to-air engagement patterns so firing is conducted within the boundaries of the “shoot-box” as defined in the RSA. 2. Only 20mm Target Practice (TP) and Target Practice Tracer (TPT) munitions are authorized.
Additional Info	1. The Air-to-Air Gunnery Area is established on the NTTR for recurring aerial gunnery requirements. 2. The Air-to-Air Gunnery Area is an 8NM radius circle, centered at N36 55.075 W115 38.294 (within R-64A) and includes portions of R-61A, R-62A/B, R-64A/B, and R-65A/B/C. Users must schedule all of the preceding subranges in order to utilize the Air-to-Air Gunnery Area. 3. Aerial gunnery may be conducted in at 10,000-30,000ft MSL. 4. Aerial Gunnery Target Sets (AGTS) will be used in the Air-to-Air Gunnery Area.

Table A4.49. STA.

Range Type	N/A
Airspace	Surface up to, but not including, 2,500ft AGL
Highest Elevation	7,448ft MSL
C2/Communication	UHF 257.95 (Silverbow Tower)
Hazards	1. Mountainous terrain exists along the western border. 2. Multiple towers are located throughout R-4809A.
Entry/Departure Info	As directed by Silverbow Tower control
Supersonic Restrictions	Supersonic flight is prohibited in the STA.
Ordnance Restrictions	There are no strikeable targets in STA; aircrews are prohibited from expending ordnance in STA.
Flare Restrictions	Aircrews are prohibited from employing flares in STA.
Laser Restrictions	Air/ground users are prohibited from employing lasers in STA.
Other Restrictions	Aircrew will not fly directly over STA with live ordnance.
Additional Info	1. Aircrew will coordinate with NATCF for advisory to 500ft AGL when the tower is inactive. 2. NATCF directs all IFR traffic into TTRA.

Table A4.50. X-Ray Extension.

Range Type	ATCAA
Airspace	FL240 to unlimited
Highest Elevation	7,391ft MSL
C2/Communication	UHF 317.525 (NATCF East)
Hazards	None
Entry/Departure Info	As directed by NATCF
Supersonic Restrictions	Supersonic flight is prohibited in the X-Ray Extension.
Ordnance Restrictions	There are no strikeable targets in X-Ray Extension; aircrews are prohibited from expending ordnance in X-Ray Extension.
Flare Restrictions	Aircrews are prohibited from employing flares in the X-Ray Extension.
Laser Restrictions	Air/ground users are prohibited from lasing any object on the ground beneath this airspace. Air-to-air lasing is authorized when laser operations are performed IAW AFI 11-214.
Other Restrictions	None
Additional Info	1. X-Ray Extension may be scheduled by contacting NATCF. 2. Elgin must be scheduled to activate X-Ray Extension. 3. NATCF may decline use if circumstances warrant.

Table A4.51. Weapons and Munitions Approved for CARC Use.

Weapon (Caliber)	Munition	Surface Danger Zone (SDZ) Distance (radius)	Vertical Danger Zone (VDZ) Elevation
Handgun (.38 cal)	M41 PGU-12/B	6,036ft / 0.99NM	2,215ft AGL
Handgun (9mm)	M882	6,036ft / 0.99NM	2,215ft AGL
Rifle (5.56mm)	M855 M856	11,811ft / 1.94NM	3,345ft AGL
Machine gun (7.62mm)	M80 M118	15,748ft / 2.59NM	4,856ft AGL
Machine gun (.50 cal)	M2 M9 M33 M17 M8 API M20 APIT	21,981ft / 3.62NM	6,365ft AGL

Attachment 5

BOUNDARY COORDINATES

Table A5.1. Alamo A.

N37 17.00	W115 18.05		N37 00.00	W115 07.05
N37 17.00	W115 11.05		N37 00.00	W115 18.05
N37 12.00	W115 07.05		N37 17.00	W115 18.05

Table A5.2. Alamo B.

N37 00.00	W115 18.05		N36 51.00	W115 18.05
N37 00.00	W115 07.05		N37 00.00	W115 18.05
N36 51.00	W115 07.05			

Table A5.3. Alamo C.

N36 51.00	W115 18.05		N36 38.00	W115 18.05
N36 51.00	W115 07.05		N36 43.00	W115 18.05
N36 48.00	W115 07.07		N36 51.00	W115 18.05

Table A5.4. R-61A.

N37 17.00	W115 35.05		N37 00.00	W115 33.05
N37 17.00	W115 26.05		N37 06.00	W115 35.05
N37 00.00	W115 26.06		N37 17.00	W115 35.05

Table A5.5. R-61B.

N37 17.00	W115 26.05		N37 00.00	W115 26.06
N37 17.00	W115 18.05		N37 17.00	W115 26.05
N37 00.00	W115 18.05			

Table A5.6. R-62A.

N37 00.00	W115 33.05		N36 51.00	W115 18.05
N37 00.00	W115 26.06		N36 51.00	W115 33.05
N37 00.00	W115 18.05		N37 00.00	W115 33.05

Table A5.7. R-62B.

N36 51.00	W115 33.05		N36 45.00	W115 29.44
N36 51.00	W115 18.05		N36 43.00	W115 29.44
N36 43.00	W115 18.05		N36 43.00	W115 33.05
N36 43.00	W115 25.50		N36 51.00	W115 33.05
N36 45.01	W115 25.47			

Table A5.8. R-63A.

N36 45.00	W115 29.44		N36 43.00	W115 29.44
N36 45.01	W115 25.47		N36 45.00	W115 29.44
N36 43.00	W115 25.50			

Table A5.9. R-63B.

N36 43.00	W115 33.05		N36 32.00	W115 29.55
N36 43.00	W115 29.44		N36 30.19	W115 29.55
N36 43.00	W115 25.50		N36 33.43	W115 34.61
N36 43.00	W115 18.05		N36 36.37	W115 34.13
N36 38.00	W115 18.05		N36 37.57	W115 33.93
N36 32.02	W115 18.05		N36 43.00	W115 33.05
N36 32.00	W115 26.05			

Table A5.10. R-63C.

N36 32.00	W115 29.55		N36 27.95	W115 26.07
N36 32.00	W115 26.05		N36 30.19	W115 29.55
N36 31.00	W115 26.05		N36 32.00	W115 29.55
N36 31.00	W115 25.05			

Table A5.11. R-63C Extension Area.

N36 33.62	W115 30.00		N36 30.48	W115 30.00
N36 33.62	W115 25.12		N36 33.62	W115 30.00
N36 27.19	W115 24.89			

Table A5.12. R-64A.

N37 00.01	W115 43.00		N36 51.01	W115 43.05
N37 00.00	W115 33.05		N37 00.01	W115 43.00
N36 51.00	W115 33.05			

Table A5.13. R-64B.

N36 51.01	W115 43.05		N36 42.98	W115 43.05
N36 51.00	W115 33.05		N36 51.01	W115 43.05
N36 43.00	W115 33.05			

Table A5.14. R-64C.

N36 40.35	W115 51.35		N36 39.10	W115 38.74
N36 40.37	W115 43.05		N36 39.10	W115 39.28
N36 42.98	W115 43.05		N36 38.95	W115 39.95
N36 43.00	W115 33.05		N36 37.62	W115 40.08
N36 37.57	W115 33.93		N36 37.62	W115 48.91
N36 37.57	W115 38.23		N36 40.35	W115 51.35
N36 38.93	W115 38.08			

Table A5.15. R-64D.

N36 37.62	W115 48.91		N36 36.37	W115 47.80
N36 37.62	W115 40.08		N36 37.62	W115 48.91
N36 36.37	W115 40.21			

Table A5.16. R-64E.

N36 38.95	W115 39.95		N36 36.37	W115 37.02
N36 39.10	W115 39.28		N36 36.37	W115 40.21
N36 39.10	W115 38.74		N36 37.62	W115 40.08
N36 38.93	W115 38.08		N36 38.95	W115 39.95
N36 37.57	W115 38.23			

Table A5.17. R-64F.

N36 36.37	W115 37.02		N36 35.00	W115 37.05
N36 36.37	W115 34.13		N36 36.37	W115 37.02
N36 33.43	W115 34.61			

Table A5.18. R-64G.

N36 37.57	W115 38.23		N36 36.37	W115 37.02
N36 37.57	W115 33.93		N36 37.57	W115 38.23
N36 36.37	W115 34.13			

Table A5.19. R-65A.

N37 06.00	W115 56.05		N37 00.01	W115 43.00
N37 06.00	W115 35.05		N37 00.00	W115 56.05
N37 00.00	W115 33.05		N37 06.00	W115 56.05

Table A5.20. R-65B.

N37 00.00	W115 56.05		N36 51.00	W115 56.05
N37 00.01	W115 43.00		N37 00.00	W115 56.05
N36 51.01	W115 43.05			

Table A5.21. R-65C.

N36 51.00	W115 56.05		N36 40.35	W115 51.35
N36 51.01	W115 43.05		N36 45.00	W115 56.05
N36 42.98	W115 43.05		N36 51.00	W115 56.05
N36 40.37	W115 43.05			

Table A5.22. R-65D.

N36 45.00	W115 56.05		N36 35.00	W115 53.05
N36 40.35	W115 51.35		N36 36.00	W115 56.05
N36 37.62	W115 48.91		N36 41.00	W115 56.05
N36 36.37	W115 47.80		N36 45.00	W115 56.05
N36 35.00	W115 46.58			

Table A5.23. R-71N.

N37 53.00	W117 05.68		N37 40.00	W116 49.05
N37 53.00	W116 55.05		N37 40.00	W117 05.68
N37 47.00	W116 55.05		N37 53.00	W117 05.68

Table A5.24. R-71S.

N37 40.00	W117 05.68		N37 33.00	W117 05.68
N37 40.00	W116 49.05		N37 40.00	W117 05.68
N37 33.00	W116 43.00			

Table A5.25. R-74A.

N37 33.00	W116 00.84		N37 16.00	W116 00.05
N37 33.03	W115 53.05		N37 16.00	W116 11.05
N37 33.05	W115 48.05		N37 19.98	W116 11.03
N37 28.01	W115 48.05		N37 33.00	W116 00.84
N37 28.00	W116 00.05			

Table A5.26. R-74B.

N37 37.96	W116 01.48		N37 23.00	W116 17.05
N37 37.93	W115 53.05		N37 23.00	W116 18.05
N37 33.03	W115 53.05		N37 23.00	W116 19.03
N37 33.00	W116 00.84		N37 37.96	W116 01.48
N37 19.98	W116 11.03			

Table A5.27. R-74C.

N37 42.00	W116 11.05		N37 23.00	W116 19.03
N37 42.00	W115 53.05		N37 32.00	W116 19.01
N37 37.93	W115 53.05		N37 32.00	W116 17.00
N37 37.96	W116 01.48		N37 42.00	W116 11.05

Table A5.28. R-75E.

N37 33.00	W116 26.05		N37 23.00	W116 22.05
N37 33.00	W116 19.01		N37 21.00	W116 27.05
N37 32.00	W116 19.01		N37 21.00	W116 34.05
N37 23.00	W116 19.03		N37 33.00	W116 26.05

Table A5.29. R-75W.

N37 33.00	W116 42.50		N37 20.00	W116 40.12
N37 33.00	W116 26.05		N37 22.52	W116 41.96
N37 21.00	W116 34.05		N37 22.52	W116 42.50
N37 20.00	W116 37.05		N37 33.00	W116 42.50

Table A5.30. R-76.

N37 33.00	W117 05.68		N37 20.00	W116 49.51
N37 33.00	W116 43.00		N37 20.00	W116 50.05
N37 33.00	W116 42.50		N37 16.01	W116 50.05
N37 22.52	W116 42.50		N37 16.00	W116 55.32
N37 22.51	W116 45.01		N37 26.50	W117 04.55
N37 22.52	W116 47.38		N37 33.00	W117 05.68

Table A5.31. R-77A.

N37 09.88	W116 49.96		N37 00.00	W116 27.05
N37 16.01	W116 46.07		N36 55.00	W116 27.05
N37 16.00	W116 31.05		N36 55.00	W116 33.55
N37 08.00	W116 27.05		N36 51.00	W116 33.55

Table A5.32. R-77B.

N37 09.88	W116 49.96		N37 16.01	W116 50.05
N37 16.00	W116 55.32		N37 16.01	W116 46.07

Table A5.33. EC East.

N37 53.00	W116 26.05		N37 33.00	W116 26.05
N37 53.00	W116 11.05		N37 42.11	W116 26.05
N37 42.00	W116 11.05		N37 42.12	W116 23.00
N37 32.00	W116 17.00		N37 45.11	W116 23.00
N37 32.00	W116 19.01		N37 45.11	W116 26.05
N37 33.00	W116 19.01		N37 53.00	W116 26.05

Table A5.34. R-4807A (Subset).

N37 45.11	W116 26.05		N37 42.11	W116 26.05
N37 45.11	W116 23.00		N37 45.11	W116 26.05
N37 42.12	W116 23.00			

Table A5.35. TPECR.

N37 20.00	W116 50.05		N37 21.00	W116 34.05
N37 20.00	W116 49.51		N37 16.00	W116 31.05
N37 20.00	W116 45.02		N37 16.01	W116 50.05
N37 20.00	W116 40.12		N37 20.00	W116 50.05
N37 20.00	W116 37.05			

Table A5.36. TPECR (FAC A).

N37 22.52	W116 47.38		N37 20.00	W116 49.51
N37 22.51	W116 45.01		N37 22.52	W116 47.38
N37 20.00	W116 45.02			

Table A5.37. TPECR (FAC B).

N37 22.51	W116 45.01		N37 20.00	W116 40.12
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N37 22.52	W116 42.50		N37 20.00	W116 45.02
N37 22.52	W116 41.96		N37 22.51	W116 45.01

Table A5.38. Pahute A.

N37 23.00	W116 18.05		N37 16.00	W116 15.05
N37 23.00	W116 17.05		N37 16.01	W116 18.05
N37 19.98	W116 11.03		N37 23.00	W116 18.05
N37 16.00	W116 11.05			

Table A5.39. Pahute B.

N37 21.00	W116 34.05		N37 23.00	W116 18.05
N37 21.00	W116 27.05		N37 16.01	W116 18.05
N37 23.00	W116 22.05		N37 16.00	W116 31.05
N37 23.00	W116 19.03		N37 21.00	W116 34.05

Table A5.40. R-4808A.

N37 28.00	W116 00.05		N37 06.00	W115 56.05
N37 28.01	W115 48.05		N37 06.00	W116 00.05
N37 28.00	W115 35.05		N37 16.00	W116 00.05
N37 17.00	W115 35.05		N37 28.00	W116 00.05
N37 06.00	W115 35.05			

Table A5.41. R-4808B.

N37 16.00	W116 15.05		N37 06.00	W115 56.05
N37 16.00	W116 11.05		N37 00.00	W115 56.05
N37 16.00	W116 00.05		N37 00.00	W116 15.05
N37 06.00	W116 00.05		N37 16.00	W116 15.05

Table A5.42. R-4808C.

N37 00.00	W116 15.05		N36 41.00	W115 56.05
N37 00.00	W115 56.05		N36 41.00	W116 01.06
N36 51.00	W115 56.05		N36 50.00	W116 15.05
N36 45.00	W115 56.05		N37 00.00	W116 15.05

Table A5.43. R-4808D.

N37 16.00	W116 31.05		N37 00.00	W116 27.05
N37 16.01	W116 18.05		N37 08.00	W116 27.05
N37 16.00	W116 15.05		N37 16.00	W116 31.05
N37 00.00	W116 15.05			

Table A5.44. R-4808E.

N37 00.00	W116 27.05		N36 51.00	W116 26.55
N37 00.00	W116 15.05		N36 51.00	W116 33.55
N36 50.00	W116 15.05		N36 55.00	W116 33.55
N36 41.00	W116 01.06		N36 55.00	W116 27.05
N36 41.00	W116 14.80		N37 00.00	W116 27.05
N36 46.00	W116 26.55			

Table A5.45. R-4808S.

N36 46.00	W116 26.55		N36 41.00	W116 26.55
N36 41.00	W116 14.80		N36 46.00	W116 26.55

Table A5.46. EC West.

N37 53.01	W116 40.05		N37 33.00	W116 26.05
N37 53.00	W116 26.05		N37 33.00	W116 42.50
N37 45.11	W116 26.05		N37 33.00	W116 43.00
N37 45.12	W116 30.03		N37 40.00	W116 49.05
N37 44.21	W116 30.02		N37 40.00	W116 40.05
N37 42.15	W116 27.99		N37 53.01	W116 40.05
N37 42.11	W116 26.05			

Table A5.47. R-4809A.

N37 53.00	W116 55.05		N37 40.00	W116 49.05
N37 53.01	W116 50.00		N37 47.00	W116 55.05
N37 53.01	W116 40.05		N37 53.00	W116 55.05
N37 40.00	W116 40.05			

Table A5.48. R-4809B.

N37 45.12	W116 30.03		N37 42.15	W116 27.99
N37 45.11	W116 26.05		N37 44.21	W116 30.02
N37 42.11	W116 26.05		N37 45.12	W116 30.03

Table A5.49. Reveille North.

N38 14.00	W116 18.87		N38 00.25	W114 34.56
N38 14.00	W115 00.00		N37 59.96	W116 40.02
N38 01.00	W114 12.00		N38 14.00	W116 18.87

Table A5.50. Reville South.

N37 59.96	W116 40.02		N37 53.00	W116 11.05
N38 00.25	W114 34.56		N37 53.00	W116 26.05
N37 59.33	W114 50.71		N37 53.01	W116 40.05
N37 58.24	W115 07.05		N37 53.01	W116 50.00
N37 56.75	W115 25.98		N37 59.96	W116 40.02
N37 54.54	W115 53.04			

Table A5.51. Coyote A.

N37 33.05	W115 48.05		N37 28.00	W115 35.05
N37 33.07	W115 26.00		N37 28.01	W115 48.05
N37 17.00	W115 26.05		N37 33.05	W115 48.05
N37 17.00	W115 35.05			

Table A5.52. Coyote B.

N37 56.75	W115 25.98		N37 17.00	W115 18.05
N37 58.23	W115 07.05		N37 17.00	W115 26.05
N37 17.00	W115 07.05		N37 33.07	W115 26.00
N37 12.00	W115 07.05		N37 56.75	W115 25.98
N37 17.00	W115 11.07			

Table A5.53. Coyote C.

N37 54.53	W115 53.03		N37 33.03	W115 53.05
N37 56.75	W115 25.98		N37 37.93	W115 53.05
N37 33.07	W115 26.00		N37 42.00	W115 53.05
N37 33.05	W115 48.05		N37 54.53	W115 53.03

Table A5.54. Coyote D.

N37 53.00	W116 11.05		N37 42.00	W116 11.05
N37 54.53	W115 53.03		N37 53.00	W116 11.05
N37 42.00	W115 53.05			

Table A5.55. Caliente A.

N37 58.23	W115 07.05		N37 17.00	W115 07.05
N37 59.33	W114 50.72		N37 58.23	W115 07.05
N37 17.00	W114 50.72			

Table A5.56. Caliente B.

N37 59.33	W114 50.72		N37 17.00	W114 50.72
N38 00.25	W114 34.57		N37 59.33	W114 50.72
N37 27.90	W114 34.70			

Table A5.57. Caliente C.

N38 00.25	W114 34.57		N37 27.02	W114 00.47
N38 01.00	W114 12.00		N37 27.90	W114 34.70
N37 53.73	W113 42.07		N38 00.25	W114 34.57
N37 49.42	W113 42.02			

Table A5.58. Elgin.

N37 17.00	W114 50.72		N36 43.02	W114 50.72
N37 27.90	W114 34.70		N37 17.00	W114 50.72
N37 27.02	W114 00.47			
N36 43.00	W114 36.05			

Table A5.59. Sally Corridor.

N37 17.00	W115 07.05		N36 32.02	W115 18.05
N37 17.00	W114 50.72		N36 38.00	W115 18.05
N36 43.02	W114 50.72		N36 48.00	W115 07.07
N36 43.00	W115 03.05		N37 17.00	W115 07.05
N36 26.00	W115 18.05			

Table A5.60. Alamo Corridor.

N37 17.00	W115 18.05		N36 48.00	W115 07.07
N37 17.01	W115 11.06		N36 38.00	W115 18.05
N37 12.00	W115 07.05		N37 17.00	W115 18.05

Table A5.61. R-63B High.

N36 32.00	W115 29.55		N36 26.00	W115 23.05
N36 32.01	W115 18.05		N36 30.19	W115 29.55
N36 26.00	W115 18.05		N36 32.00	W115 29.55

Table A5.62. R-63C Extension Area.

N36 33.62	W115 30.00		N36 30.48	W115 30.00
N36 33.62	W115 25.12		N36 33.62	W115 30.00
N36 27.19	W115 24.89			

Table A5.63. CTA.

N36 36.37	W115 47.80		N36 35.00	W115 37.05
N36 36.37	W115 40.21		N36 35.00	W115 46.58
N36 36.37	W115 37.02		N36 36.37	W115 47.80

Table A5.64. Gomer Triangle.

N37 16.00	W116 31.05		N37 08.00	W116 27.05
N37 16.00	W116 15.05		N37 16.00	W116 31.05

Table A5.65. STA.

STA is described as a 5NM radius circle within the boundaries of R-4809A, centered at:				
N37 47.93	W116 46.85			

Table A5.66. Shelf.

N37 42.90	W116 51.53		N37 40.00	W116 49.05
N37 42.90	W116 40.05		N37 42.90	W116 51.53
N37 40.00	W116 40.05			

Table A5.67. Dorito.

N37 59.96	W116 40.02		N37 53.01	W116 50.00
N37 53.01	W116 40.05		N37 59.96	W116 40.02

Table A5.68. X-Ray Extension.

N36 43.00	W115 03.05		N36 26.00	W115 18.05
N36 43.00	W114 36.05		N36 43.00	W115 03.05
N36 26.00	W114 53.00			

Table A5.69. NTTR/UTTR Transition Corridor.

N39 23.00	W114 27.00		N38 07.92	W114 37.37
N39 23.00	W113 19.00		N39 23.00	W114 27.00
N38 01.00	W114 12.00			

Attachment 6

REMOTELY PILOTED AIRCRAFT (RPA) OPERATING AREAS

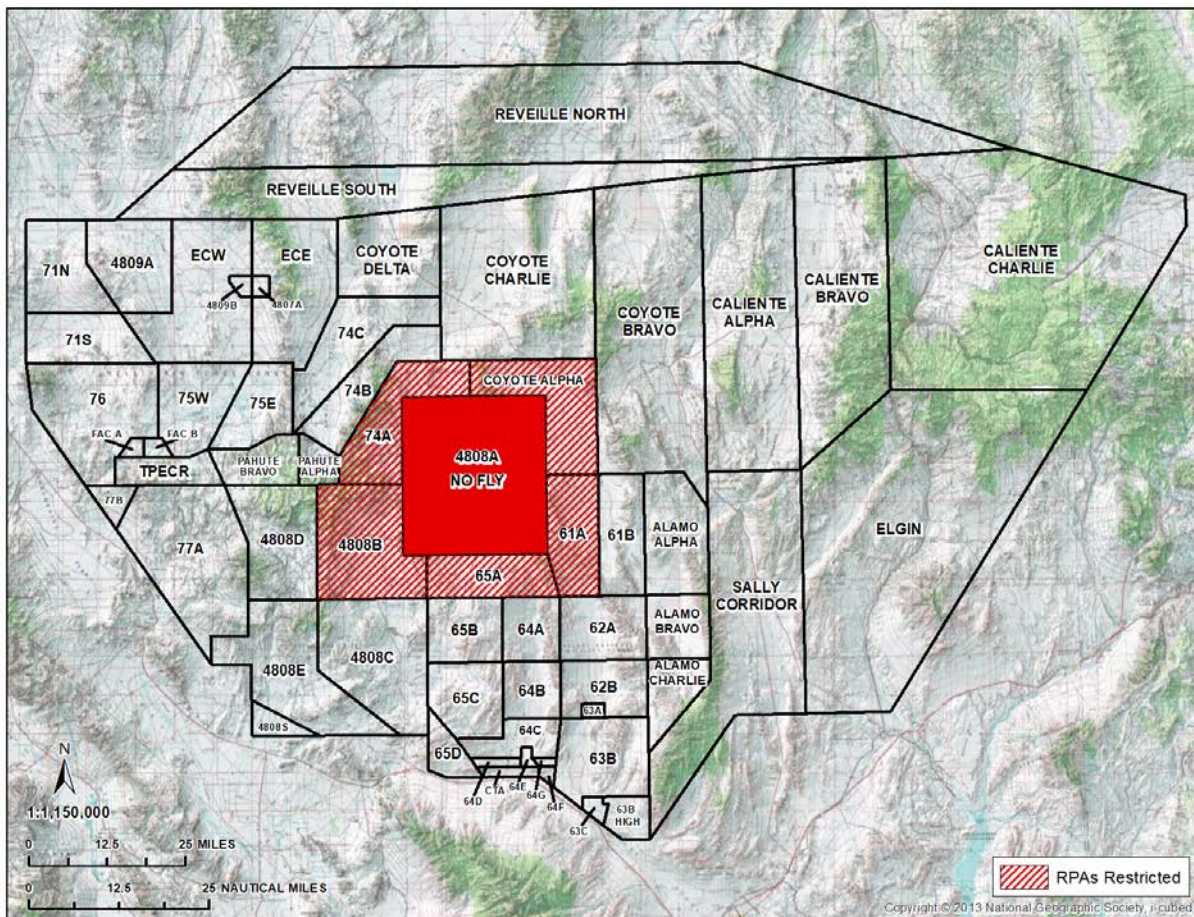
A6.1. In addition to scheduled airspace, predetermined routes have been identified for use for RPA transit:

A6.1.1. RPA Transit Corridors One and Two. The RPA imaging sensor will be fully stowed (e.g., unable to image the surrounding air and ground space) while utilizing the corridors unless otherwise approved through the NTTR Scheduling Process.

A6.1.2. RPA Transit Routes Tan, Green, and Blue.

A6.2. Authority to operate RPAs within R-4808 requires specific NNSS/NFO and/or DOE approval through the NTTR Scheduling Process. RPAs are normally restricted from operating in the contiguous airspace made up of R-74A, Coyote A, R-61A, R-65A, R-4808B.

Figure A6.1. RPA Contiguous Airspace Restriction.



A6.3. RPA Transit Corridors. These corridors are used to transit between Creech AFB and R63B/H and through R-4808C/D/E. When utilized, deviation from the scheduled corridor is not authorized without coordination from appropriate using agency and orbiting within corridors is not authorized.

A6.4. RPA Transit Corridor One. This corridor is 1.5NM wide and overlies CTA from the east edge of R-65D to the southeast edge of CTA, then extends southeast to R-63B High. RPA Transit Corridor One may be scheduled in whole or in segments through the NTTR Scheduling Process. The RPA Transit Corridor One segments are:

A6.4.1. RPA Transit Corridor One-Segment 1: Within R-63B; 7,000-12,000ft MSL.

A6.4.2. RPA Transit Corridor One-Segment 2: Within R-64D; 7,000-12,000ft MSL.

Figure A6.2. RPA Transit Corridor One.

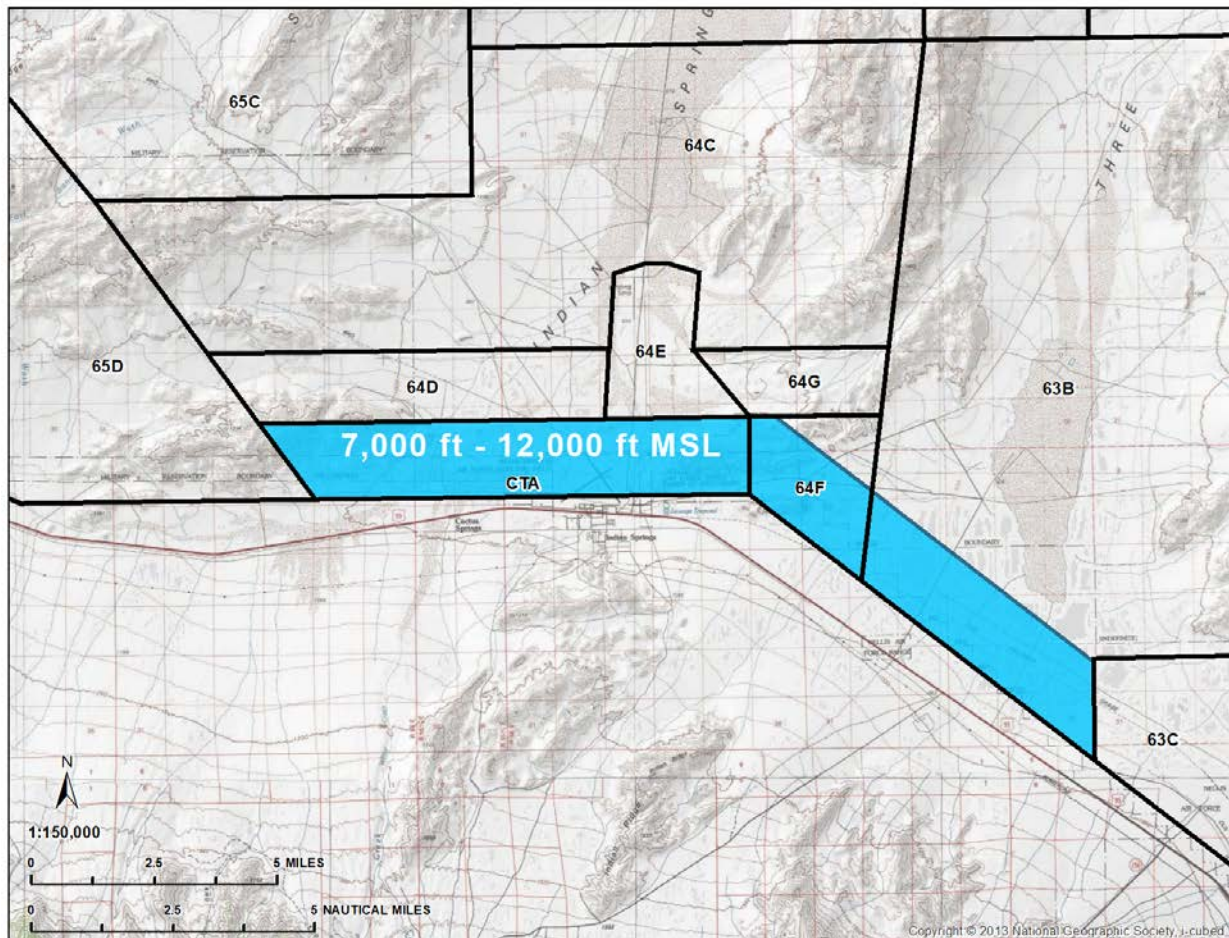
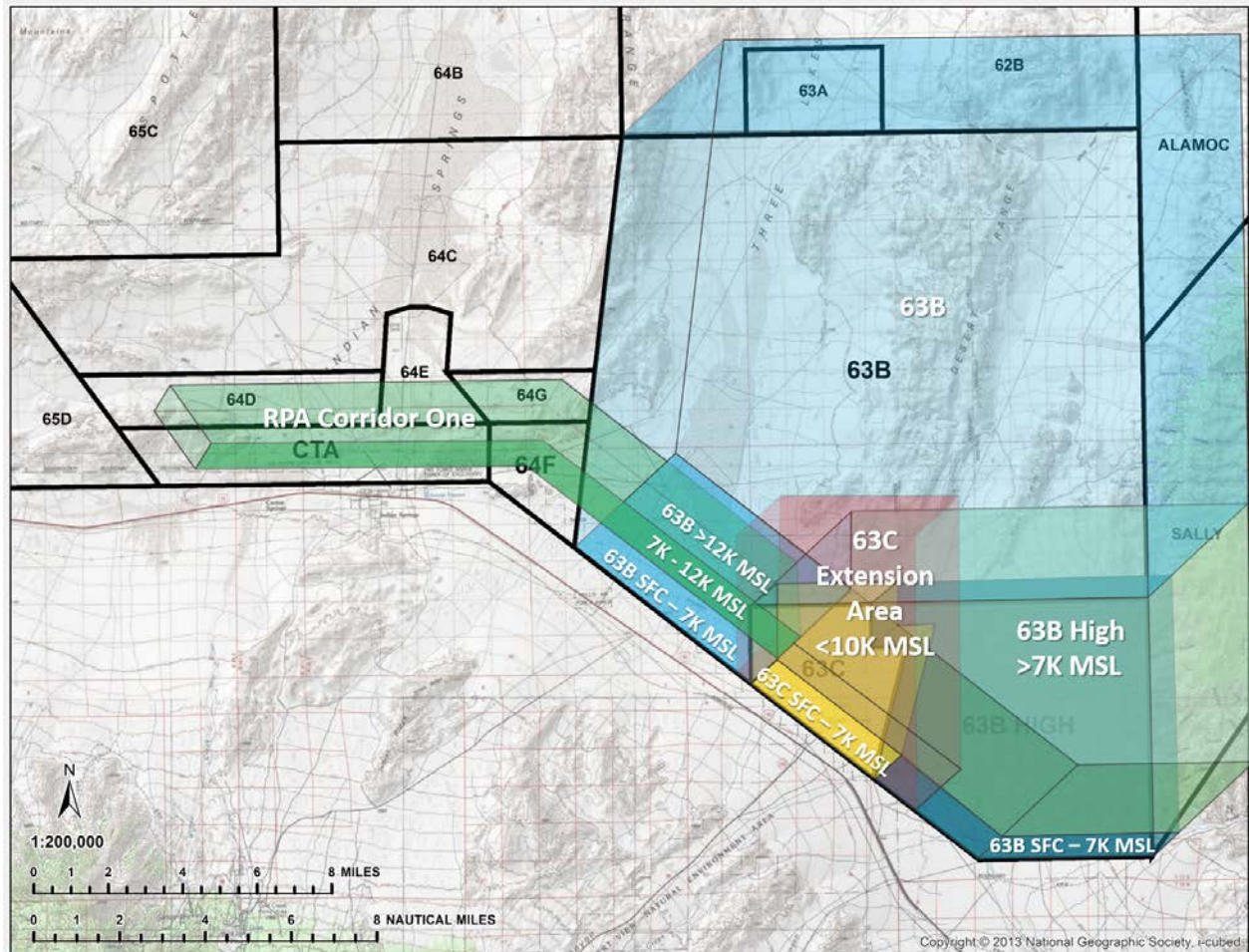


Figure A6.3. Relationship of RPA Transit Corridor One to R-63B and R-63B High.



A6.5. RPA Transit Corridor Two. This corridor is 1NM wide between *Inlet* (in R-65D) and either *Alpha* (in R77A/B) or *Roy* (in Pahute B) traversing R-4808C/D/E through *Elbow*, *Skid*, *Fridmo*, and *Gerte*. RPA Transit Corridor Two may be scheduled in whole or in segments through the NTTR Scheduling Process utilizing the following way points:

Table A6.1. RPA Transit Corridor Way Points.

Turn Point	Coordinates		Turn Point	Coordinates	
Inlet	N36 42.00	W115 55.00	Gerte	N36 55.00	W116 26.00
Elbow	N36 42.00	W116 10.00	Alpha	N36 55.53	W116 27.25
Skid	N36 42.00	W116 15.00	Roy	N37 16.02	W116 26.00
Fridmo	N36 46.35	W116 25.77			

A6.5.1. The RPA Transit Corridor Two segments are:

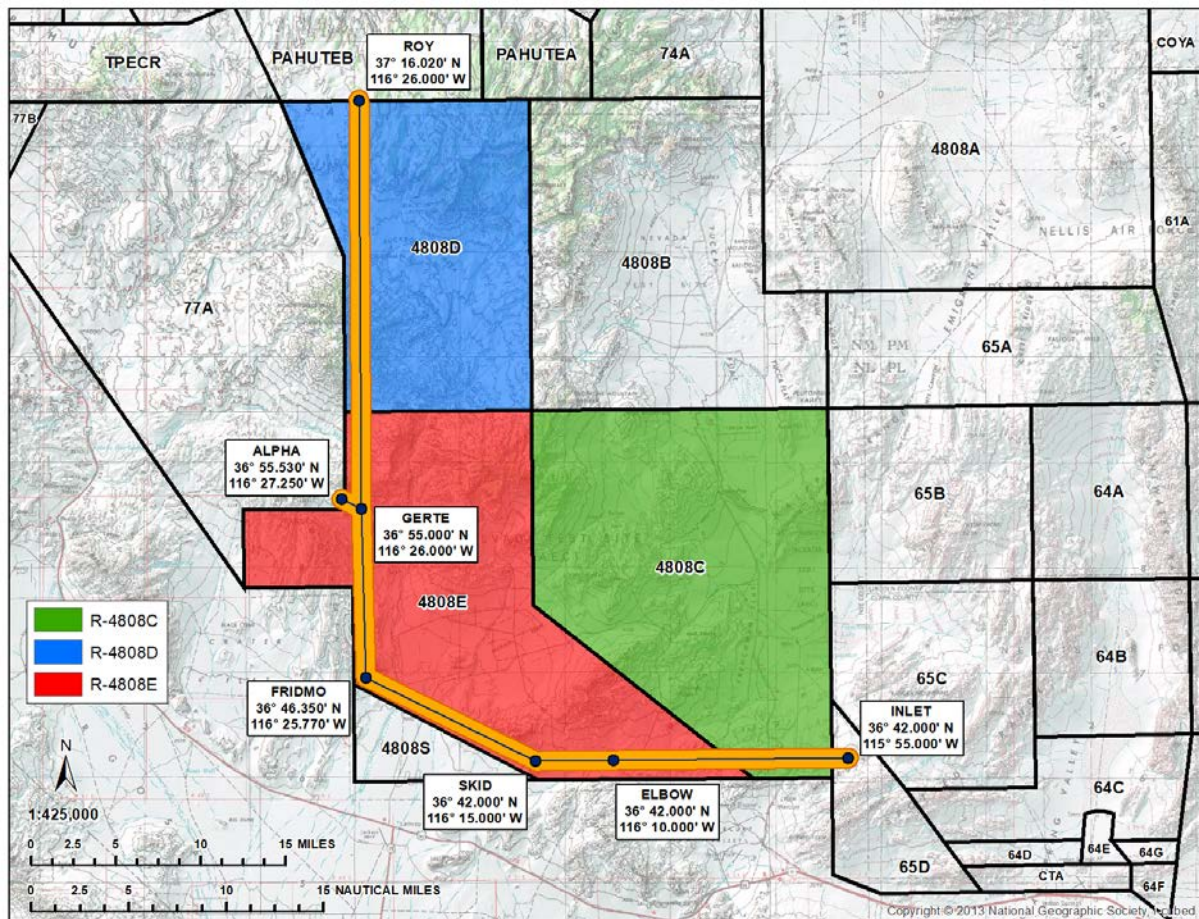
A6.5.1.1. RPA Transit Corridor Two-Segment 1: Between *Inlet*, *Elbow*, *Skid*, and *Fridmo*; 10,000-12,000ft MSL.

A6.5.1.2. RPA Transit Corridor Two-Segment 2: Between *Fridmo*, *Gerte*, and *Alpha*; 10,000-18,000ft MSL.

A6.5.1.3. RPA Transit Corridor Two-Segment 3: Between *Gerte* and *Roy*; 10,000-18,000ft MSL.

A6.5.2. The RPA must contact DML and Birddog Operations to relay position/altitude NLT 5 minutes prior to entering RPA Transit Corridor Two. Additionally, the RPA must contact DML and Birddog Operations to relay position/altitude NLT 5 minutes prior to entering the *Elbow* to *Inlet* corridor segment when traveling eastbound.

Figure A6.4. RPA Transit Corridor Two.



A6.6. RPA Transit Routes. These transit routes are designed to aid RPA transit within the NTTR, to and from the north portions of the range.

A6.6.1. Tan Route. This route is 1NM wide and located on the western border of the NTTR. It starts at *Alpha*, located in R77A, and ends at *Foxtrot* in R-71N. This route may only be scheduled in segments if the unit is not leaving the NTTR. The minimum altitude authorized is 1,000ft AGL. Use of this route must be coordinated through the NTTR Scheduling Process.

Table A6.2. Tan Route Way Points.

Turn Point	Coordinates		Turn Point	Coordinates	
Alpha	N36 55.53	W116 27.25	Delta	N37 33.00	W117 05.01
Bravo	N36 55.56	W116 36.69	Echo	N37 48.06	W117 05.01
Charlie	N37 26.52	W117 03.69	Foxtrot	N37 52.47	W117 00.00

A6.6.2. Blue Route. This route is 1NM wide and located on the western border of Caliente C and Elgin. It starts at *Golf*, located in Elgin, and ends at *Kilo* in Caliente C. This route may only be scheduled in segments if the unit is not leaving the NTTR. The minimum altitude authorized is 11,000ft MSL. Use of this route must be coordinated through the NTTR Scheduling Process.

Table A6.3. Blue Route Way Points.

Turn Point	Coordinates		Turn Point	Coordinates	
Golf	N36 43.57	W114 49.98	Juliatt	N37 59.73	W114 33.85
Hotel	N37 16.78	W114 49.87	Kilo	N38 00.21	W114 20.01
India	N37 27.88	W114 33.79			

A6.6.3. Green Route. This route is 1NM wide and located on the eastern border of the NTTR. It starts at *Golf*, located in Elgin, and ends at *Kilo* in Caliente C. This route may only be scheduled in segments if the unit is not leaving the NTTR. The minimum altitude authorized is 11,000ft MSL. Use of this route must be coordinated through the NTTR Scheduling Process.

Table A6.4. Green Route Way Points.

Turn Point	Coordinates		Turn Point	Coordinates	
Golf	N36 43.57	W114 49.98	November	N37 49.52	W113 42.89
Lima	N36 43.55	W114 36.50	Kilo	N38 00.21	W114 20.01
Mike	N37 27.04	W114 01.25			

Attachment 7

SUPERSONIC OPERATING AREAS

Table A7.1. Authorized NTTR Supersonic Areas.

NTTR Subrange Designations	Supersonic Flight Authorized
R-71N/S R-74A/B/C R-75E/W R-76	100ft AGL to unlimited
Alamo A/B/C Caliente A/B ¹ Coyote A/B/C/D EC East R77A/B Pahute A/B R-61A/B R-62A/B R-63A/B/C R-64A/B/C R-65A/B/C/D TPECR ²	5,000ft AGL to unlimited
Reveille North	5,000ft AGL to maximum scheduled altitude west of a line from: N38 00.42 W114 29.53 to N38 05.90 W114 34.92 to N38 07.28 W114 35.01 30,000ft MSL to unlimited east of a line from: N38 00.42 W114 29.53 to N38 05.90 W114 34.92 to N38 07.28 W114 35.01
Reveille South	5,000ft AGL to maximum scheduled altitude
Sally Corridor ³	5,000ft AGL to unlimited north of N36 52.00 30,000ft MSL to unlimited south of N36 52.00
Elgin ³	5,000ft AGL to unlimited north of a line from: N36 52.00 W114 50.72 to N37 04.00 W114 33.00 to N37 04.00 W114 19.19 30,000ft MSL to unlimited south of a line from: N36 52.00 W114 50.72 to N37 04.00 W114 33.00 to N37 04.00 W114 19.19
Caliente C ^{1,4}	30,000ft MSL to unlimited
EC West ⁵ R-4809A ⁵ R-4809B	Above 5,000ft AGL and specifically scheduled through the NTTR Scheduling Process.
R-4808B/C/D/E	As approved by NNSS/NFO and/or DOE and specifically scheduled through the NTTR scheduling process.

Table A7.1. Authorized NTTR Supersonic Areas (continued).

Note 1: The noise sensitive area in the vicinity of the Caliente, NV (a 5NM radius circle, centered at N37 36.83 W114 31.33, within the boundaries of Caliente B/C) is restricted to subsonic, surface to unlimited.

Note 2: For scheduling and supersonic operations purposes, TPECR includes FAC A/B ground/airspace.

Note 3: Supersonic flight south of N36 48.00 is only permitted with magnetic headings of 259° clockwise to 079°.

Note 4: The noise sensitive area in the vicinity of the Lincoln County Airport (a 3NM radius circle, centered at N37 47.25 W114 25.30, within the boundaries of Caliente C) is restricted to subsonic, surface to unlimited.

Note 5: NNSS/SFO may schedule supersonic operations 100ft AGL to unlimited in the three supersonic target entry cones in EC West and R-4809A. NNSS/SFO will coordinate their desires through NTTR Range Projects to obtain approval.

Figure A7.1. Authorized NTTR Supersonic Areas.

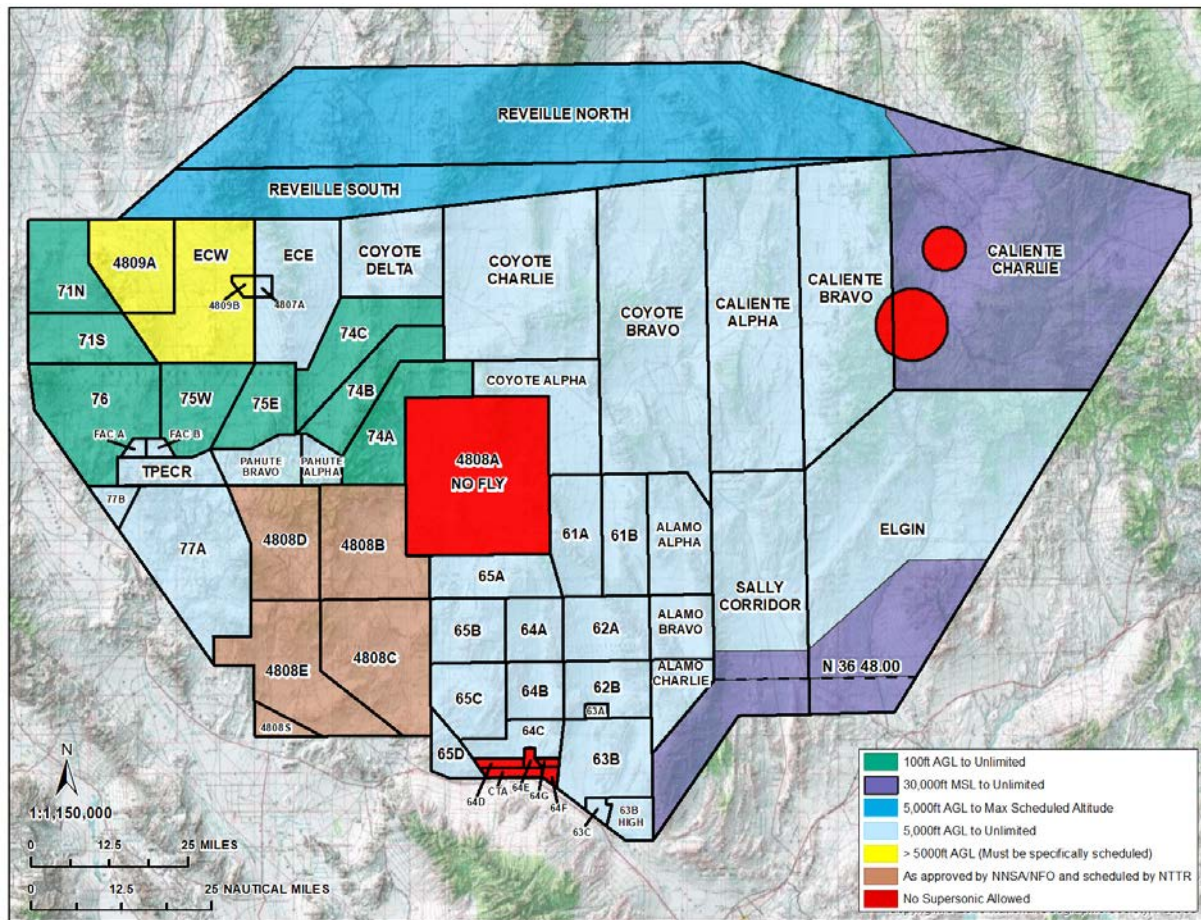


Table A7.2. NNSS/SFO Antelope Lake Target North Supersonic Entry Cone.

Magnetic headings of 150° clockwise to 223°				
Coordinates				
N37 53.00	W116 45.00		N37 47.60	W116 26.05
N37 42.00	W116 41.30		N37 40.50	W116 39.00

Table A7.3. NNSS/SFO Antelope Lake Target South Supersonic Entry Cone.

Magnetic headings of 339° clockwise to 007°				
Coordinates				
N37 42.00	W116 41.30		N37 40.50	W116 39.00
N37 34.80	W116 44.55		N37 33.00	W116 37.60

Figure A7.2. NNSS/SFO Antelope Lake Target North and South Supersonic Entry Cones.

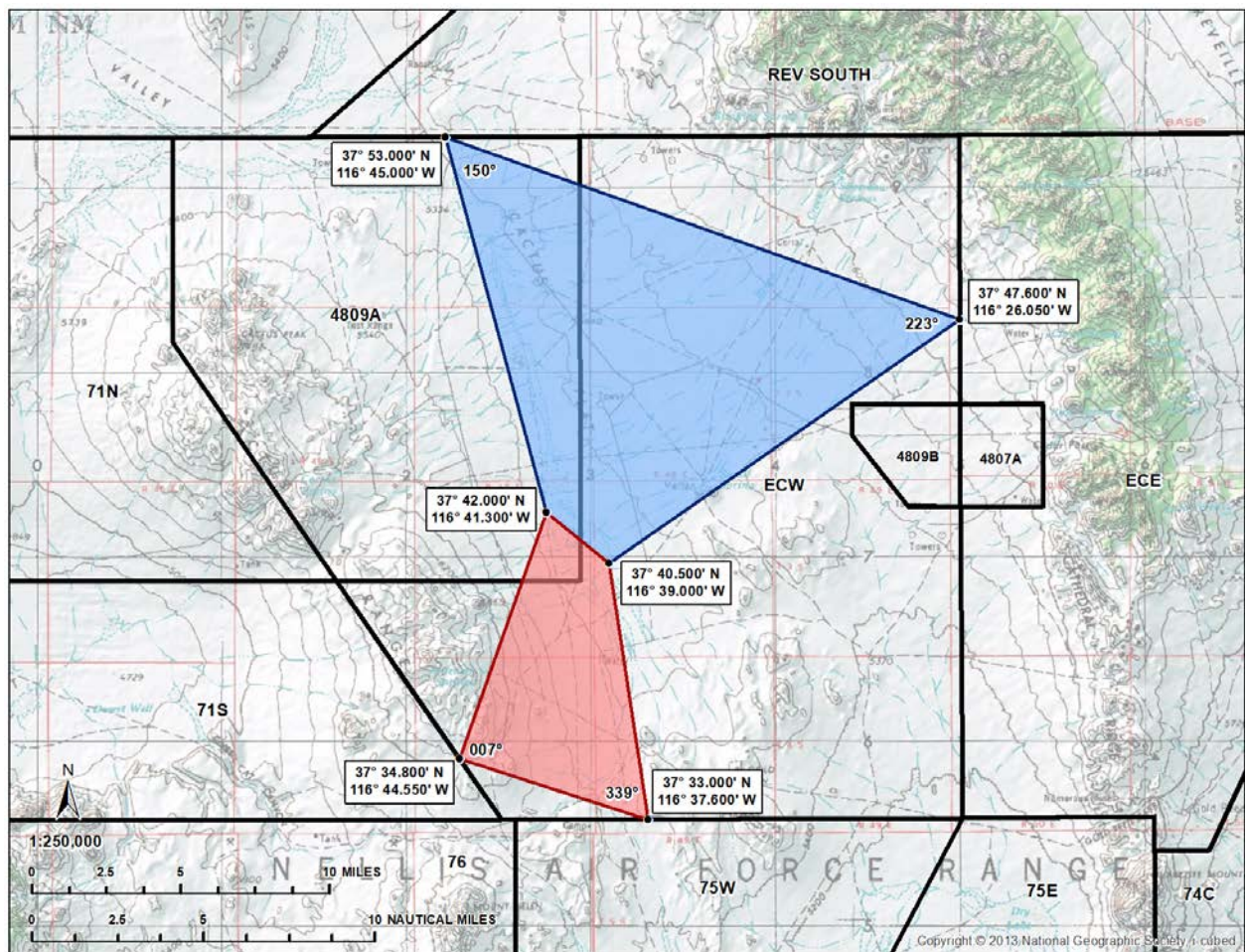
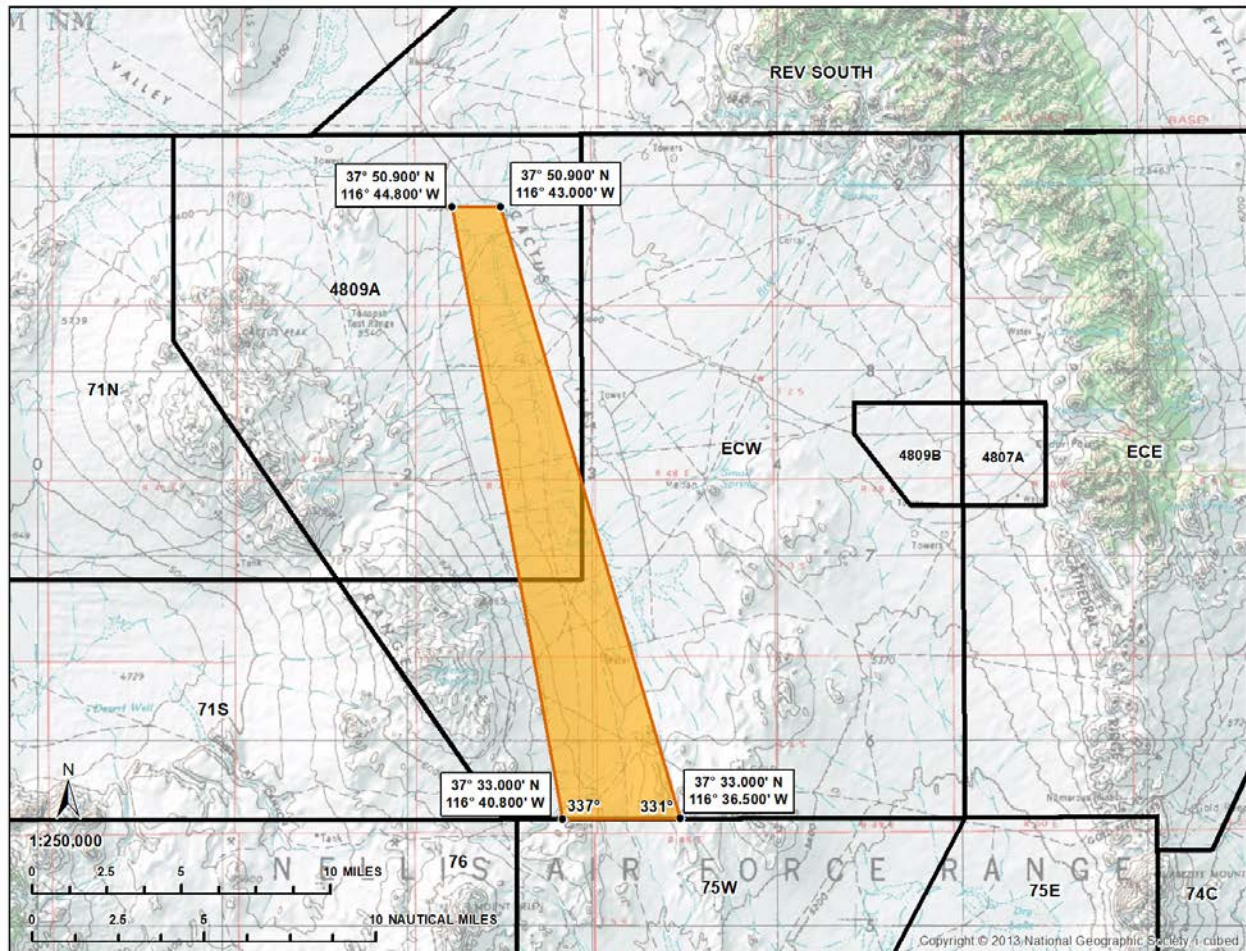


Table A7.4. NNSS/SFO Main Lake Target South Supersonic Entry Cone.

Magnetic headings of 331° clockwise to 337°				
Coordinates				
N37 50.90	W116 44.80		N37 50.90	W116 43.00
N37 33.00	W116 40.80		N37 33.00	W116 36.50

Figure A7.3. NNSS/SFO Main Lake Target South Supersonic Entry Cone.



Attachment 8

THUNDERBIRDS TRAINING AREAS

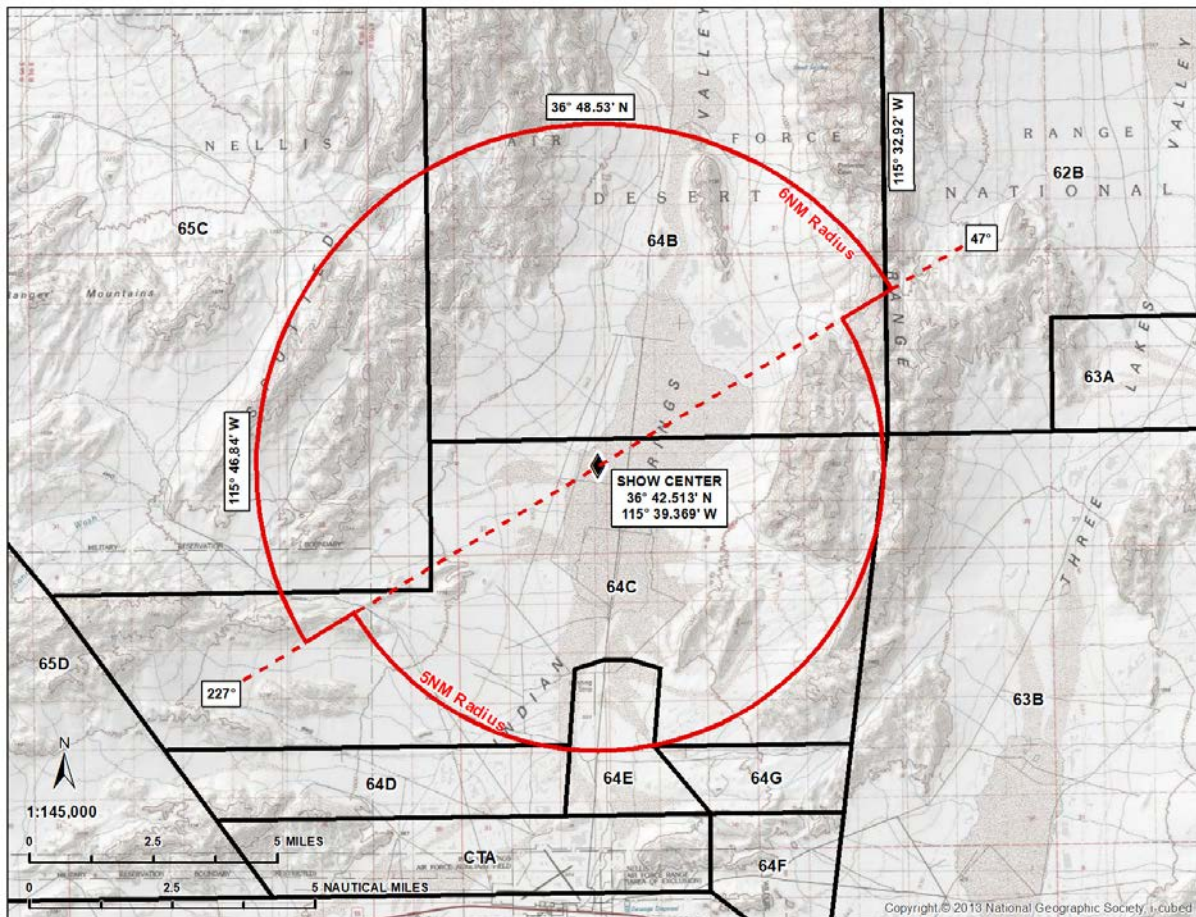
A8.1. Thunderbirds NTTR Range Training Area. When active, this training area normally reaches from surface to FL180. When this training area is activated, R-64B/C/E and R-65C will be scheduled IAW the NTTR Scheduling Process.

Table A8.1. Thunderbirds NTTR Range Training Area Boundaries.

Location	Coordinates	
Show Center ¹	N36 42.513	W115 39.37
Northernmost Boundary	N36 48.53	
Easternmost Boundary		W115 32.92
Southernmost Boundary	N36 37.51	
Westernmost Boundary		W115 46.84

Note 1: The NTTR Training Area is described as an approximate 6NM radius from Show Center at a magnetic heading of 227° clockwise to 047° and a 5NM radius from Show Center with a magnetic heading of 47° clockwise to 227°.

Figure A8.1. Thunderbirds NTTR Range Training Area.



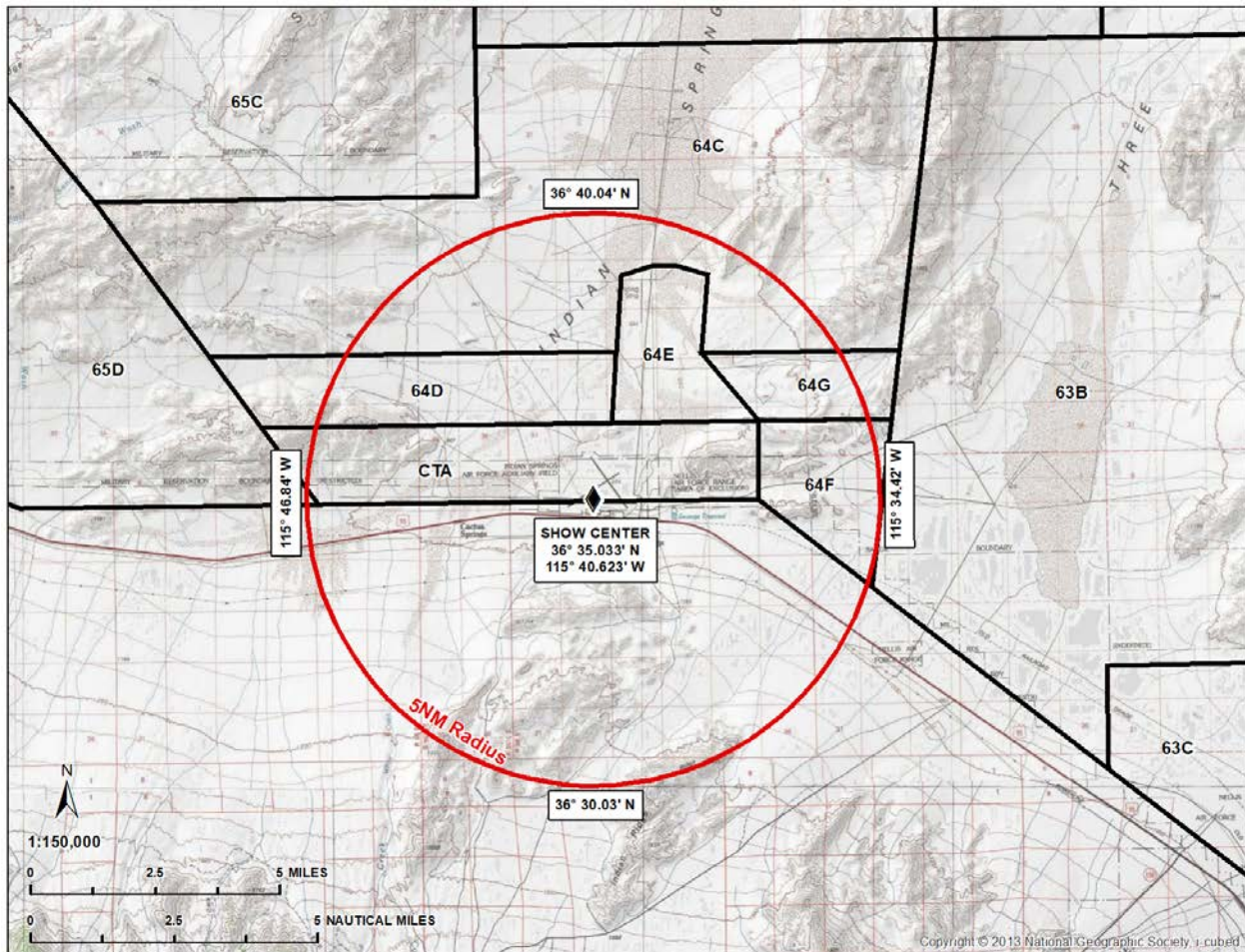
A8.2. Thunderbirds Creech AFB OTF Training Area. When active, this training area normally reaches from surface to FL180. To activate this training area, the Thunderbirds will coordinate directly with 432 WG for the release of CTA and R-64D/E/F/G for NTTR scheduling. Thereafter, CTA, R-64D/E/F/G, and R-64C will be scheduled IAW the NTTR Scheduling Process.

Table A8.2. Thunderbirds Creech AFB OTF Training Area Boundaries.

Location	Coordinates	
Show Center	N36 35.033	W115 40.623
Northernmost Boundary	N36 40.04	
Easternmost Boundary		W115 34.42
Southernmost Boundary	N36 30.03	
Westernmost Boundary		W115 46.84

Note 1: The Creech AFB OTF Training Area is described as an approximate 5NM radius from Show Center at all headings.

Figure A8.2. Thunderbirds Creech AFB OTF Training Area.



Attachment 9

AIRSPACE RECALL

A9.1. NTTR Emergency Airspace Recall. In the event of an NTTR emergency, range users will contact NTTR Range Monitoring (assisted by NATCF as required) and state ranges required to address the emergency.

A9.1.1. NTTR Range Monitoring will immediately announce the activation of this emergency recall on appropriate range frequencies and Guard.

A9.1.2. NTTR Range Monitoring will assist in the emergency, as required.

A9.1.3. NTTR Range Monitoring will notify NTTR/DO with details of emergency airspace recall.

A9.2. DML Airspace Recall. In the event of conditions impacting DML activities, DML will inform NATCF, who will coordinate with NTTR Range Monitoring for the immediate use of Coyote A and/or R-61A, R-65A, and R-74A, as required. When a recall is required, these areas will be recalled with a maximum of warning time and for the minimum time necessary.

A9.2.1. Upon notification, NTTR Range Monitoring will then pass the recall information to all affected aircraft and to all aircraft that subsequently check-in.

A9.2.2. NTTR Range Monitoring will notify the ROO with details of DML airspace recall. The ROO will ensure the necessary reprioritization coordination is accomplished, particularly with regards to large, complex events (i.e., exercise RED FLAG, etc.).

A9.3. DML Weather Recall. In the event of severe weather phenomena (e.g., thunderstorms, etc.) impacting DML activities, DML will inform NATCF, who will coordinate with NTTR Range Monitoring for the immediate use of affected areas. When a recall is required, these areas will be recalled with a maximum of warning time and for the minimum time necessary.

A9.3.1. Upon notification, NTTR Range Monitoring will announce the activation of the recall on the appropriate range frequencies and Guard. NTTR Range Monitoring will then pass the recall information to all aircraft that subsequently check-in.

A9.3.2. DML weather recall places the affected ranges under DML control at 12,000ft MSL and below. Liberal use of these ranges above that altitude is allowed, but aircraft operating on those ranges below 13,000ft MSL require clearance to enter and continuous contact with DML.

A9.3.3. If DML observes traffic entering affected ranges below 13,000ft MSL, they will repeat the recall on Guard.

A9.4. R-4809A Airspace Recall. In the event of conditions impacting DML activities in R-4809A, DML will inform NATCF, who will coordinate with NTTR Range Monitoring for the immediate use of R-4809A. When a recall is required, R-4809A will be recalled with a maximum of warning time and for the minimum time necessary.

A9.4.1. Upon notification, NTTR Range Monitoring will announce the activation of the recall on the appropriate range frequencies and Guard. NTTR Range Monitoring will then pass the recall information to all aircraft that subsequently check-in.

A9.4.2. If DML observes traffic entering R-4809A below 15,000ft MSL, they will repeat the airspace recall announcement on Guard.

A9.5. FAA Airspace Weather Recall. Severe weather phenomena (e.g., thunderstorms, etc.) may occur that necessitate the routing of non-participating (civilian/airliner) aircraft through the NTTR. LA ARTCC shall request release/transit of the airspace from NATCF, as required. Reference current NAFBI 11-250.

Attachment 10**AIRCRAFT ENTRY AND EXIT PROCEDURES**

A10.1. To request range entry, aircrew will contact both NATCF and NTTR Range Monitoring (in order). To request range exit, aircrew will contact both NTTR Range Monitoring and NATCF (in order). Refer to the NTTR Mission Planning websites for assigned frequency clearances. Additionally, users will adhere to NAFBI 11-250, CAFBI 11-250, and local operating procedures, as applicable.

A10.2. Helicopters should contact NTTR Range Monitoring prior to losing line of sight communications for clearance onto the range.

A10.3. Due to limited line-of-sight communications capability on many NTTR ranges, it may not be possible to contact NTTR Range Monitoring or NATCF prior to exiting the range. Users may exit the range VFR and contact NTTR Range Monitoring and NATCF as soon as communications can be established.

A10.4. Aircraft Range Entry/Exit. NATCF will transfer communications to NTTR Range Monitoring by voicing, "Cleared scheduled, contact BLACKJACK, Range Altimeter XX XX."

A10.4.1. Mission flight leads will then check-in with NTTR Range Monitoring prior to range entry. Every flight lead, regardless of scheduled mission type, must check-in with NTTR Range Monitoring. For NTTR concurrent-use operations with multiple flights, one flight lead may check-in for all flights. Failure to check-in with NTTR Range Monitoring prior to range entry may result in lack of awareness to the presence of ground parties on range. Check-in with the following:

A10.4.1.1. Call Sign.

A10.4.1.2. Number of aircraft in flight.

A10.4.1.3. Scheduled range(s) and times.

A10.4.1.4. GRR version.

A10.4.1.5. Working frequency.

A10.4.1.6. Concurrent-Use Operations (if applicable).

A10.4.1.7. Number/type of ordnance to be dropped/fired (live, inert, or gun rounds).

A10.4.1.8. Target(s) to include dynamic retargeting.

A10.4.1.9. Laser operations.

A10.4.1.10. Intent to conduct lights-out training.

A10.4.1.11. Any mission changes/restrictions (i.e., chaff, fire condition, and flares).

A10.5. For LFEs, the exercise POC will coordinate information with NTTR Range Monitoring, after which LFE participant units/flights are exempt from the requirement to check-in with NTTR Range Monitoring.

A10.6. NTTR Range Monitoring will advise aircrew of changes to range restrictions/conditions and clear aircraft to their area working frequency by voicing “Cleared Tactical.”

A10.7. Prior to range exit, mission flight leads will check-out with NTTR Range Monitoring. Every flight lead, regardless of scheduled mission type (including LFE events), must check-out with NTTR Range Monitoring. For NTTR concurrent-use operations with multiple flights, one flight lead may check-out for all flights. Check-out with the following:

A10.7.1. Call sign.

A10.7.2. Number of aircraft in flight.

A10.7.3. Total number and type of ordnance expended on each target (i.e., “Strike 01, 12 x Mk-82 on 76-10”).

A10.8. Prior to range exit, mission flight leads will contact NATCF to coordinate for RTB/follow-on clearance.

Attachment 11

GROUND PARTY PROCEDURES

A11.1. Ground access to the NTTR holds inherent risks. As such, access is carefully controlled and it is incumbent on all ground parties to understand and adhere to NTTR ground party procedures. HQ NTTR limits ground access to certain areas due to UXO and explosive residue throughout the NTTR which can present a hazard to personnel as well as in support of environmental stewardship efforts.

A11.1.1. NTTR Range Monitoring authorizes entry to the NTTR subranges that include strikeable targets, monitors ground parties on those subranges, and monitors exit from those subranges. To ensure ground parties depart the range at their scheduled time prior to an ordnance-release (live or inert) mission, NTTR Range Monitoring will contact ground parties 15 minutes prior to their scheduled exit time.

A11.1.2. Remaining overnight (RON) on the NTTR for convenience is not authorized. Activity that spans the night period may be authorized if properly coordinated through HQ NTTR.

A11.1.3. Sensitive Equipment. Sensitive equipment consists of any personal device capable of enhancing vision (i.e., NVDs, binoculars, and targeting scopes) recording video or electronically storing data (i.e., cameras, cell phones with camera capability, memory cards, computers, PDAs) and weapons and ammunition. Sensitive equipment is not permitted on range without specific approval from NTTR/IP.

A11.1.4. In no case will there be more than six persons, including range crewmembers, allowed in any range tower during active range operations.

A11.2. Ground parties are identified as either “associated ground parties” or “non-associated ground parties:

A11.2.1. Associated ground parties consist of personnel and vehicles directly involved in tactical mission execution, such as field artillery fire teams, special operations teams, or JTACs. Video recording is routinely employed by Thunderbirds personnel.

A11.2.2. Non-associated ground parties consist of personnel and vehicles not directly involved in mission execution, such as HQ NTTR staff, range maintenance contractors, EOD technicians, Public Affairs “Combat Camera,” and range tour groups.

A11.3. All ground party access requests must be coordinated through NTTR/IP using the NAFB Form O-74, *NTTR Visit Request/Authorization*. An authorized escort must accompany all non-cleared visitors on the NTTR ranges. The escort will brief visitors on range procedures and restrictions. Escorts will coordinate range entry and departure routes, times and procedures with NTTR/IP to determine security requirements.

A11.4. Prior to operation of vehicles on the NTTR, ground parties must:

A11.4.1. Obtain appropriate safety training from NTTR/SE.

A11.4.2. Possess valid government vehicle certification training and licensing.

A11.4.3. Ensure every vehicle is in safe operating condition prior to entering the NTTR.

A11.4.4. Possess range access badges.

A11.4.5. Have an NTTR approved callsign from the NTTR/RS-managed NTTR Master Callsign List.

A11.4.6. Review the airspace schedule and restrictions on mission execution day prior to entering the range.

A11.4.7. Ensure each vehicle is equipped with:

A11.4.7.1. LMR (available for check-out at HQ NTTR building) for contacting the controlling agency.

A11.4.7.2. LEP (available for check-out at HQ NTTR building) for each occupant, if required by the range schedule.

A11.4.7.3. NTTR driving maps with mandatory reporting points and procedures annotated.

A11.4.7.4. Auto-kit with basic repair equipment (e.g., serviceable spare tire, jack, etc.).

A11.4.7.5. A basic first aid kit.

A11.4.7.6. Vehicle Tracking System (VTS) (if available). Strikeable ranges are first priority for VTS use.

A11.4.7.7. At least three liters of water per person.

A11.4.7.8. Vehicles assigned to HQ NTTR and operated by HQ NTTR personnel will also be equipped with a minimum of: one pair of leather gloves, one flashlight with strobe, four emergency blankets, one rain poncho, one tow rope, one glow stick, one warning triangle, and a set of jumper cables.

A11.5. Ground party vehicles may employ individually or in convoys (two or more vehicles that depart at the same time from the same origin to a destination and are organized for the purpose of control under a single convoy lead). When in convoy, the convoy lead must:

A11.5.1. Determine and notify all convoy personnel of marshaling/assembly area and departure time.

A11.5.2. Inspect vehicles and ensure all personnel have required equipment.

A11.5.3. Brief convoy personnel on range schedule and restrictions.

A11.5.4. Follow the proper route from the departure point to the destination point.

A11.5.5. Observe all range restrictions, safety policies, and regulations at all times.

A11.5.6. Ensure that all convoy drivers maintain a safe distance from each other.

A11.5.7. Request/receive range access clearance for the entire convoy and maintain constant radio contact with the controlling agency.

A11.5.8. Ensure all occupants have and use adequate LEPs for the laser activities scheduled.

A11.6. NTTR roads are a mix of asphalt, improved dirt/gravel, and unimproved dirt. Off-road operations are strictly prohibited without specific approval. Headlights must be on at all times while on range. All vehicles must strictly adhere to posted speed limits. Unless otherwise posted, maximum speed limits on NTTR roads are as follows:

A11.6.1. Asphalt and Improved Roads = 45 MPH

A11.6.2. Unimproved Roads = 35 MPH

A11.6.3. Other = 25 MPH

A11.7. Travel times and routes. The following estimated driving times assume a single vehicle driving at the speed limit, daytime, clear weather, road familiarity and good road conditions. Distances are provided in statute miles.

Table A11.1. Driving Times.

Nellis AFB to Range Entry Points	Distance/Speed	Travel Time
Via I-215 to US-95 to Point Bravo	40 miles/55-70 mph	57 min
Via I-215 to US-95 to Creech AFB	52 miles/55-70 mph	1 hrs 15 min
Via I-215 to US-95 to TPECR Gate	145 miles/55-70 mph	2 hrs 59 min
Via I-215 to US-95 to Lida Gate	180 miles/55-70 mph	3 hrs 29 min
Via I-215 to US-95 to Tonopah to Able Gate	246 miles/55-70 mph	4 hrs 52 min
Via I-15 to US-93 to SR-375 to Cedar Gate	175 miles/55-70 mph	3 hrs 17 min
Via I-15 to US-93 to SR-375 to SR-6 to Able Gate	262 miles/55-70 mph	4 hrs 38 min

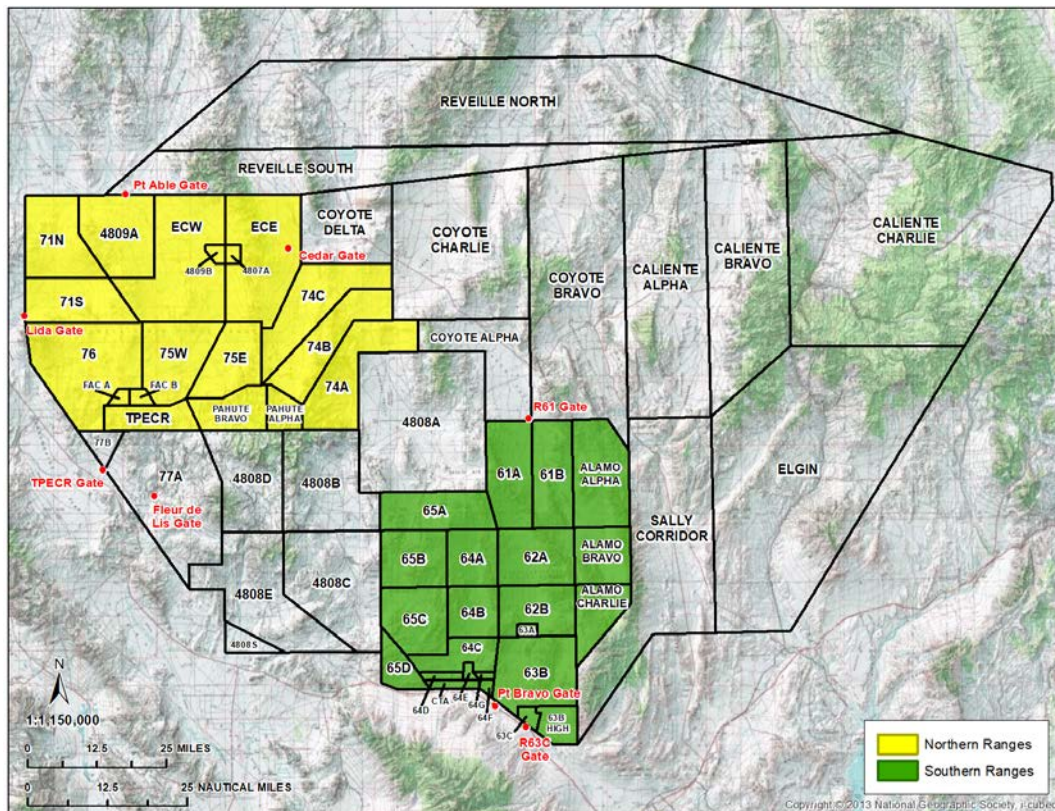
Table A11.2. Driving Times.

Range Crossing Time / Roads Used	Distance/Speed	Travel Time
R-62B/Three Lakes Road	10 miles/25-45 mph	20 min
R-63B/Three Lakes Road	13 miles/25-45 mph	25 min
R-64B/Mile Range Road	10 miles/25-40 mph	20 min
R-64C/Spotted Range Road (to R-65C)	7-8 miles/25-45 mph	15 min
R-64C/Mile Range Road (to R-64B)	7-8 miles/25-45 mph	15 min
R-71/Sleeping Column Road/East Stonewall Flat Road/Civet Cat Canyon Road	18 miles/15-40 mph	30 min
R-71/Sleeping Column Road/E. Stonewall Flat Road/Stonewall Flat Road	26 miles/25-45 mph	45 min
R-75W/Cross Range Road	18 miles/25-45 mph	35 min
R-75W/Wilson Camp Road/Cross Range Road	15 miles/15-40 mph	30 min
R-76/Civet Cat Canyon Road	17 miles/15-40 mph	45 min

A11.8. Entry/Exit procedures.

A11.8.1. Ground parties entering and exiting the NTTR must utilize authorized entry points at the following gate locations:

Figure A11.1 NTTR Gate Locations.



A11.8.2. Communications. Ground parties will use the range safety net (Fox 4) to contact NTTR Range Monitoring for range access. If NTTR Range Monitoring is off duty, contact contractor security operations on range safety net (Fox 4) or 432 SFS/BDOC at (702) 404-0556 for access:

Table A11.3. Authorized Entry Points.

Gate	Type	Access To	Contact
Range 63 Gate	Unmanned	CARC	NTTR Range Monitoring ¹
Range 61 Gate	Unmanned	Range 61A/B	NTTR Range Monitoring
Creech Bypass Gate	Unmanned	Southern subranges	NTTR Range Monitoring ²
Point Bravo Gate	Manned	Southern subranges	Scorpion
Able Gate	Manned	Northern subranges	Cactus
TPECR Gate	Manned	Northern subranges	Cactus
Cedar Gate	Manned	Northern subranges	Cactus
Lida Gate	Unmanned	Northern subranges	Cactus
North Gate at Mile Range Road	Unmanned	Transit between Creech AFB and Southern subranges	432 SFS/BDOC
South Gate at Box Canyon Road	Unmanned	Transit between Creech AFB and Southern subranges	432 SFS/BDOC
Fleur De Lis Gate	Unmanned	Range 77A	NTTR Range Monitoring
Notes:			
1. Contact NTTR Range Monitoring only if utilizing firing ranges on 63-C. No notification is required for entry only.			
2. Contact NTTR Range Monitoring only if entering live ranges. No notification is required to access the Box Canyon or Mile Range facilities.			

A11.8.3. Having entered the range, further entry into any other subrange requires a radio check-in/check-out on Fox 4 with NTTR Range Monitoring.

A11.8.4. Safe-to-Pass Roads. There are several sections of range roads that are authorized for travel without specific scheduling of the subrange. Additionally, contact with NTTR Range Monitoring is not required for entry and exit authorization for these “Safe-to-Pass Roads,” although contact with NTTR Range Monitoring is required if departing the road in question. Safety of these roads is maintained by ensuring no weapons safety footprints overlay them:

Table A11.4. Safe-to-Pass Roads.

Road	Subrange	Description
Blockhouse Road, Stagecoach Road	R-63B	Transit from Point Bravo to the Cine 9 and Cine 7 threat pads
All roads	R-64D	Traversing R-64D
Mile Range and Tank Table Road	R-64E	Traversing R-64E
Box Canyon Road	R-64F	Transit between Creech AFB and R-63B
Sleeping Column Road	R-71N	Transit between R-4809A and View Point Alpha
All roads north of N37 45.00	R-71N	Transit between Double Tracks and Mud Lake north of Double Tracks
All roads east of the W116 00.0	R-74A/B/C	Traversing R-64D east of the W116 00.00
Frans Hamel Road	R-75W	Transit between R-76 and EC West
Highlighted access routes on R-77A	R-77A	Access to ER-EC-5, 6, 11 and 12
Tolicha Peak Access Road	R-77B	Transition between HWY-95 and TPECR

A11.8.4.2.1. When R-65C is scheduled for target maintenance, NTTR Safety will automatically deconflict all profiles on R-64C that affect Spotted Range Road and notify NTTR Range Monitoring of the dates and times that Spotted Range Road is safe to pass.

A11.9. Vehicle Breakdown. Advise NTTR Range Monitoring immediately of the location of a vehicle breakdown and intentions. If the vehicle can be repaired quickly (i.e., a flat tire), attempt to repair it. If it cannot be repaired quickly, or there is doubt, notify NTTR Range Monitoring.

A11.10. Emergencies. In the case of a vehicle accident or medical emergency, render first aid to the victims, notify the NTTR Range Monitoring immediately of the location, and provide status of all personnel and nature of emergency response required if necessary. After returning from the range, report to NTTR/SE to accomplish the SF 91, *Motor Vehicle Accident Report* or AF Form 978, *Supervisor's Mishap Report as applicable*.

A11.11. Ground Weapons Employment. Ground parties are authorized to fire surface-to-surface ordnance at targets as listed on the NTTR Mission Planning websites. The following restrictions apply:

A11.11.1. All Firing Points (FPs) must be approved by NTTR/SE prior to weapons employment.

A11.11.2. No surface-to-surface weapons employment is authorized against any target unless specifically approved by NTTR/SE with an approved SDZ plot. Approved surface-to-surface targets and weapons can be found on the Nellis Mission Planning websites.

A11.11.3. Ground weapons fire will not be aimed towards fixed, high-value sites (TOSS, UMTE locations).

A11.11.4. Gun-to-Target Lines (GTLs) will not cross over any personnel.

A11.11.5. Surface-to-surface weapons will not be fired when the target is obscured unless tracking radar is used. All impacts must be visually observed or tracked with radar.

A11.11.6. Brass/Dunnage Cleanup. All dunnage and brass debris left on range is the responsibility of the ground party that generated the debris. In most cases, additional range time is required to accomplish brass/dunnage cleanup. Prior coordination can be made to preposition 55 gallon barrels at firing locations to collect brass and dunnage, or the unit may opt to pay for the range maintenance contractor to clean up debris. A standard charge will be applied to the unit for brass/dunnage cleanup IAW the NTTR BMP.

Attachment 12

FOREIGN USERS

A12.1. Foreign Air and Ground Users. Foreign air and ground users of the NTTR are normally categorized as either: 1) Foreign National (FORNAT) users, or 2) Foreign Exchange Officers (FEO) permanently assigned to US Nellis AFB or Creech AFB units. FEOs assigned to US units that are not assigned to Nellis AFB or Creech AFB are considered FORNATs on the NTTR. All foreign users are prohibited from R-4808 and R-4808A without NNSS/NFO and/or DOE approval (coordinated through the NTTR Scheduling Process).

A12.2. Foreign Air and Ground Participation. Foreign air and ground participation in activities conducted on the NTTR are scheduled through the NTTR Scheduling Process and reflected on the GRR. For daily information, CSE can be used to generate a Foreign Participant Report that reflects all known and scheduled foreign participation in NTTR activities.

A12.3. Foreign Visit Request (FVR) Process. The FVR process is initiated by the partner nation's embassy in Washington, DC. The host embassy inputs applicable data on each individual into the Foreign Visit System (FVS). FVS then notifies ACC/IAG. In turn, ACC/IAG sends the FVR to all affected agencies (including HQ USAFWC) for action.


A12.3.1. **FORNATs.** USAFWC Foreign Disclosure office (FDO) notifies NTTR/IP of approved FORNAT FVRs. A host unit for the FORNAT must be identified and will fulfill all host unit responsibilities.

A12.3.2. **FEOs.** USAFWC/FDO notifies NTTR/IP of approved FEO FVRs and US unit of assignment as well as FEO assignments that have ended. NTTR/IP will provide NTTR/DO a consolidated listing of all current FEOs when FEOs are added or removed from approved status.

A12.3.2.1. When required and identified on the daily range schedule, FEOs are restricted from the contiguous airspace as provided in Figure A12.2. Additionally, when FEOs are participating in any mission activity that also includes FORNATs, FEOs will comply with the FORNAT contiguous airspace restriction as provided in Figure A12.3.

A12.4. Non-Local Foreign Participants. Foreign aircraft and/or aircrews launching from/recovering to Nellis AFB or Creech AFB, but not operating on the NTTR, are not scheduled through the NTTR Scheduling Process nor reflected on the GRR.

Figure A12.1. Example Consolidated FEO Memorandum.

	<p>DEPARTMENT OF THE AIR FORCE NEVADA TEST AND TRAINING RANGE (ACC) NELLIS AIR FORCE BASE, NEVADA</p>	<p><i>DD MMM YY</i></p>
<p>MEMORANDUM FOR NTTR/DO</p>		
<p>FROM: NTTR/IP</p>		
<p>SUBJECT: Consolidated Foreign Exchange Officer (FEO) Memorandum</p>		
<p>1. The following FEOs are authorized to participate in events taking place on the NTTR:</p>		
<p>2. Unit: <i>XYTES</i></p>		
<p>a. Name: <i>Last, First M.I.</i></p>		
<p>1) Rank: 2) Service #: 3) Nationality: 4) MDS: 5) Aircrew Position: <i>Pilot, Navigation, Weapon System Operator, Sensor Operator, etc.</i> 6) Clearance:</p>		
<p>b. Name: <i>Last, First M.I.</i></p>		
<p>1) Rank: 2) Service #: 3) Nationality: 4) MDS: 5) Aircrew Position: <i>Pilot, Navigation, Weapon System Operator, Sensor Operator, etc.</i> 6) Clearance:</p>		
<p>3. Unit: <i>XYAGRS</i></p>		
<p>a. Name: <i>Last, First M.I.</i></p>		
<p>1) Rank: 2) Service #: 3) Nationality: 4) MDS: 5) Aircrew Position: <i>Pilot, Navigation, Weapon System Operator, Sensor Operator, etc.</i> 6) Clearance:</p>		
<p>4. FEOs are prohibited from R-4808 without express NNSA/NFO and/or DOE approval (coordinated through the NTTR Scheduling Process). This memorandum supersedes all previous versions, same subject.</p>		
<p><i>SIGNATURE</i> <i>NAME</i> Information Protection Office</p>		
<p><i>Testing - Tactics - Training - Innovation - Integration</i></p>		

A12.5. Host Unit Scheduling Responsibilities for Foreign Aircraft, Aircrews, and Ground Participants.

A12.5.1. Activities conducted on the NTTR. Nellis AFB or Creech AFB units hosting foreign aircraft, aircrews, and/or ground participants operating on the NTTR will accomplish the following:

A12.5.1.1. Ensure hosted foreign participant requirements are provided to 57 OSS/OSOS no later than 60 days prior to the month of execution and submitted to NTTR Range Scheduling no later than 45 days prior to the month of execution.

A12.5.1.2. Annotate "FOREIGN PARTICIPANTS" and the country of origin on weekly pencils scheduling requests and submit IAW the NTTR Scheduling Process.

A12.5.1.3. Ensure "FOREIGN PARTS" have been entered into the CSE scheduling database and accurately reflected on the GRR.

A12.5.1.4. If greater than 48 hours prior to the day of scheduled execution, coordinate all foreign participant scheduling changes through NTTR Range Scheduling.

A12.5.1.5. As part of the schedule confirmation process (no earlier than three days prior to the day of scheduled execution and no later than 1200L two days prior to the day of scheduled execution), verify foreign participation with NTTR Range Scheduling.

A12.5.1.6. If within 48 hours of the day of scheduled execution, coordinate all foreign participant scheduling changes with NTTR Range Monitoring. If foreign participation is cancelled, notify NTTR Range Monitoring for removal of "FOREIGN PARTS" from the GRR.

A12.5.2. Activities conducted on other than the NTTR. Nellis AFB or Creech AFB units hosting foreign aircraft and/or aircrews launching from/recovering to Nellis AFB or Creech AFB, but not operating on the NTTR, will accomplish the following:

A12.5.2.1. Ensure hosted foreign participation requirements are provided to 57 OSS/OSOS no later than 60 days prior to the month of execution. 57 OSS/OSOS will inform NTTR Range Scheduling of the foreign participation no later than 45 days prior to the month of execution.

A12.5.2.2. Ensure foreign participation information is entered into the PEX system, as required.

A12.5.2.3. If within 48-hours of the day of scheduled execution, coordinate all foreign participation scheduling changes with the 57 WG SOF.

Attachment 13

LOW OBSERVABLE (LO) DECONFLICTION

A13.1. Throughout the NTTR BMP and Scheduling Process, host units must be prepared to coordinate shifts to desired range times to ensure deconfliction with LO activities of higher-priority. If the LO unit scheduler determines that deconfliction is required between LO aircraft and foreign participation, the necessary deconfliction will be incorporated into the daily range schedule.

A13.2. LO Unit Scheduler Responsibilities.

A13.2.1. Comply with foreign participant deconfliction requirements IAW applicable security classification guides and signature protection concept of operations (CONOP).

A13.2.2. Through the NTTR Scheduling process, schedule appropriate time buffers between foreign participants and LO operations.

A13.2.3. Foreign aircraft and/or aircrews launching from/recovering to Nellis AFB or Creech AFB, but not operating on the NTTR, are not scheduled in the CSE nor reflected on the GRR. LO unit schedulers should take appropriate measures to ensure deconfliction with foreign aircraft and/or aircrews IAW applicable security classification guides and signature protection CONOP.

A13.3. Electronic Intelligence (ELINT) Deconfliction. The coordination and deconfliction of concurrent operations by LO aircraft and radar-equipped or ELINT gathering aircraft of foreign origin and/or foreign aircrews operating similar US aircraft requires careful coordination between the host unit and the LO unit schedulers.

A13.4. NTTR LO-Foreign Scheduling Restrictions.

A13.4.1. **NTTR-LO Foreign Aircrew Test Missions.** Only foreign aircrew members who hold the appropriate security clearances will be scheduled to operate upon the NTTR as participants in LO test missions. The designated Responsible Test Organization is responsible for ensuring proper clearances.

A13.4.2. **Foreign Aircrew Scheduling Exceptions.** Foreign participants will not be scheduled to operate upon the NTTR during LO training missions, with the following exceptions:

A13.4.2.1. **B-2.** As directed by the B-2 unit scheduling representative.

A13.4.2.2. **F-22A.** Aircrews from Australia and the United Kingdom who hold the appropriate security clearances are authorized. The F-22A unit scheduling representative is responsible for ensuring proper clearances and/or authorizing exceptions.

A13.4.2.3. **F-35A.** Aircrews from Australia, Canada, Denmark, Italy, the Netherlands, Norway, and the United Kingdom who hold the appropriate security clearances are authorized. The F-35A unit scheduling representative is responsible for ensuring proper clearances.

A13.4.2.4. **RQ-170.** As directed by the RQ-170 scheduling representative.

Attachment 14

ASSIGNED FREQUENCIES

A14.1. Each agency, numbered range, and MOA is assigned a discrete tactical frequency for communications. Users should confirm frequencies prior to operations. Current frequencies are listed in the tables below:

Table A14.1. Tactical Frequencies (MHz).

Range/Function	Primary	Secondary	Tertiary
R-61	341.925		
R-62	234.25		
R-63	361.6	274.875	122.9
R-64	288.8	274.875	122.9
R-65	225.45		
R-71	335.45	288.225	
R-74	228.0	288.225	
R-75	363.9	288.225	
R-76	354.3	288.225	
R-77, ECE, ECW and TPECR	293.5	379.65	
Alamo	238.8		
Caliente	289.3	294.9	
Coyote	234.325	370.825	
Elgin	281.025	268.2	
NTTR (Spare)	357.1	255.95	
HAVE QUICK Time of Day (TOD)	369.0		

Table A14.2. Agency Frequencies (MHz).

Agency	Primary	Secondary
NATCF East (Sally)	317.525	126.65
NATCF West (Lee)	254.4	119.35
NTTR Range Monitoring (BLACKJACK)	377.8	123.55
DML	261.1	126.15
Creech AFB SOF	226.1	148.175
Creech AFB SFA	285.525	118.3
Creech Tower (KINS)	360.625	118.3
Silverbow Tower (KTNX)	257.95	124.75
NTTR Threat Systems (ROULETTE)	293.5	379.65
JICO "Juice"	231.100	

Attachment 15**GLOBAL POSITIONING SYSTEM (GPS) TESTING**

A15.1. NTTR events involving GPS interference (referred to as “GPS testing”) must be conducted while maintaining the safety of all range users. GPS testing is approved and conducted IAW CJCSM 3212.03. The requestor, NTTR SMO, DOE SMO, and the Nevada Area Frequency Coordinator (NAFC) will collaborate, as required, to ensure GPS testing is effectively deconflicted.

A15.2. Review, coordination, and approval of GPS testing normally requires direct coordination between the requestor and the GPS test provider and will proceed along IAW CJCSM 3212.03 timelines (which may require in excess of 90 days). In parallel, the requestor will pursue local coordination through the NTTR BMP as part of the overall project. Requestors must submit a GPS testing description to HQ NTTR NLT 90 days prior to the first day of execution, including:

A15.2.1. Overall GPS testing POC information.

A15.2.2. Desired GPS testing dates/times (in local date/time). The requestor must account for Coordinated Universal Time (UTC) and daylight savings time conversions.

A15.2.3. Desired transmitter locations.

A15.2.4. GPS testing “Cease Buzzer” procedures and POC information.

A15.2.5. Copies of submitted GPS testing requests.

A15.3. NLT 30 days prior to the first day of execution, requesting units must submit GPS Interference and Navigation Tool (GIANT) Reliability Prediction Model (RPM) analyses from the following altitudes: 60,000ft MSL, 40,000ft MSL, 25,000ft MSL, 15,000ft MSL, 10,000ft MSL, and 4,000ft AGL.

A15.4. To ensure safety of non-participating aircraft, specific procedures for GPS testing within Reveille North must be coordinated between the requestor, NTTR SMO, and the NAFC.

A15.5. Written approval must be provided by the ROO prior to the conduct of GPS testing on the NTTR. Approval includes the date(s), time(s), and transmitter location(s) as well as any necessary amplifying information. Any necessary deconfliction with other operations (DOE, NNSA, etc.) will be managed through the NTTR BMP.

A15.6. Requesting units will ensure all GPS activity NOTAMs are filed and published through the FAA, including those associated with classified GPS testing.

A15.7. In addition CJCSM 3212.03 monitoring requirements, the GPS testing unit must monitor the range safety network (Fox 4) during GPS testing execution.

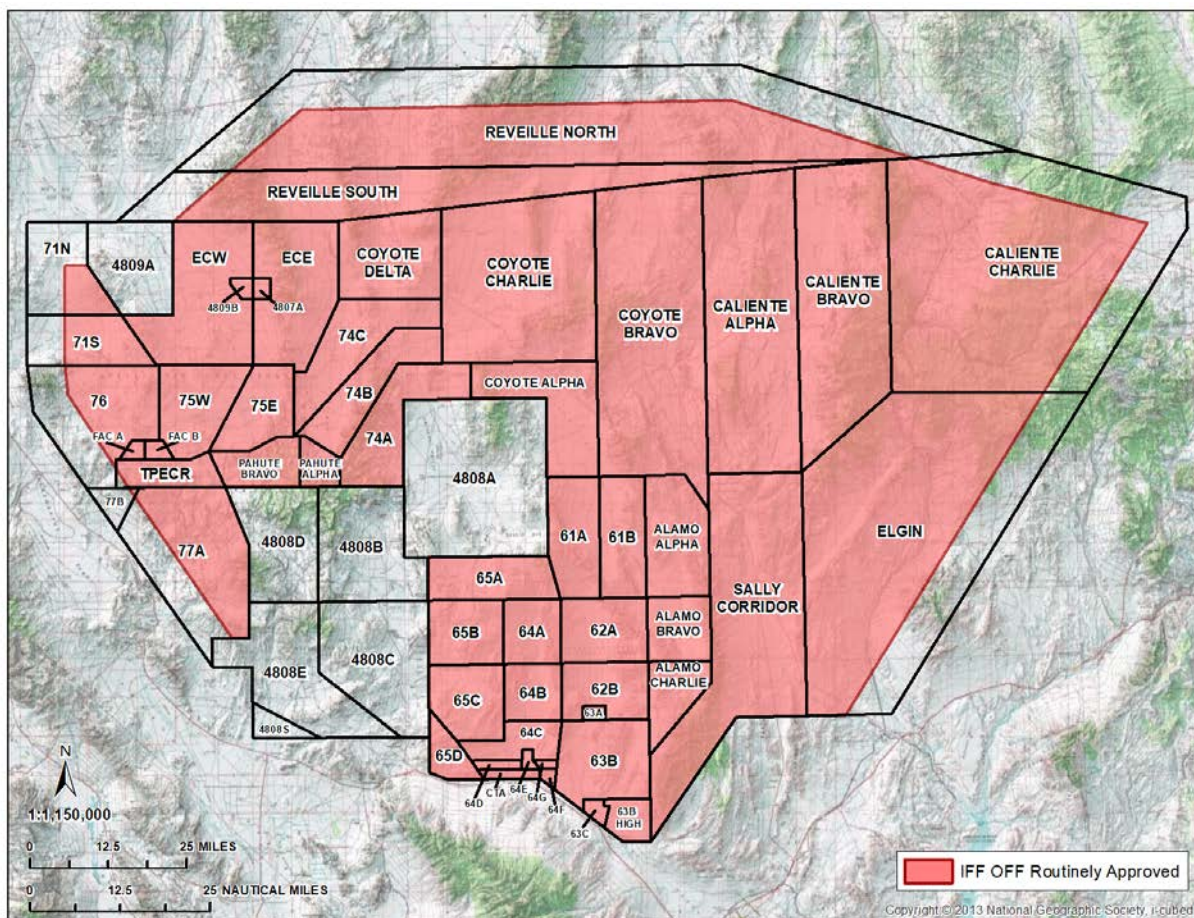
Attachment 16

TRANSPONDER OPERATIONS

A16.1. Unless specifically authorized and scheduled, all aircraft will have an operational identification friend or foe (IFF) system, and will squawk Mode C and a tactical Mode 3 (non 1200 squawk) on all missions on range. Normally, only military aircraft operating in support of USAFWS, 64th Aggressor Squadron and 53d Test and Evaluation Group may conduct IFF OFF operations.

A16.2. IFF OFF operations, when authorized through the NTTR Scheduling Process, are permitted within the boundaries of Elgin, Caliente, Coyote, Reveille, R-4806, R-4807, and portions of R-4809. Use of these areas must also include a NTTR boundary buffer as follows: a 3NM northern buffer, a 5NM eastern buffer, and a 5NM western buffer where applicable. The Coyote northern buffer would not apply when the user has also scheduled Reveille. Aircraft will not operate IFF OFF in these buffer zones. IFF OFF missions in R-4808 and R-4809A are prohibited without specific approval of NNSS/NFO and/or DOE through the NTTR Scheduling Process.

Figure A16.1. NTTR IFF OFF Area.



Attachment 17**LIGHTS-OUT FLYING OPERATIONS**

A17.1. MARSA operations apply for all participating aircraft conducting covert/lights-out operations on the NTTR.

A17.1.1. Covert/Lights-out operations are allowed in R4806; R4807; ECW; and above FL180 in Reveille, Coyote, Caliente, and Elgin, without any coordination.

A17.1.2. Covert/Lights-out operations in R-4808 and R4809A are prohibited without specific approval of NNSA/NFO and/or DOE through the NTTR Scheduling Process.

A17.1.3. Covert/Lights-out operations between the hours of sunset and sunrise below FL180 in the Reveille, Coyote, Caliente, and Elgin MOAs are approved if the mission is scheduled at least 96 hours in advance. Missions scheduled within 96 hours may be approved covert/lights-out on a case-by-case basis. Missions scheduled inside 48 hours will not be approved covert/lights out.

A17.1.3.1. Lights-out will appear in CSE/GRR if covert/lights-out are approved below FL180 in the Reveille, Coyote, Caliente, and Elgin MOAs.

A17.1.3.2. NTTR Range Scheduling will send known covert/lights-out missions to ZLA and ZLC ARTCC's Military Operations desk on Thursday for the following week.

A17.1.3.3. NTTR Range Scheduling will send changes to ZLA and ZLC ARTCC's Military Operations desk up to 96 hours prior to the scheduled mission.

A17.1.3.4. NTTR Range Monitoring will process the appropriate ZLC NOTAMs if the mission is scheduled at least 96 hours in advance. NTTR Range Monitoring will notify the ZLC ARTCC Military Operations desk as appropriate of changes and cancellations affecting Lights-Out times.

A17.1.4. Covert/Lights-Out operations will be terminated immediately if advised by NATCF, NTTR Range Monitoring, DML, or if the aircrew observes any of the following:

A17.1.4.1. Conflicting traffic.

A17.1.4.2. A participating aircraft spills out of the designated airspace.

A17.1.4.3. Loss of positive control (i.e., NATCF, NTTR Range Monitoring, or DML radar and/or other associated monitor equipment outage).

A17.1.4.4. Loss of communications (i.e., aircraft, NATCF, or DML radio outage).

Attachment 18**LASER AND DEW OPERATIONS**

A18.1. Contact NTTR/DO to coordinate use of laser or DEW systems on the NTTR; NTTR/DO will in-turn coordinate with NTTR/SE. NTTR/SE has the responsibility to evaluate and monitor the use of laser and DEW systems on the NTTR and to enforce control of associated hazards. A list of approved laser and DEW systems and targets on the NTTR is available on the NTTR Mission Planning website. Reference the NTTR Mission Planning website for a current list of laser certifications.

A18.2. Personnel who may be subjected to laser or DEW radiation will accomplish the appropriate safety training and wear approved/certified protective equipment (including LEP with the appropriate optical density/filters) IAW command directives and NTTR safety policy.

A18.2.1. Personnel operating in enclosures where no direct or reflected laser energy can enter (for example, inside a building with windows covered) are exempt from the requirement to wear LEP.

A18.2.2. During laser operations, ground personnel will not use optics such as binoculars, viewfinder type cameras with telephoto lenses, optical sighting equipment, or telescopes unless the device incorporates appropriate optical density/filters for the laser in use.

A18.3. The NTTR Mission Planning website identifies which range targets may be lased. Targets will be inspected and approved by the NTTR/SE, IAW AFMAN 13-212 and AFI 48-139, *Laser and Optical Radiation Protection Program*.

A18.4. Environmental factors (e.g., standing water, ice, snow, etc.) or other reflective objects within 200 meters of a laser target may create a reflectivity hazard which will preclude the use of “combat” lasers while the condition is present. The flight lead is ultimately responsible for this determination and for the decision to operate a laser or not. A dry pass to determine target area conditions may be required.

A18.5. Laser/DEW systems approved for training operations. Requests will be accomplished through the NTTR Scheduling Process and must include (as applicable):

A18.5.1. Common and/or Military nomenclature for the laser system (i.e. AN/AAS-52 MTS-A, AN/AAQ-33 Sniper, etc.);

A18.5.2. Mode of Operation (Combat or Training);

A18.5.4. Range(s) and target(s) requested for laser operations.

A18.5.4. Minimum and maximum distance from laser to desire target(s);

A18.5.5. Minimum and maximum lasing altitudes;

A18.6. Laser/DEW systems for tests and demonstrations. Requests will be accomplished through the NTTR/DOXP office and must include (as applicable):

A18.6.1. Common and/or Military nomenclature for the laser system (i.e. AN/AAS-52 MTS-A, AN/AAQ-33 Sniper, etc.);

A18.6.2. Mode of Operation (Combat or Training);

A18.6.3. Platform Type (handheld, weapons mounted, vehicle mounted, fixed wing, or rotary wing)

A18.6.4. Laser System Parameters:

A18.6.4.1. All laser wavelength(s);

A18.6.4.2. Beam profile (i.e. Gaussian, Top hat, etc.);

A18.6.4.3. Beam diameter at 1/e (both axis, if applicable);

A18.6.4.4. Beam divergence (full angle at 1/e – both axis, if applicable);

A18.6.4.5. Laser Type (Continuous Wave or Pulsed) and maximum beam irradiance (Watts/cm²) for Continuous Wave systems or maximum beam radiant exposure (Joules/cm²) for Pulsed systems;

A18.6.5. Range(s) and target(s) requested for laser operations.

A18.6.6. Minimum and maximum distance from laser to desire target(s);

A18.6.7. Minimum and maximum lasing altitudes.

A18.7. Airborne Laser Employment:

A18.7.1. Aircrews will only lase targets that have been specifically approved for laser operations IAW with the NTTR Laser Range Certification issued by the 711 HPW (refer to the NTTR Mission Planning website). Requests for exceptions must be submitted to NTTR/DO, who will coordinate with NTTR/SE.

A18.7.2. Aircrews will not activate the laser until the target is positively identified.

A18.7.3. Aircrews will not scan from one target to another with the laser.

A18.7.4. Aircrews will not fire the laser above the horizon unless authorization has been granted by the DoD Laser Clearing House and NTTR/SE.

A18.7.5. Line-of-Sight to the approved target must be maintained during lasing. Lasing may be initiated from any altitude and slant range that precludes laser energy from terminating outside of a laser certified subrange. NTTR approved weapons profiles are designed to take laser Flight Limitation Profile Curves (FLPCs) into account. Specific FLPCs may be obtained from NTTR Mission Planning website.

A18.7.6. Air-to-Air laser employment is restricted to the guidance detailed in AFI 11-214.

A18.8. Ground Laser Employment:

A18.8.1. Personnel will only lase targets that have been specifically approved for laser operations IAW with the NTTR Laser Range Certification issued by the 711 HPW (refer to the NTTR Mission Planning website). Requests for exceptions must be submitted to NTTR/DO, who will coordinate with NTTR/SE.

A18.8.2. Personnel will not activate the laser until the target is positively identified.

A18.8.3. Personnel will not scan from one target to another with the laser.

A18.8.4. Personnel will not employ lasers from below the target elevation nor above the horizon unless authorization has been granted by the DoD Laser Clearing House and NTTR/SE.

A18.8.5. Lasing may be initiated from any NTTR OP or laser certified subrange (except R-61A/B). Line of site to the approved target must be maintained during lasing.

Attachment 19

FIRE, CHAFF, AND FLARES

A19.1. High-fire potential normally exists from 1 May through 31 October, yearly. Ordnance delivery and range operations may be negatively impacted by fire code restrictions. NTTR Range Monitoring will disseminate daily fire codes during the high-fire potential months. Fire codes will be depicted on the NTTR Mission Planning websites and the GRR.

A19.2. Fire Codes.

A19.2.1. Low. Fires that are easily controlled with hand tools and mechanical equipment. Fire spread is slow.

A19.2.2. Moderate. Indicates the upper limit of fires which can be controlled with hand tools because the fire is becoming too hot for crews to work safely. Fire spread is increasing.

A19.2.3. High. The prospects of controlling a fire with hand tools and mechanical equipment are poor because working safety is diminished by an intense heat, and/or the fire spreads more quickly than the suppression capability of the fire-fighting equipment. Control lines may have to be placed well beyond the fire, and air tankers with retardant will probably be needed.

A19.2.4. Very High. The heat load on people within 30ft of the fire is dangerously high. Control lines must be placed well ahead of the fire. Retardant efforts may be ineffective due to the intensity of the fire. Fire spread is very fast.

A19.2.5. Extreme. Fires are very difficult to control. Extreme fire behavior is possible. There is significant danger for the firefighters and extreme caution must be taken.

A19.3. NTTR Range Monitoring will check daily with BLM for fire codes during the high-fire potential months. NTTR Range Monitoring will disseminate daily fire codes during the high-fire potential months.

A19.4. In addition to standing restrictions, periodically, specific restrictions will be published prohibiting the use of chaff and flares. Reasons may include extreme ground fire hazards, threats to ground property, high personnel injury potential, and ATC radar interference. The ROO will establish restrictions as appropriate based on the prevailing conditions.

A19.5. Chaff Restrictions. Chaff restrictions on the NTTR vary daily due to atmospheric conditions. NTTR Range Monitoring validates by 0630L daily that the chaff restrictions have been uploaded as required.

A19.5.1. Rope chaff, explosive chaff and large-scale chaff corridor employments may require Environmental Impact Analysis. Reference the chaff authorization on the Mission

Planning website for current authorizations. For chaff employment that falls outside the scope of the current authorization, contact the NTTR SMO and Environmental offices for coordination and approval.

A19.5.2. Chaff drops that appear as corridor or extensive area seeding in Elgin and Caliente C are not authorized.

A19.5.3. Minimum altitude for helicopter chaff deployment is 100ft AGL.

A19.5.4. Refer to the GRR for additional chaff restrictions.

A19.6. Flare Restrictions.

A19.6.1. Minimum flare release altitude for self-protection flares is that altitude which allows the flare to burnout prior to 100ft AGL.

A19.6.2. Minimum release altitude for illumination flares, such as photo-flash and parachute flares is that altitude which allows the flare to burn out prior to 500ft AGL.

A19.6.3. Flare release altitude over manned sites, ground parties, or within 3NM of forested areas is 5,000ft AGL, provided minimum flare release altitude has been achieved.

A19.6.4. Flare release altitude in the MOAs and Pahute A/B is 5,000ft AGL and above, provided minimum flare release altitude has been achieved.

A19.6.5. During fire codes “very high” or “extreme,” no flares of any type will be permitted on the NTTR below 5,000ft AGL.

Figure A19.1. NTTR Flare Restriction Areas.

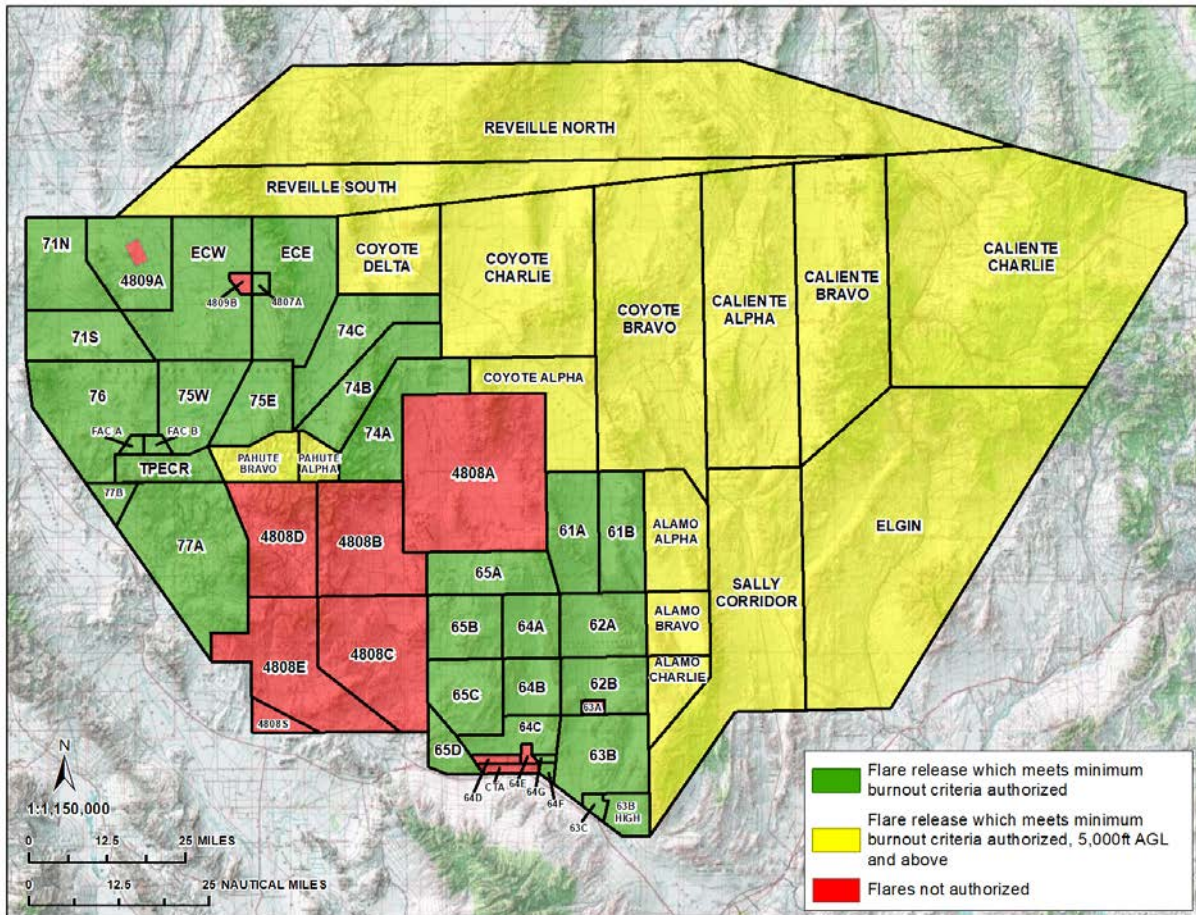


Table A19.2. NTTR Authorized Flares.

LUU-1	M206	MJU-7/B	MJU-23/B	MJU-52	No. 4 Mk 2
LUU-2	M206 (T1)	MJU-7 (T1)/B	MJU-27	MJU-64	No. 118 Mk 3 Type 1
LUU-5	M211	MJU-7 Lot MBT	MJU-32/B	MJU-71/B	81mm Illumination
LUU 19	M212	MJU-8	MJU-39	MK-24	
KC-001	MJU-2	MJU-10	MJU-40	MK-46	
Gen X	MJU-2/B	MJU-10B	MJU-46	MK-50	
M49	MJU-7	MJU-22	MJU-47	SD-206	
M127	MJU-7A/B	MJU-23	MJU-50	SM-875	

A19.6.6. Refer to the GRR for additional flare restrictions.

A19.7. Wildland Fire Response. In the event of fire resulting from natural causes or as the result of a major disaster on the range, an emergency response force may respond. This depends on the specific situation and jurisdiction of the response force. Refer to the Installation Emergency Management Plan (PLAN 10-2) for further details under Tab F, Wild Land Fire/Forest Fire

Checklist. Report wildland fires to Nellis Command Post at (702) 652-2446. Provide the following information in the report:

A19.7.1. General Location/Description and/or Range Number.

A19.7.2. GPS Point. Specify Latitude/Longitude or Universal Transverse Mercator (UTM), if possible.

A19.7.3. Size of Fire and Direction of Fire movement.

A19.7.4. Structures/Assets potentially in danger.

A19.7.5. Cause of Fire (if known).

Attachment 20**NTTR JOINT DATA NETWORK (JDN)**

A20.1. NTTR JDN. The NTTR JDN is intended to satisfy the range's robust and dynamic information exchange requirements (IERS) during all NTTR activities, including day-to-day operations, LFEs, and unique test and training events. Access to the NTTR JDN is coordinated through the NTTR BMP or the NTTR Scheduling Process, as appropriate.

A20.2. NTTR JDN Cell. The NTTR JDN Cell (JDNC) manages the NTTR JDN and is responsible for the integration of all sub-networks, including the Multi-Tactical Data Link Network (MTN), Defense Research and Engineering Network, and the Joint Technical Enabling Network.

A20.3. JDNC Roles and Responsibilities:

A20.3.1. In coordination with the relevant NTTR agencies, plan, program, and budget for JDN infrastructure; maintain and sustain assigned NTTR JDN equipment; maintain configuration control over assigned NTTR JDN equipment.

A20.3.2. Collect NTTR-user IERS in support of network design.

A20.3.3. Coordinate with the Network Design Facility (NDF).

A20.3.4. Obtain FAA Link-16 Time Slot Duty Factor (TSDF) approvals and waivers.

A20.3.5. In support of JDN operations, submit SARs to Defense Information Systems Agency (DISA) for the purpose of obtaining Satellite Access Authorizations (SAAs).

A20.3.6. Author and publish NTTR Operational Tasking Links (OPTASKLINKs) and associated USAF Initialization Data Loads (IDLs), and updates, as required. NTTR OPTASKLINKs may be found on the NTTR Share Point.

A20.3.7. Provide the NTTR JDN Joint Interface Control Officer (JICO) (unless specifically delegated via the OPTASKLINK) to actively manage the JDN and Common Operational Picture (COP).

A20.3.8. Provide the COP to the Shadow Air Operations Center-Nellis (ShOC-N) for display and/or further distribution.

A20.3.9. Log weekly TSDF on the US Army Forces Command (FORSCOM) Pulse Deconfliction Server.

A20.4. NTTR JDN User Roles and Responsibilities:

- A20.4.1. Provide recommendations for desired JDN infrastructure changes.
- A20.4.2. Provide IERs in support of network design.
- A20.4.3. Identify unique security concerns associated with mission-specific data shared on the JDN.
- A20.4.4. Identify JDN SAR/SAA requirements.
- A20.4.5. Recommend desired network design changes to JDNC.
- A20.4.6. Comply with published OPTASKLINKs.
- A20.4.7. Recommend desired OPTASKLINK changes to JDNC.
- A20.4.8. Assign an NTTR JDN Unit Link Manager (ULM) to actively monitor the JDN and COP and coordinate with the JICO during mission execution.
- A20.4.9. NTTR users who plan and execute data link networks outside of the NTTR JDN, and without an NTTR JICO assigned, must provide the JDNC with network identifier, crypto short title and network time no later than 10 duty days before execution in order to avoid network fratricide.
- A20.4.10. For users outside ShOC-N, coordinate directly with ShOC-N for access to the COP.

Attachment 21

IMAGERY PROCESSES AND RESTRICTIONS

A21.1. Imagery. Imagery of the NTTR and/or R-4808 includes all images collected, displayed, disseminated, or recorded, via any medium (digital/film/other), regardless of equipment category, of the NTTR and/or R-4808, range equipment, or operations. Video imagery includes all compilations of moving images. The following guidance applies to aerial imagery (imagery generated by equipment aboard an aircraft) and ground imagery (imagery generated by equipment on the ground). Space-based (commonly referred to as “overhead imagery”) and SIGINT collections on the NTTR and R-4808 must be coordinated directly with USAF/A2.

A21.1.1. NTTR users who wish to image on the NTTR and/or R-4808 will coordinate their desires through NTTR Range Projects to obtain approval. Approval must be in place prior to scheduling range time through the NTTR Scheduling Process. Range restrictions regarding imagery are annotated in CSE, under “Reports,” “Block Restrictions.” Ultimately, the aircraft commander is responsible for adherence to imagery standards by individuals operating aboard that aircraft. Public release of any images must be coordinated by the requestor through NTTR/IP to obtain approval.

A21.1.2. Imaging of R-4808 requires NNSS/NFO and/or DOE approval.

A21.1.3. Imaging of R-4809A is normally limited to USAF/A2-assigned, Nellis AFB-based aircraft.

A21.1.4. Imaging of R-4809A by USAF/A2-assigned, Creech AFB-based RPAs must be coordinated by the requestor through NTTR Range Projects to obtain approval.

A21.1.5. Temporary Duty aircrews (excluding USAF Weapons School students) and visiting aircraft are not authorized to image in R-4809A without coordination by the requestor through NTTR Range Projects to obtain approval. Visiting RPAs and/or non-Creech assigned RPA crews are not authorized to image in R-4809A.

A21.1.6. RPA imaging of threats must be coordinated by the requestor through NTTR Range Projects to obtain approval.

A21.2. NTTR/SD Coordination. All imaging on range requires coordination with NTTR/SD through the NTTR BMP or NTTR Scheduling Process (as appropriate). Before introduction on the NTTR, NTTR/SD will initiate a review of the technical specifications of the integrated military equipment with the relevant sponsoring agencies. Use is approved in perpetuity, except as limited by the daily restrictions. Users may contact NTTR/SD to determine any preexisting approvals for use on the NTTR.

A21.2.1. Sensitive Equipment Passes. The management of controlled sensitive equipment is articulated in NTTR OI 31-101. In summary, users must obtain a sensitive equipment pass prior to imaging on NTTR, R-4808, or the NNSS/SFO Permitted Premises. Sensitive

equipment passes will be issued only for a period of time commensurate with the associated activity, although annual passes may be issued to local units with a recurring requirement. A local host unit, experienced in local imagery procedures, will be identified for each sensitive equipment pass issued. Approval must be in place prior to scheduling range time through the NTTR Scheduling Process.

A21.2.1.1. NTTR Sensitive Equipment Passes. Prior to issue of an NTTR sensitive equipment pass, a complete inventory of intended imaging equipment is required. All imaging equipment will be itemized on the NTTR sensitive equipment listing. This equipment listing will include name, brand, type, resolution, frame rate, aperture, zoom capability, etc. NTTR/SD will approve and issue NTTR sensitive equipment passes.

A21.2.1.2. R-4808 Sensitive Equipment Passes. Prior to issue of a R-4808 sensitive equipment pass, a complete inventory of intended imaging equipment is required. All imaging equipment will be itemized on the NTTR sensitive equipment listing. This equipment listing will include name, brand, type, resolution, frame rate, aperture, zoom capability, etc. NTTR/SD will coordinate with the relevant sponsoring agency(ies) to establish approval to issue R-4808 sensitive equipment passes.

A21.2.1.3. NNSS/SFO Permitted Premises Equipment Passes. Prior to issue of an NNSS/SFO sensitive equipment pass, a complete inventory of intended imaging equipment is required. All imaging equipment will be itemized by NNSS/SFO. This equipment listing will include name, brand, type, resolution, frame rate, aperture, zoom capability, etc. NNSS/SFO will coordinate with the relevant sponsoring agency(ies) to establish approval to issue NNSS/SFO Permitted Premises sensitive equipment passes.

A21.3. Integrated Military Imaging Equipment. Integrated military imaging equipment that operates as an integrated sensor of a weapon system to record and/or transmit imagery. This equipment will operate IAW individual MDS security guidelines and NTTR range restrictions regarding imagery as annotated in CSE.

A21.4. Ancillary Imaging Equipment. Approved ancillary imaging equipment includes: government owned equipment (non-weapons system), government or commercial media equipment, and government sponsored equipment. Ancillary imaging equipment may be used for US-only purposes with limited releasability to foreign nationals.

A21.5. RPA Imaging. RPAs and associated support systems must meet specific requirements to conduct imaging (still and FMV) on the NTTR.

A21.5.1. RPA Ground Control Stations (GCS) and associated data-storage and processing devices must operate and be controlled at the commensurate classification level of the imagery.

A21.5.2. All personnel operating within the GCS, or with access to any relevant imagery, must be cleared commensurate to the classified level of the GCS.

A21.5.3. Classified feeds will not be disseminated outside of the cleared GCS unless specifically coordinated with the relevant sponsoring agencies.

A21.5.4. When imaging R-4809A and/or threats, the RPA's Asynchronous Transfer Mode (ATM) pathway will be encrypted using, at a minimum, Triple Data Encryption Standard (TDES) to encrypt links and Operational Read Files (ORF) will be established to control access.

A21.6. Aerial Survey. Aerial surveys of BLM/USFWS land conducted from NTTR-associated MOA airspaces present a unique challenge to operations on the NTTR as a whole. Aerial surveys, when identified, will be reflected on the daily range schedule. Prior to survey execution, NTTR/DO will provide suggested operational guidelines to the survey agency to include:

Table A21.1. Aerial Survey Guidelines.

- | |
|--|
| <ul style="list-style-type: none"> • Survey company name • Event name • Scheduled dates and times • Survey aircraft type, N-number, and callsign (if applicable) • Airspace to be used • Intended collection areas (collection-area maps and tracks will be included, if available) • Positive control measures • Procedures for inadvertent overflight • Procedures for inadvertent imaging of restricted areas (including imagery review) • Suggested buffers • Relevant radio frequencies • NTTR-assigned project manager contact information |
|--|

A21.7. FMV. All FMV imaging conducted on the NTTR and/or R-4808 must be specifically coordinated and approved through the NTTR Range Projects. The requesting unit will submit a "NTTR FMV Questionnaire" (Figure A21.2) in conjunction with the PID (when utilized) IAW NTTR BMP timelines. When the PID is not utilized, the questionnaire must be submitted at the NTTR Range War meeting (approximately 30 days prior to the month of execution). Any questions that are not answered at the time of submittal may delay or preclude approval.

Table A21.2. NTTR FMV Questionnaire.

- Range user requesting FMV approval?
- Event name and desired dates and times (if known)?
- Event objective? For test events, provide test plan.
- Intended collection target?
- Will the aircraft use FMV enroute to the target?
- Are foreign nationals involved?
- Local host unit(s) (if any)?
- Has the requesting user operated on the NTTR and/or NNSS before? When? Why?
- Sensor platform?
- What are the desired platform operating and FMV sensor collection altitude(s)?
- Call sign?
- IFF code?
- FMV equipment to be used?
- Sensor type (optical, infra-red, electromagnetic spectrum, LIDAR, radiometer, etc.)?
- Can the sensor be turned on and off during the mission?
- Sensor field of view?
- Sensor field of regard?
- Sensor resolution?
- Sensor range?
- Will experimental equipment/software be used?
- What will be the disposition of test sensor equipment after the test is complete?
- Where does the data flow after it is collected?
- Is it a live feed or will it be recorded/processed first?
- Is the data downlinked to a ground station or retained on-board?
- If necessary, can the data be edited prior to distribution or storage?
- What is the final storage destination of the data?
- At what security level will the data be stored?
- Will stored data be retained in it be encrypted format?
- Will stored data be treated as “US Only?”
- Who will have access to collected data?
- How long will the data be retained after the event?

A21.8. Imagery Review. Any imagery of the NTTR and/or R-4808, range equipment, or range operations taken by any NTTR user may require review prior to release and dissemination. Users will provide access to the media in question, and related storage devices, upon request. Review will be accomplished by cognizant security officials from the organization requiring the review (USAF, DOE, NNSS/NFO, NNSS/SFO, etc.). If requested, NTTR/IP may conduct the review, if review resources are available.

A21.8.1. Review will normally take place at the HQ NTTR building. Alternate locations may be used, if required, at the direction of NTTR/IP. The user will deliver the imagery in question, related storage devices, and any required cabling (RCA™, High Definition Media Interface (HDMI), etc.) necessary to display the images, to the review location as soon as possible.

A21.8.2. In the event that imagery of concern is not available in the Nellis AFB area (i.e., an off-station aircraft has already returned to its home base), NTTR/IP or other cognizant security official will contact the parent unit with guidance for securing the imagery until such time as a review can be accomplished.

A21.8.3. Inadvertent/unauthorized imaging of the NTTR must be immediately reported to NTTR/IP. NTTR/IP will coordinate with the appropriate agencies to take appropriate action.

Attachment 22

AIR COMBAT MANUEVERING INSTRUMENTATION

A22.1. NTTR Air Combat Training System (NACTS). NACTS provides high-fidelity, real-time monitoring of aircraft position, flight dynamics, weapon status, and limited firing parameters. By using computerized displays and direct radio communication, qualified ground personnel can monitor missions in real-time and record all flight data and communications in support of the mission debrief. NACTS provides the same capability for up to 100 aircraft for air-to-air, air-to-ground, and ground-to-air weapons employment. NACTS consists of:

A22.1.1. Airborne Instrumentation (AI) Pods. The P5 Combat Training System (CTS) AI pod is currently employed by NTTR.

A22.1.1.1. AI pods are constructed using an AIM-9 Sidewinder body (minus canards and fins). Pods incorporate a global positioning satellite receiver to provide accurate time, space, and position information (TSPI).

A22.1.1.2. AI pods may be requested by Nellis AFB-based military aircraft operating away from the NTTR. The process for requesting P5 pods is the requester must submit a Pod only Program Introduction Document (PID) through DOXP office six weeks prior to the requested date. Availability is based on projected NTTR pod requirements under the J-Tech contract. AI Pods are assigned through ACC to NTTR to support J-Tech contract requirements and are maintained by contractors. Each MDS must have a “cleared-to-fly” pod certification letter, for each airframe, before use.

A22.1.2. AI pod data is collected via P5 Remote Range Units (RRUs) and is transmitted to Nellis AFB for processing.

A22.1.3. Processed AI pod data is converted into a usable display and debriefing formats via the P5 Live Monitor System (LMS).

A22.1.4. ICADS is a Windows, PC-based aircrew debriefing system and is located at several flying units on Nellis AFB. ICADS provides enhanced visual and debriefing formats that can be tailored for different debrief styles by aircrew members.

A22.2. NACTS Range Training Officer (RTO). Units using NACTS may appoint a qualified RTO (IAW unit-established standards) for each mission. The RTO acts as the primary interface between NACTS and the flight. As such, the RTO must be familiar with both NACTS operations and unit training objectives. RTOs will not act as a Range Safety Officer or Range Control Officer.

A22.2.1. RTO uses the NACTS display and available communication systems to provide air combat maneuvering (ACM) support requested by the flight lead, such as real-time flight data, system dropouts, and rejoin information.

A22.2.2. The presence of an RTO does not diminish the authority or responsibilities of the airborne flight lead or primary instructor. Aircrews are responsible for accomplishing the mission, adhering to training rules, and maintaining flight safety.

A22.2.3. Normally, the flight lead or designated representative will brief the RTO on mission objectives before the flight and will provide mission data to the RTO not less than 30 minutes before range time. In the absence of the RTO, the flight lead will pass this information to the Display and Debriefing Subsystem technician. The flight lead will pass tail numbers, AI pod numbers, and armament station to the technicians at least 15 minutes prior to range time start.

Attachment 23

RESOURCE MANAGEMENT

A23.2. NTTR Resource Managers utilize the CSE as a common system to fully integrate and manage range scheduling, business management processes and resource management processes in order to meet customer needs, prioritize decision-making, and forecast requirements.

A23.3. All units must submit their NTTR resource support requirements accordingly through the NTTR Scheduling and BMP processes.

A23.4. The NTTR Resource Management Adjudication Process is identical to the NTTR Range Scheduling Adjudication Process and provides a standardized framework for thorough evaluation and administration of range user resource requirements for all air and ground activities conducted on the range whenever a resource conflict exists.

A23.5. The NTTR Range Resource Manager is responsible for the initial administration of the resource management adjudication process and is the first step for resolving resource conflicts.

A23.6. The NTTR Resource Management timeline is organized into three progressive phases: planning, processing, and execution.

A23.6.1. The NTTR resource management planning phase is a collaborative and integrated undertaking that is led by the NTTR Range Resource Manager. The NTTR resource management planning phase provides a method for consolidating long-term NTTR resource issues and requirements from all range users. The planning phase ranges from 12 months to 90 days prior to the month of execution.

A23.6.2. The NTTR resource management processing phase translates long-term requirements into an executable support schedule.

A23.6.2.1. The NTTR resource management processing phase begins once the initial set of mission requirements are reflected on the shell. NTTR Range Resource Manager will collaborate with NTTR/RSO and NTTR contractor leadership to identify proposed NTTR resource support windows based on range user requirements. The NTTR Range Resource Manager will annotate proposed support windows on the margins of the shell and release the shell to 57 OSS/OSO no later than 60 days prior to the month of execution.

A23.6.2.2. Once 57 OSS/OSO receives the shell, every attempt will be made to collectively submit Nellis, Creech, and other ACC range requirements within the proposed NTTR resource support windows during the 57 WG Range Integration meeting.

A23.6.2.3. Once Nellis, Creech, and other ACC range requirements are reflected on the spreadsheet, the NTTR Range Resource Manager will identify NTTR resource

support shortfalls and begin the resource adjudication process for all user resource requirements that are outside of the proposed NTTR resource support windows.

A23.6.2.4. When all NTTR range users and associated project managers have adjusted the spreadsheets and coordinated individual range requirements through the NTTR Range War meeting, the NTTR Range Resource Manager will continue to adjudicate all range user resource requirement shortfalls and attempt to resolve potential resource shortfalls prior to the NTTR Pencil meeting.

A23.6.2.5. The NTTR Range Resource Manager will annotate actual range resource support windows on margins of the final version of the post-range war spreadsheets and distribute to all range users immediately following the NTTR Range War meeting.

A23.6.3. NTTR Resource Management meeting (21-day). The NTTR Resource Management meeting is hosted by NTTR Range Resource Manager and conducted in the HQ NTTR building approximately three weeks prior to the week of execution at 0800L each Tuesday. The purpose of the Resource Management meeting is for all NTTR resource owners, associated project managers to conduct a three week breakdown of upcoming NTTR range user resource requirements and take necessary actions to provide NTTR range resource support for all NTTR range user requirements to the maximum extent possible. Select NTTR range users may attend when necessary.