UNITED STATES MARINE CORPS
Marine Corps Base, Camp Lejeune

Range and Training Regulations

(BO P3570.1A)

Standing Operating Procedures
For
Range Control

Range Control Division
Training and Operations
Marine Corps Base
PSC Box 2004
Camp Lejeune, North Carolina 28542-0004

UNITED STATES MARINE CORPS
MARINE CORPS BASE
PSC BOX 20004
CAMP LEJEUNE. NORTH CAROLINA 28542-0004

BO P3570.1A
ROD/BRCO

APR 29 2003

BASE ORDER P3570.1A

From: Commanding General
To: Distribution List

Subj: STANDING OPERATING PROCEDURES FOR RANGE CONTROL OPERATIONS (SHORT TITLE; RANGE CONTROL SOP)

Ref: (a) MCO P3570.1A

Encl: (1) LOCATOR SHEET

1. Situation. To publish a directive covering the requirements, instructions, and procedures governing the use of training facilities, ranges, air and ground maneuver areas and waters within and adjacent to Marine Corps Base, Camp Lejeune under the jurisdiction of the Commanding General.

2. Cancellation. BO P3570.1 dtd 2 Jun 1994

3. Mission.

a. Commander's Intent and Concept of Operations

(1) Commander's Intent

(a) The intent of the Range Control SOP is to provide a document for using units with information and operating procedures for ranges, training areas, and training facilities aboard Camp Lejeune.

(2) Concept of Operations

b. Subordinate Element Missions

(1) Organizational Commanders training aboard Camp Lejeune are encouraged to submit recommendations, concerning improvements or changes to improve training, to the Commanding General (Assistant Chief of Staff, Training and Operations (AC/S, T&O) through the T&O Web site or through written communications.

c. Coordinating Instructions

(1) In the event the instructions contained in this document conflict with those issued by higher authority, the higher authority shall take precedence. The Commanding General will be notified of the conflict or question of interpretation.

(2) Punitive Effect. A violation of this manual may be punishable in accordance with the Uniform Code of Military Justice for military personnel and may be the basis for appropriate disciplinary procedures with respect to civilian employees.

4. Administration and Logistics

a. Applicability. This manual is applicable to all commands, organizations, units and activities authorized use of the ranges, training areas, and airspace controlled by the Commanding General, Marine Corps Base, Camp Lejeune.

b. Concurrence. This Manual has been coordinated with and concurred by the Commander, United States Marine Corps Forces Atlantic; the Commanding Generals', II Marine Expeditionary Force, 2d Marine Division, 2d Force Service Support Group, 2d Marine Aircraft Wing, 4th Marine Expeditionary Brigade and II MEF Augmentation Command Element (MACE), and units assigned to Training and Education Command, Quantico Va.

5. Command and Signal

a. Signal. Reviewed and approved this date.

b. Command. DISTRIBUTION: A-1 plus.

A. J. KARLE, Jr.
Chief of Staff

OPERATIONS (SHORT TITLE: RANGE CONTROL SOP)

LOCATOR SHEET

LOCATION:

_____

(Indicate the location(s) of the copy(ies) of this Manual.

ENCLOSURE (1)

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of Person Incorporated Change

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CHAPTER 1

GENERAL INSTRUCTIONS

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1000. PURPOSE AND SCOPE.

1. This Standard Operating Procedure (SOP) prescribes the regulations and general precautions to be taken in the firing or other use of live ammunition, simunitions, non-lethal weapons training devices, energy producing weapons/equipment, pyrotechnics and explosives; also the use of live fire ranges, mortar positions, gun positions, training/maneuver areas, airspace, tactical and administrative landing and drop zones, waterways, beaches, and other training facilities aboard Marine Corps Base, Camp Lejeune, North Carolina.

2. The primary purpose of this manual is to maximize safe and realistic training opportunities. Nothing contained in these regulations will be construed as permitting live fire that endangers lives or property and equipment.

3. The safety regulations, as prescribed by this order and the current MCO P3570.1_ are applicable to firing ammunition for training and target practice. Where conflicts occur with instructions contained in Field and Technical Manuals, Marine Corps Manuals and unit standard operating procedures, the provisions of the current MCO P3570.1_ will take precedence.

1001. SAFETY/RISK MANAGEMENT.

1. Safety is the responsibility of every individual and the Commanders, at all times, and is a key factor in successful training. Safety and operations must intertwine so that risk management and safety are a part of the planning and execution of all missions, exercises, and daily evolutions. The key to safe training is the understanding that each and every individual regardless of rank is a safety manager. Any individual who observes an unsafe condition should report this immediately to the chain of command so that the activity in question, be it a training event or any other activity, may be halted until the unsafe condition has been corrected. Anyone can call a “cease-fire” if they observe an unsafe act.

1002. DEVIATIONS/WAIVERS.

1. Requests for deviations/waivers of this order or the current MCO P3570.1_ may be granted based on critical mission requirements.

2. Requests for deviations/waivers will be submitted to the Commanding General, MCB Camp Lejeune, Assistant Chief of Staff Training and Operations (AC/S T&O) via the Director, Range

Control Division, 30 days in advance of the first day of scheduled training. Deviations/waivers will be considered on a case-by-case basis and will follow the format in MCO P3570.1_.

3. A completed Operational Risk Management (ORM) Worksheet (see Appendix E) shall accompany all deviation requests.

4. Temporary modifications of the range regulations (Appendix A) will be considered as a Special Range Request (SRR). Procedures for obtaining a SRR are discussed in Appendix K of this manual.

1003. OBSERVATION/PARTICIAPATION OF TRAINING BY MILITARY DEPENDENTS AND CIVILIANS.

1. Requests for military dependents or civilians to participate in training on a live fire range, facility, or training area aboard MCB, Camp Lejeune shall be submitted via the chain of command to the Commanding General, MCB Camp Lejeune, AC/S, T&O 30 working days in advance of the training. The 30 working day requirement provides MCB Camp Lejeune sufficient time to request permission from HQMC to allow dependents or civilians to take part in training evolutions. CMC (DCPP&O) Message 1815312 Sep 01 applies. HQMC must approve all requests for military dependents or civilians to fire any and all crew served weapons.

a. The following information is required:

(1) Unit conducting event

(2) Organization and background of civilian visitor participants

(3) Type of event the civilian visitors will participate

(4) Date and time the event will take place

(5) Location of the event

(6) Purpose the event will serve and reason the civilian visitors are participating

(7) Operational Risk Management Worksheet

b. Civilian participants shall sign a waiver of liability before the event. A copy of the signed waiver of liability must

be on site while training is being conducted. Recommend unit keep waivers on file for a minimum of two years.

2. The training that military dependents/civilians can participate in is limited. Firing crew served weapons and dud-producing weapons are not authorized for civilians. For a complete list of prohibited activities see ALMAR 010/01. When incorporating civilians in any authorized training activities, Commanders will conduct a complete ORM and establish control measures to ensure civilian activities are conducted safely.

3. Special Event (i.e., CAPEX) observation by dependent/ civilian will be coordinated by special bulletin.

1004. QUIET HOURS.

1. Quiet hours are normally in effect for artillery, mortars, demolitions and large caliber weapons i.e. 155mm, 120mm, 60/81mm mortars, 40mm, 30mm, 25mm, 60mm, 81mm etc from 2400-0600 daily. Quiet hours will be in effect during church services on Sunday 0800-1200. Demolition training over 50 lbs must cease one hour prior to sunset. Requests to fire these weapon systems during quiet hours must be approved by the Commanding General, MCB, Camp Lejeune (AC/S, Training and Operations via Director, Range Control Division) fifteen (15) days in advance. Requests for specific quiet hours for ceremonies, retirements, etc. are published via naval message from resident Commanding Generals.

1005. EXPLOSIVE NOISE PREDICTIONS (ENP).

1. Explosive Noise Predictions will be provided by the Range Control Officer when demolition material are to be used for training ammunition technicians in the emergency destruction of ammunition. The ENP will determine the amount of explosives to be used and/or the amount of tamping required lowering the noise to an acceptable level and ordinate property damage.

1006. ADDRESSES/PHONE NUMBERS.

1. The following list provides the various means of contacting Range Control.

a. Mailing address:
COMMANDING GENERAL
ATTN: RANGE CONTROL DIVISION(RCD) BLDG 54
MARINE CORPS BASE
PSC BOX 20004
CAMP LEJEUNE NC 2854-0004

b. Plain language address:

CG MCB CAMP LEJEUNE NC//RCO//

c. E-Mail addresses:

Range Control Officer,

lejeunerangecontrol@lejeune.usmc.mil

Range Control Duty Officer,

blackburnduty@lejeune.usmc.mil

d. Web sites:

Range Control Web Site:

http://clbmcb-www1.lejeune.usmc.mil/T&O2003/index.htm/T&O/RCD/RCDhp.htm

Training and Operations Web Site:

http://clbmcb-www1.lejeune.usmc.mil/T&O2003/index.htm

e. Phone numbers:

Commercial area code 910/DSN prefix 751

(1)	Range Control Division (RCD)	451-3733
(2)	Director RCD	451-9230
(3)	Deputy Director RCD	451-3932
(4)	Director Range Development Division (RDD)	451-4480
(5)	Deputy RDD	451-1307

(6)	Range Operations (RO)	451-2102
(7)	Range Control Officer (RCO)	451-1235
(8)	Deputy Range Control Officer	451-1236
(9)	Range Safety Specialist	451-1240
(10)	Range Control Operations Chief	451-5803
(11)	Range Control GSRA Compound	449-6205/6228
(12)	Range Scheduling	451-3065/ 3066/4478
(13)	Range Control Duty Officer (Blackburn)	451-3064
(14)	Explosive Ordnance Disposal Team	449-0558/0334
(15)	MOUT Facility	451-2364/2384
(16)	Navy Safety Boat Crew	451-5046/0752
(17)	NBC Chamber	451-3518/1928
(18)	Area 5 Pool	451-2027
(19)	RCD Fax number	451-1593

1007. APPLICABLE MAP SHEET.

1. All Grid Coordinates listed in this Order apply to the Combat Training Chart, Camp Lejeune Military Installation Map, Edition 1-DMA, Series V742S, Stock Number COMBT 809310.

Recommendations/changes to the Camp Lejeune Military Installation Map will be made to the Director, RDD.

CHAPTER 2

RESPONSIBILITIES

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DIRECTOR, RANGE CONTROL DIVISION (RCD)	2001	2-2
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DIRECTOR RANGE DEVELOPMENT DIVISION (RDD)	2003	2-3
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2000. ASSISTANT CHIEF OF STAFF, TRAINING AND OPERATIONS (AC/S, T&0).

1. Plan, coordinate, and supervise the development, modernization, maintenance and operation of the Base training areas and facilities.

2. Establish assignment and scheduling procedures for the use of the Base training facilities.

3. Publish appropriate directives and correspondence concerning training areas, ranges, and their support.

4. Conduct continuous review of Base training facilities to ensure safety precautions meet established criteria prescribed in current regulations.

5. Coordinate with the AC/S Installation and Environment to ensure the Range Management Plan receives the necessary planning, programming and budgeting of real property management resources.

6. Program and budget for the transformation, maintenance, and repair of all training facilities/areas and ranges. This must be coordinated between AC/S, I&E and AC/S, T&O for reimbursement for costs.

7. Prioritizes projects based on requirements and available funding.

8. Budget for, requisition, and procure communication equipment to support Range Control operations.

2001. DIRECTOR, RANGE CONTROL DIVISION (RCD).

1. Responsible to the AC/S, T&O for supervising, managing and coordinating the operations of Range Control and range safety. Withdraw the privileges of any person, organization, agency, or club that willfully violates this manual.

2. Coordinate with AC/S, I&E regarding all training and training facilities use that could potentially affect the environment.

3. Assist the Installation Safety Office and PAO in establishing and implementing a comprehensive range safety and unexploded ordnance awareness educational program.

4. Supervise, coordinate and manage the following sections/resources:

a. Base EOD Team

b. Navy Safety Boat Crew

c. MOUT CTF

d. NBC Chamber

e. Area 5 Pool

f. Range Control Duty Officer (BLACKBURN)

g. Range Scheduling

h. Range Operations/Range Safety

i. Range Inspectors

2002. DIRECTOR, TRAINING RESOURCES MANAGEMENT DIVISION (TRMD).

1. Facilitate outsourcing of range improvement and construction projects as approved by the Assistant Chief of Staff, T&O.

2. Manage and coordinate all contracts associated with range maintenance and operation.

3. Conduct analyses/studies of noise contours that result from Camp Lejeune’s training activities.

4. Ensure adequate noise monitoring systems are in place at appropriate locations.

5. Ensure the tower working group coordinates appropriate use of existing/new towers so as to not interfere with range/air operations.

2003. DIRECTOR, RANGE DEVELOPMENT DIVISION (RDD).

1. Responsible for range and training facility development and modernization which includes but, is not limited to, coordinating designs, award and delivery of construction efforts, initial outfitting, and developing operating procedures in support of training assets.

2. Continually assess ranges, training areas, and facilities for ability to meet published training requirements. Make improvements based on assessments.

3. Act as the Integrated Geographic Information Repository (IGIR) Working Group liaison to ensure changes to the sixteen military training themes are updated and appropriate changes are incorporated into the Base Geographic Information System (GIS).

4. Coordinate the submission of training-related projects to the Environmental Impact Working Group. Ensure action items in National Environmental Protection Act (NEPA) documents are resolved prior to implementation of proposed actions. As the AC/S, T&O action sponsor to the group, the RDO reviews all requests for Environmental Impact Review (REIR) submissions for impacts to the training areas and training assets.

5. Coordinate with AC/S, I&E regarding all training areas and facilities use which have the potential to impact the environment and the Base Master Plan.

6. Develop and recommend the range modernization and maintenance plan, incorporating short, mid and long-term range and training facility requirements/projects. Evaluate changing requirements to the plan and the organization to ensure mission objectives are sustained.

7. Provide impact area layouts, surface danger zones, range design and analysis of special or unique live fire and maneuver training requests by evaluating and applying applicable safety parameters and environmental restrictions.

8. Maintain historical information on active and inactive ranges, project data and related files relevant to the installation training complex boundaries.

2004. RANGE CONTROL OFFICER (RCO).

1. Designated by the Commanding General, MCB as the Base Range Control Officer, responsible for executing and enforcing these regulations as they pertain to the land, sea and airspace within the Camp Lejeune training complex.

2. Serve as the central point for control and coordination for all activities conducted within the installation-training complex to ensure safety and unified operations.

3. Approve, control, and monitor personnel access into the installation-training complex for both training and administrative activities. The RCO will coordinate the scheduling of all requested training within the Base's air, land, and water spaces.

4. Produce and publish a daily Range Firing Warning and Airspace Utilization Order of all scheduled training.

5. Publish a weekly Notice to Mariners and road closures via naval message and/or web site.

6. Conduct field safety inspections.

7. Recommend range maintenance priorities to TRMD.

8. Assist the Installation Safety Office and PAO in establishing and implementing a comprehensive range safety and dud awareness educational program. Coordinate requested programs through TRMD for implementation

9. Assist the RCO with supervising, coordinating and managing the following sections/resources:

a. Base EOD Team

b. Navy Safety Boat Crew

c. MOUT CTF

d. NBC Chamber

e. Area 5 Pool

f. Range Control Duty Officer (BLACKBURN)

g. Range Scheduling

h. Range Operations/Range Safety

i. Range Inspectors

10. Maintain and update files of current, historical, active and inactive usage data of the installation training complex to include known hazards, type of ammunition expended on each range, dud accumulation and disposal records, and clearance status of temporary, dedicated and high hazard impact areas.

11. Provide a Range Officer in Charge/Range Safety Officer and LASER Range Safety Officer Information Safety Brief to include:

a. Installation training complex facilities

b. Installation procedures for opening and closing facilities

c. Communications requirements

d. MEDEVAC/CASEVAC procedures

e. Environmental issues

f. Safety Training for ROIC/RSOs

2005. RANGE CONTROL DUTY OFFICER (RCDO).

1. The Range Control Duty Officer’s (RCDO) station, call sign BLACKBURN, will be manned 24 hours a day seven days a week to provide emergency assistance to units training aboard Camp Lejeune.

2. Using units must have previously scheduled the ranges and training/maneuver area(s) via RFMSS or at Range Control no later than 0700 two days (48 hours) preceding the planned use. Scheduled training/maneuver area(s) do not include TLZ’s located within the scheduled area. There will be no requirement to schedule training/maneuver areas if they are to be used for transiting, but if a unit is occupying, it must be scheduled in the RFMSS and the using unit must contact BLACKBURN via 38.60 FM.

3. Using units are required to establish communication with the RCDO on 38.60 FM for main side and 49.90 FM in the Greater Sandy Run Area (GSRA).

4. The RCDO will be the primary means of providing MEDEVAC/CASEVAC assistance. All MEDEVAC/CASEVAC and INJURIES will be reported to BLACKBURN even if no assistance is needed or required. BLACKBURN will ensure that all reported injuries are forwarded to the Base Safety Office within 72 hours.

2006. COMMANDING OFFICER OF USING UNIT.

1. Ensure compliance with this manual, the current MCO P3570.1_, applicable ammunition, weapons, and equipment, MCO, TMs, FMs, and Marine Corps Warfighting Publications (MCWP), Marine Corps Reference Publications (MCRP) and applicable SOPs

for safe training and firing for each weapon system within the command. Ensure all subordinate leaders involved in live fire training have a working knowledge of and comply with this manual.

2. Conduct Operational Risk Management (ORM) assessment for all training. Develop controls and procedures for all phases of training events. See Appendix E, ORM for examples.

3. Establish and maintain safety training and a certification program to train and qualify personnel in safety procedures for their specific area of responsibility/assignment. Personnel who have not completed certification will not be appointed as Range Officers in Charge (ROICs)/Range Safety Officers (RSOs) or Laser Range Safety Officers (LRSOs). This training is required every two years except for lasers. Laser certification is good for three years.

4. Designate a ROIC and RSO, for each firing point or range (Figure 2-1) on page 2-13.

5. Comply with installation safety procedures and certify individuals who perform the duties as ROIC/RSO and section chiefs to ensure they:

a. Are competent and properly instructed in the performance of their duties.

b. Are knowledgeable of the weapon system for which they are responsible.

c. Have attended the ROIC/RSO Information Safety Brief given by the Range Safety Specialist/Operations Chief and that a valid Range Safety Officer card is in their possession during live firing training.

6. If not prescribed by a higher authority, designate the appropriate uniform and protective equipment.

7. Responsible for scheduling, modifying, and canceling Training Activity Request (TAR) per Chapter 3.

8. Appoint personnel who are technically qualified to certify and verify ammunition, explosives, and other dangerous articles (i.e. spent brass, bandoleers, ammo pouches, clips, links, casings, etc.) in accordance with DOD 4160.21-M and BO P8020.1A.

2007. RANGE OFFICER IN CHARGE (ROIC).

1. Qualifications:

a. Must be either a Commissioned Officer, Warrant Officer, or Staff Noncommissioned Officer (SNCO) (Gunnery Sergeant or above for dud producing weapons).

b. Unit commanders will ensure ROICs are certified in the weapon system for which they are responsible. For weapon systems equipped or dependent on LASER, the ROIC will be knowledgeable of LASER hazards and proper employment. The ROIC will be held responsible and accountable for the conduct of the activity and the adherence to governing regulations and guidance. ROIC must be able to fully influence the conduct of the event.

2. Duties:

a. Ensure the overall safe conduct of training and proper use of the installation/training complex.

b. Receive a range safety briefing from the installation range control organization on use of the training complex.

c. Be physically present at the training site/live fire range at all times. ROIC must have this SOP, a valid Range Safety Officer Card, ORM, unit SOP, Safety Brief, relevant ammunition/weapon/equipment TMs and FMs, and Special Range Request (if applicable) on site when training or conducting a live fire range.

d. Determine when it is safe to fire in accordance with applicable regulations and installation range requirements.

e. Ensure receipt of final clearance to fire from Range Control/BLACKBURN.

f. Ensure proper supervision of personnel performing immediate action, misfire, hang-fire, and cook-off procedures.

g. Ensure all weapons and ammunition malfunctions, duds, defective ammunition and accidents are reported to Range Control and higher headquarters as directed.

h. Ensure required communications are established and maintained at all times.

i. Ensure safe LASER operations.

j. Ensure adequate medical support and safety transportation is available.

k. Ensure ammunition and explosives are properly handled, transported, stored, secured and accounted for within the training complex from the time of receipt to the time of expenditure or turn in.

l. Maintain records of “hot and cold” times/number of personnel/ammunition expended and reported to BLACKBURN after the training event.

m. Ensure plans for firing exercises and maneuvers are coordinated with Range Control.

n. Establish control of target area to prohibit entry by unauthorized personnel.

o. Ensure coordination and approval has been gained from the Range Control agency for all civilian personnel which will be entering the training site/live fire range.

p. Brief the RSO on the duties to be performed in support of the training event. Clearly establish the requirement for the RSO to brief the ROIC on the safety of the facility and unit and the readiness to commence live fire operations prior to the start of firing.

q. Implement risk management in all phases of the training event or live fire range.

r. Comply with all environmental regulations.

s. Ensure a thorough shakedown for ammunition is conducted prior to leaving the range.

t. Ensure that the Class V(W) Expenditure Report (NAVMC Form 11381) is completed at the range per MCO P8020.10_.

u. Report all duds, ammunition malfunction and defective ammunition as directed per MCO 8025.1_.

2008. RANGE SAFETY OFFICER (RSO).

1. Qualifications:

a. Must be a Commissioned Officer, Warrant Officer, or Staff Non-Commissioned Officer (SNCO) (Staff Sergeant and above).

b. The RSO for drop zones, rappelling towers, HRST and dive ops may be a Sergeant E-5 or above with proper certification.

c. Must have received the MCB Range Control Information Safety Brief and have in his/her possession a valid Range Safety Officer card and have been certified by their Commanding Officer on all weapons systems/ammunition to be used during training.

d. An Officer/SNCO must be the Safety Insert Officer (SIO) due to Marine Corps Publication MCRP3-11.4A for drop zones, rappelling towers and HRST training.

2. Personnel assigned as RSO will have no other duties during that period of training. Assistant Range Safety Officers (ARSO) may be appointed as required to positively control every shooter or maneuvering element.

3. Duties:

a. Receive Range Safety Brief from Range Control Duty Officer (BLACKBURN) by radio and the on site Range Inspector.

b. Ensure weapons and personnel are properly positioned before granting clearance to fire.

c. Ensure that only authorized ammunition and explosives listed on the range request to include proper charge, explosive weight limits, fuse, and fuse setting are used. Ensure that firing data and weapons systems are within prescribed safety limits and are verified. Expenditure Reports (NAVMC Form 11381 depicted in Fig 4-1 of MCO P8020.10A) will be used to document all expenditures of A & E assets.

d. Ensure that the Surface Danger Zone (SDZ) remains clear of all unauthorized personnel.

e. Ensure personnel within designated hazard areas wear proper eye and hearing protection as well as flak jacket and helmets.

f. Obtain authorization from Range Control (BLACKBURN) to commence training and live fire operations.

g. Prior to commencing live fire operations, conduct final coordination with ROIC to include a summary of checks, inspections, and actions the RSO has completed. Verify that required communications has been established and a “hot status” has been received from Range Control (BLACKBURN).

h. Order immediate cease-fire or check-fire when any unsafe condition occurs or when Range Control (BLACKBURN) directs.

i. Be physically present at the training event at all times.

j. Report all accidents, weapons and ammunition malfunctions in accordance with MCO P8020.1A to the ROIC.

k. Upon completion of firing order, verify to the ROIC all weapons and weapon systems are clear and safe before allowing the removal of weapons from the firing area.

l. During LASER operations:

(1) Ensure unit personnel employing LASERs receive a safety brief to include explanations of specific LASER related hazards, safety equipment, and detailed range safety procedures.

(2) Comply with procedures in Chapter 9 of this SOP.

(3) Know and observe horizontal and vertical safety limits of the LASER range.

(4) Follow unit SOPs for LASER operations and training exercises.

(5) Ensure all personnel conducting LASER operations, to include personnel in target areas, maintain continuous communications with ROIC/RSO.

(6) Cease LASER operation immediately if communication or positive control of the LASER beam is lost.

(7) The LRSO may also serve as the RSO.

m. Ensure the entire range is clear of unauthorized personnel and equipment prior to and during firing.

n. The RSO for indirect and direct fire weapons is appointed by the ROIC to assist him in maintaining surveillance of firing and safety within the entire SDZ and air space of the

range. The RSO will not be assigned other duties or fire a weapon while acting in this capacity. The RSO will be the last to leave the range following completion of firing, ensuring the range is clear of all personnel and equipment and properly policed and inspected.

o. The RSO is responsible to the ROIC for the enforcement of applicable safety regulations contained in this manual, the current edition of MCO P3570.1_ and other appropriate references. The RSO will ensure a copy of this manual is maintained and available on the range at all times.

p. The RSO, along with the ROIC, shall ensure the unit monitors the safety/administrative control net AT ALL TIMES. The RCDO is the net control, call sign "BLACKBURN", on 38.60 FM (squelch off) and 325.0 UHF. Units shall request authorization to go "HOT" and "COLD" from "BLACKBURN" and give radio checks every 30 minutes on the hour and half hour. If, at any time, a unit loses communications with "BLACKBURN," the RSO will put the range in a "check-fire" status until communications are reestablished.

q. As directed by the ROIC, the RSO shall report to Range Control by 1200 the day prior to properly check-out the assigned live fire range, drop zone, rappelling tower, gun position (GP), mortar position (MP), and designated range safety equipment prior to commencement of fire.

r. The responsibilities of the RSO will not be delegated. The RSO will not be assigned any other duties or fire a weapon during the time period that he is the RSO. The RSO is a supervisory position.

s. In the event of an accident/incident (i.e. round out of safe, MEDEVAC/CASEVAC, downed aircraft, or injury/fatality) a "cease-fire" command will be given on that range and adjoining ranges, if necessary. Report up the chain, Command chain and T&O chain.

t. Ensure road guards and tower sentries are properly positioned and briefed in their duties. When applicable, secure all barriers and gates. RSO will ensure proper communications are established and maintained between road guards and tower sentries during live fire.

u. Order an immediate "cease-fire" or "check-fire" when any unsafe condition is observed.

v. Report forest fire locations immediately to Blackburn.

w. Submit dud reports as per unit SOP.

x. Call BLACKBURN upon completion of firing to report: round count, type of ammunition fired, and number of personnel trained.

y. Ensure the area is policed before calling for a Range Inspector. DO NOT LEAVE, BURY OR BURN TRASH. If the range/area is not properly policed, the unit will be denied further access to training ranges/areas until the range/area is adequately policed and approved by a Range Inspector.

z. Return all safety equipment within 24 hours to Range Control upon completion of the live fire event.

NOTE: Range Check-In Procedures

Upon completion of training on a live fire range or any training facility, you must be inspected by a range inspector and receive a range inspector (Viper) card and complete the Range Report. Range Control will accept no facility without a range inspector (Viper) card. This is proof that the range was inspected and properly cleared.

2009. OFFICER IN CHARGE (OIC)/RANGE SAFETY OFFICER (RSO) APPOINTMENT REQUIREMENTS.

WEAPON SYSTEM	**RANGE OFFICER IN CHARGE #1**			**RANGE SAFETY OFFICER #1**		
	OFF	WO	NCO	OFF	WO	NCO
Practice hand grenade; sub caliber training devices; laser devices; firing devices; simulators, trip flares, small arms and machineguns	X	X	E6	X	X	E5
Chemical agents and smoke #2, #6	X	X	E6	X	X	E5
Aerial gunnery & air defense weapons; flamethrowers; live grenades, grenade launchers, and grenade machineguns; live mines & demolitions; tank and fighting vehicle cannons; recoilless rifles.	X	X	E7	X	X	E6
Field Artillery #3	X	X	E7	X	X	E6
Mortars	X	X	E6	X	X	E6#7
ADA rockets and guided missiles	X	X		X#4	X	
Direct fire antitank rockets and missiles	X	X	E7	X	X	E6
Live fire exercises using organic weapons, squad through company, battery,	X	X	E7	X	X	E6
Combined arms live fire exercises using outside fire support; battery, squad, platoon company or battalion or larger. #5	X	X	E7	X	X	E6

FIG 2-1

Notes:

#1. Civilians in the grade of GS-07 or above may act as OIC, and GS-05 or above, or equivalent for RSO. Civilian contractors may act as OIC/RSO when approved by the Base Commander.

#2. OIC and RSO must be nuclear, biological and chemical (NBC) qualified when conducting NBC or smoke training.

#3. Use of E7s as OICs is authorized only when approved by the Base Commander. Duties of RSO are normally performed by either the battery executive officer or platoon commander.

#4. RSO will be a field grade officer, CW04 or CWO5 or civilian in the grade of GS-12 or above.

#5. OIC will be a field grade officer for battalion or larger CALFEX.

#6. RSO for Marine Corps will be E6 or above for practice hand grenades, Chemical Agents and Smokes.

#7. RSO for Marine Corps can be E5 for mortar training activities.

REQUESTS TO WAIVE THE ESTABLISHED CRITERIA MUST BE SUBMITTED THROUGH THE APPROPRIATE CHAIN OF COMMAND TO THE COMMANDING GENERAL, MCB CAMP LEJEUNE FIFTEEN (15) DAYS PRIOR TO THE EVENT.

CHAPTER 3

SCHEDULING

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3000. GENERAL

1. Currently the Range Scheduling Office (located in the Range Control, Building 54 on Post Lane) supports more than 200 using units, battalion/squadron level, both internal and external to Camp Lejeune on a daily basis. The scheduling office reviews, approves and/or disapproves all training requests. The schedulers only approve/disapprove Training Area Requests (TARs) for units. The scheduling unit must schedule the ranges, training areas, and other facilities in RFMSS.

2. The scheduling office utilizes a computer database, the Range Facility Management Support System (RFMSS), to schedule, track and report utilization of all live fire ranges, training areas, training facilities, airspace and sea space aboard Camp Lejeune.

3. Requests. The Range Scheduling Office is the scheduling agency for all Camp Lejeune ranges, training areas, training facilities, airspace, and sea space aboard Camp Lejeune. Exceptions are as follows:

a. The rifle and pistol ranges located at the Stone Bay Range complex are scheduled through the Commanding Officer, Weapons Training Battalion (Stone Bay). Telephone number is 450-2917/2918.

b. Ranges located at Special Operations Training Group Compound, Stone Bay Range complex are scheduled through the Officer in Charge, Special Operations Training Group, II MEF. Telephone number is 450-2982/2981. Weapons Training Battalion and Special Operations Training Group will report usage data (Number of personnel trained and ammunition by DODIC to Range Control by quarter (January, April, July, October) due the 10th of the month listed in letter format to Range Control Officer, MCB, Camp Lejeune, NC.

4. All scheduled training will be published via message on the Range Firing Warning and Airspace Utilization Order. Only events scheduled and promulgated on the Range Firing Warning and Airspace Utilization Order are allowed on the training areas and ranges. The Range Firing and Airspace Utilization Order is transmitted one working day prior to the scheduled event. Changes or additions will be accepted until 0700 two (2) days prior to the requested/scheduled event. Training Area Requests (TARs) with changes/additions must be routed through the proper unit chain of command to RCD. Only the Range Control Officer is

authorized to change the Range Firing Warning and Airspace Utilization Order after it is transmitted. Short notice contingencies will be handled on a case-by-case basis after verification by higher headquarters.

3001. RANGE FACILITY MANAGEMENT SUPPORT SYSTEM (RFMSS).

1. RFMSS is a computer database, which the Range Control Office uses to schedule, track, and report utilization of all training events aboard Camp Lejeune. Within RFMSS, units can view all training possibilities available, conflicts, specific requirements and priority users for all ranges and training areas. RFMSS will provide the requesting unit with all necessary information to schedule training.

2. RFMSS terminals are located in all requesting unit S-3 shops. An additional terminal is available for requesting units in the Range Scheduling Office (Building 54, Range Control). Commanding Officers are responsible for ensuring their units have a trained RFMSS clerk. The Base Range Control Scheduling Officers will provide support and entertain all reasonable questions but <u>will not</u> schedule events for units if they have the capability to do so. The Scheduling Officer (Range Control) will conduct RFMSS training once a quarter; class dates will be published via RFMSS mail to all using units.

3002. GENERAL SCHEDULING.

1. Requests for ranges/training areas/training facilities will be provided to the Commanding General, MCB, Camp Lejeune per the procedures stated below.

a. Marine Corps Base units, tenant commands, 2d Marine Aircraft Wing (2d MAW) units, and U.S. Marine Corps Reserve units will have priority of training aboard MCB, Camp Lejeune. Units external to Camp Lejeune or II MEF can submit Training Area Requests (TARs) but their training will not be given priority over tenant/II MEF Commands.

b. All Reserve/National Guard units, including Marine Corps Reserve units, must submit scheduling requests for the use of MCB, Camp Lejeune ranges, training areas, tactical landing zones, drop zones, administrative landing zones, restricted airspace and adjacent waters through the MCB, Reserve Support Unit (RSU) telephone number 451-1872. All administrative procedures, range/training area regulations, and scheduling priorities in this Manual apply.

c. <u>Other services and organizations external to MCB, Camp Lejeune must request approval to train aboard MCB, Camp Lejeune</u>

via message or letter to: COMMANDING GENERAL, MCB, CAMP LEJEUNE//T&O//, info COMMARFORLANT//G-3//). This request must include the type of training to be conducted, ranges, training areas, tactical landing zones, drop zones, administrative landing zones, restricted airspace, adjacent waters and logistical requirements. Upon approval, a “Liaison Officer” may be assigned. If assigned, the “Liaison Officer” will provide direct liaison between the requesting unit/organization, MCB, Camp Lejeune and other tenant commands as required. All administrative procedures, range/training areas regulations, and scheduling priorities are contained in this manual.

3003. SCHEDULING.

1. Requests to schedule ranges, training areas, training facilities, restricted airspace, tactical landing zones, paradrop zones, administrative landing zones, impact areas, gun positions, mortar positions and sea/waterways, may be made up to 90 days prior to the planned activity, but no later than 0700 two days prior to planned use. USMC formal schools (MOS-producing) may submit requests up to 120 days prior to planned training. The only exceptions will be ranges G-5, G-6 CBC, and G-7 that close the Atlantic Intracoastal Waterway (AIWW), to include the E-1 range and BT-3/N-1 Impact Area, which closes the Atlantic Ocean sector adjacent to Camp Lejeune and military ship operations in the Atlantic Ocean Sector, to include Onslow Bay. These ranges, the E-1, BT-3/N-1 Impact Area, and the Atlantic Ocean Sector must be scheduled one month prior to use to allow for publication of a Notice to Mariners, for required coordination with external agencies, and the scheduling of aircraft to perform an aerial sweep of the AIWW and Atlantic Ocean Sector prior to live firing, per the requirement stated in the Code of Federal Regulations. Contingency work-up requirements will be accepted whenever range scheduling is operational. 2nd Tank Bn (SR-10) and 2nd LAR Bn (SR-7) can schedule up to one year in advance via Range Control scheduling section.

a. Late requests for training events that require a Notice to Mariners, Notice to Airmen (NOTAMs) or notification of the public **will not be approved**.

b. All diving/para operations will be scheduled.

c. Ranges, training/maneuver areas to be used for the pre-staging of ammunition must be scheduled.

2. Requests must be submitted on a TAR via the chain of command to the Commanding General, MCB, Camp Lejeune (RCO). TARs will be submitted electronically via a Range Facility Management Support System (RFMSS) terminal. Commanders of organizations external to Camp Lejeune may request use of above-mentioned ranges, etc. by letter or message. TARs must include projected “hot and cold” times of firing, weapons types, ammunition and personnel. Units can obtain the action taken on electronic TARs by reviewing RFMSS at your Command. Written TARs should be followed up by the requesting unit through RCO to obtain status.

3. Marine Expeditionary Unit (MEU) commanders are responsible for the deconfliction and submission, to Range Control, of all TARs generated by MEU subordinate commands.

4. Only the events as published in the Range Firing Warning and Airspace Utilization Order are allowed on the training areas and ranges. The Range Firing and Airspace Utilization Order is transmitted one working day prior to the scheduled event. TARs will be accepted until 0700 two (2) days prior to training. No change to the Range Firing Warning and Airspace Utilization Order will be approved after it is transmitted. Verifiable contingencies will be considered on a case-by-case basis.

5. Units that must cancel scheduled training will notify Range Control immediately by written or electronic means.

6. Requests to use designated or non-designated artillery gun positions, for which standard/approved safety data has not been computed and listed in the 10th Marines Safety Manual, must include overlays of the surface danger zone and be provided to the Commanding General, MCB Camp Lejeune (Dir, RCD) ten working days in advance of the first day of training.

7. Requests to use designated or non-designated mortar positions for which standard/approved safety data has not been computed must include overlays of the surface danger zones and must be surveyed by the 10th Marines Survey Section and results provided to the Commanding General, MCB, Camp Lejeune (Dir, RCD) ten (10) working days in advance of the first day of training. Unscheduled training areas during hunting season may be opened for hunters to use. “Hunt sheets” listing the open hunting areas are sent out to the different agencies aboard the Base the day prior. For safety purposes, units will not enter these training areas that have been turned over to the Base Game Warden.

8. If a unit fails to arrive on a range that requires a range operator within one hour of the scheduled time, that unit will be canceled for the remainder of the day on that specific range.

9. If a unit fails to arrive on a range that requires EOD support for down-range target emplacement within one-half hour of the scheduled time, that unit forfeits the requested EOD support for that day unless a request for an extension is granted. Requests for an extension may be granted via telephone from the ROIC to the RCO/DRCO.

10. Requests for EOD support must be submitted to the Commanding General, MCB, Camp Lejeune (Dir, RCD) <u>five working days in advance</u> of the first day of training.

11. In order to accommodate the high volume of training conducted by MCB tenant organizations, ranges and training/ maneuver areas may be used by more than one unit. Co-use (piggy-backing) on ranges is encouraged if the following conditions are met:

a. The Commanding Officer of the host unit (the unit that originally scheduled the range) agrees to proposed co-use.

b. The requesting unit coordinates with the host unit.

c. The RCDO (BLACKBURN) is made aware of additional units and number of additional personnel by the host unit.

d. The host unit will, in all cases, request RCO approval to employ or change any item not on the original TAR at least one workday prior to actual firing time. The co-use unit will work through the host unit for approval of any changes.

e. Firing times will remain the same as listed on the original TAR; any changes must be authorized by RCO/DRCO.

f. The ROIC and RSO of the host unit will be solely responsible for safety, firing, and cleanup of the range for all units firing.

12. If reconfiguration of an existing range is necessary or training with a weapon/munitions not normally authorized on a specific range or in a training area is desired, a special written request to the Commanding General, MCB, Camp Lejeune (Dir, RCD) is required. The request must specify the planned scheme of maneuver, the weapons/munitions to be fired, and

safety actions to be taken. The request must arrive at RCO at least (10) ten workdays prior to the scheduled training.

13. Priority Assignments

a. Assignments of ranges on a priority use basis do not preclude other units from requesting and using the range. The training priority assignments are:

(1) Range A-l: Marine Corps Combat Service Support Schools.

(2) Range B-12: Marine Corps Air Station, New River.

(3) Range D-9: Marine Corps Community Services.

(4) Engineer Training Areas ETA-2 and ETA-3: 2d Combat Engineer Battalion, 2d Marine Division.

(5) Ranges I-1 and ETA-1 and ETA-6: Marine Corps Engineer School.

(6) Camp Davis, North Runway, TLZ Pheasant and TLZ Phoenix: MAG 29, MAG 26.

(7) RA, RB Training Areas: 2D Marine Division

(8) Most Administrative Landing Zones (ALZs) have been designated to specific units.

(9) SR-10: 2D Tanks have priority during scheduled gunnery training.

(10) SR-7: 2D LAR has priority during scheduled gunnery training.

(11) Normally TLZ priority is for aviation training unless otherwise scheduled.

(12) Units scheduling AA/AB/AC training areas must first notify S-3, MCCSSS, Camp Johnson. Approval must be granted by MCCSSS before Range Control scheduling will approve via e-mail.

(13) TLZ Vulture: SOTG.

(14) TLZ Kite: MCCSSS.

b. All units using these ranges, including priority users, must submit TARs and comply with all other requirements of this Manual.

c. Units assigned these ranges are responsible for the police and maintenance and may not pass the scheduling assignment to another unit without approval of the RCO. MCB, Range Maintenance Section will provide equipment support on an “as available” basis.

14. Assignment of training/maneuver areas does not include: tactical landing zones (TLZ), parachute drop zones (PDZ), gun positions (GPs), mortar positions (MPs), live fire ranges, or other training facilities located within its borders.

15. All ranges must be closed at regular intervals for EOD sweeps which reduce unexploded ordnance hazards, for proper range maintenance and re-targeting. Priority and timing of closures will be determined by the RCO and annotated in the Range Firing Warning Order.

3004. HIKES.

1. Units conducting conditioning hikes will establish and maintain communications with the Range Control Duty Officer (RCDO), call sign BLACKBURN, on frequency 38.60-FM (squelch off). Communications are required to allow for passing of destructive weather conditions and wet bulb globe temperature index information and potential safety issues.

2. Hike routes, to include overlays, will be submitted to RCO for scheduling of the training/maneuver areas and roadways, one working day in advance of the hike.

3005. PRIORITY OF TRAINING.

1. In the event of conflicting requests, ranges, training areas/training facilities will be assigned to requesting units in the following precedence:

a. Capabilities Exercises (CAPEXs), Major Joint or Combined Exercises

b. Marine Corps formal school training

c. Contingency Operations

d. Pre-deployment training: i.e., MEU(SOC), FLEETEX, ARGEX, MCCRES evaluations

e. Special training directed by higher headquarters, research, development, testing and evaluation activities.

f. Unit training

g. Sports and recreational activities

2. If priorities cannot be determined, Range Control will seek guidance from parent commands and request a priority setting.

3. Bumping Procedures. If it is determined a scheduled unit's training must be bumped, the RCO will make every attempt to locate a range, training/maneuver area for the unit that was bumped or move the requested training to another date.

3006. SPECIAL RANGE REQUESTS(SRR).

1. Any deviations from established live fire ranges, gun positions, mortar positions, training facilities, training events or approved training scenarios, identified in this Manual requires a Special Range Request (SRR).

2. All SRRs must be submitted to the RCO no later than 10 working days prior to the planned event. Because of the coordination and planning involved in an SRR, late entries will be considered on a case-by case basis.

3. All SRRs must include the following:

a. A letter from the Battalion/Squadron Commander to the Range Control Officer requesting a specific deviation from this order.

b. An approved operational risk management assessment.

c. A specific safety plan.

d. The planned scheme of maneuver.

e. The weapons/munitions to be fired.

f. Any Surface Danger Zones (SDZs), necessary.

3007. NOTICE TO MARINERS.

1. Event requests which affect the waterways aboard Camp Lejeune to include the Atlantic Intracostal Waterway (AIWW), New River, Mile Hammock Bay, and Onslow Beach, E-1, (N-1/BT-3 impact area) require special consideration and a publication of a

Notice to Mariners in order to coordinate with external agencies.

2. All events requiring a Notice to Mariners must be scheduled three weeks in advance in order to facilitate the publication of the Notice to Mariners. Requests to support emergency training or special contingency requirements must be submitted at least 24 hours in advance. Late requests for training events requiring a Notice to Mariners or notification to the public will not be approved.

3008. NOTICE TO AIRMEN.

1. Events that require a Notice to Airmen (NOTAM) must be scheduled one calendar month in advance in order for Range Control to coordinate with external agencies. (Example: If a unit wants to fire artillery in the month of March the request must be submitted prior to 31 January or the last working day of that month.)

2. Any weapons firing in the Greater Sandy Run Area (GSRA) require a Notice to Airmen (i.e. SR-6, SR-7, and SR-10). These ranges need to be scheduled one (1) calendar month prior to the firing date. The following ranges require an air sweep: AIWW, E-1, G-5, G-7, H Ranges, Naval Gunfire, N-1/BT-3. They need to be scheduled two (2) calendar months prior to the firing date.

3009. ROAD CLOSURES.

1. When a requested event requires Range Control to close a road, that event must be scheduled 10 working days in advance in order for Range Control to publish a road closure message.

2. Ranges requiring road closures include:

a. Lyman Road Ops for Harriers (AV-8B): closes Lyman Road

b. G-3 TOW: closes Lyman Road

c. G-3 .50 cal: closes Highway 172

d. ETA-2 line charge: closes Highway 172

e. G-6 CBC: could close Lyman Road, if required

3. Other ranges may require road closures depending upon the requesting unit’s scheme of maneuver/SRR.

4. The requesting unit is responsible for posting road guards, maintaining communications with BLACKBURN, and clearing the roads in the affected training areas prior to going hot.

3010. CHECK OUT/IN PROCEDURES.

1. Commander Responsibilities.

a. The Commander of the using unit is responsible for the range/training facility and the safe conduct of the live fire and training.

b. The unit Commander, or his designated representative, must read and understand this manual. Sections on the duties of ROIC/RSO, safety requirements, and special instructions for the range requested are especially important. The Commander, or his designated representative, must know the weapons system safety data, SDZs, restrictions, etc. The Commander, or his designated representative, must have in their possession, while on the range, this manual and all weapons safety publications (TM's/FM's/MCWP’s/MCRP’s) applicable to the weapons/ordnance being used.

c. The Commander, or his designated representative, must obtain required safety items: red streamer(s), light(s), phone(s), barricade(s), radio(s), communication(s) equipment, flak jackets, helmets, hearing protection, binoculars, reflective vests, emergency pyrotechnics (red), illumination device(s), safety vehicle, medical kits, corpsman, special range checklists, instructions, scenarios, etc.

d. The Commander, or his designated representative, must complete required coordination in advance [e.g., with other units, range services and support (targets, simulators, Boat Crew), FAC/FO, RCO/RCDO, etc). The ROIC/RSO is responsible for unit’s conduct and safety while in support of the unit.

e. If, for any reason, the Commander, or his designated representative, is unable to meet their scheduled range commitment, notify Range Control (451-3065/3066) immediately.

2. Checking Out Ranges.

a. Using units must check out the range from Range Control no later than 1200 the day before (Friday for Saturday, Sunday and Monday) scheduled use, or the range is cancelled. Using units can check out scheduled ranges up to five (5) days in advance to the date of use. All equipment checked out from

Range Control must be returned within 24 hours after completion of the training event.

b. With the exception of grenade ranges, all other ranges, training areas, training facilities, TLZs, water drop zones (WDZs), can be checked out for the entire scheduled period. Grenade ranges must be checked out daily by 1200. This ensures that the range will be occupied and used accordingly. Grenade ranges require special consideration due to the requirement of having an EOD response team standing by to take immediate action with dud grenades.

c. The ROIC/RSO of diving operations upon checkout must conduct a face-to-face brief with the RCDO.

d. Prior to checking out live-fire ranges/impact areas, gun positions, mortar positions, drop zones (DZs), all ROICs and RSOs must have attended the Range Control Range brief and have a signed orange Range Control Certification Card in their possession. Range Scheduling personnel will replace lost cards only after confirmation of initial issue.

3. Checking In With BLACKBURN.

a. When the Commander, or his designated representative (OIC, RSO) is prepared to commence fire, call BLACKBURN and request authorization to go "HOT;” radio BLACKBURN on 38.60 FM (Squelch off) or 49.90 FM retrans west of the New River. Use the unit's tactical frequency for all traffic within the unit.

b. The use of proper radio communications is critical to the safe conduct of live fire. BLACKBURN is an open net, all radio transmissions must include the call signs of the net users in order to prevent confusion. A simple "roger" over the net is not safe. It must be given in the form "BLACKBURN,” THIS IS GOLF 3 ...ROGER...OVER."

c. RSO or OIC must maintain constant monitoring of the safety net, 38.60 FM, and give BLACKBURN a radio check every 30 minutes on the hour and half hour. Call when you are ready to secure from the range and the safety net. The Commander, or his designated representative, is required to provide data on the number of troops trained and type and number of rounds fired.

d. The Commander, or his designated representative, is responsible for a thorough police of the range prior to calling for a range inspector.

e. The individual who checked out the range (OIC/RSO from the using unit) must be present on the range until the range is declared "COLD" by BLACKBURN and must be present for range inspection by a range inspector.

f. The individual who checked out the range shall return all range safety equipment checked out, along with a Range Report concerning the police and maintenance condition of the range, to Range Control via the range report **within 24 hours**. The individual who checked out the range will be responsible for all equipment.

3011. FACE-TO-FACE BRIEFS.

1. The following events/ranges require a face-to-face brief with Range Control:

a. All Artillery Gun Positions

b. F-18 .50 cal

c. G-3 .50 cal

d. G-3 TOW

e. G-5

f. G-6 CBC

g. G-7

h. Parachute Operations

i. Dive Operations

j. Air space R5306D

k. UAV Ops

l. CAS missions

m. Lyman Road Closures

n. All waterborne live-fire ranges

o. All AIWW closures

p. All road closures

q. FARP operations

r. Anti-Air/Air-Defense operations to include E-1

s. G-10 Helo

2. All face-to-face briefs will occur at 1400 the day prior to the first day of the planned event. Contact BLACKBURN at 451-3064 to schedule a brief.

3012. UTILIZATION REPORTING.

1. Accurate utilization data is critical to all DoD installations and is frequently used as a means to justify funding for new, improved, or enhanced ranges and training facilities. Having the ability to quote accurate usage statistics is becoming increasingly important.

a. Training conducted aboard MCB, Camp Lejeune by non-tenant units represents a significant portion of this data. In order to facilitate gathering and recording non-tenant usage data, request that any tenant command or unit sponsoring, hosting, or facilitating training by non-tenant units aboard the base, report that information to MCB Camp Lejeune, AC/S T&O, Range Control Division.

b. Host/sponsor units that schedule ranges, training areas, or facilities for non-tenants can annotate the range facility management support system comments section to identify the non-tenant unit. This information can also be passed to MCB, Camp Lejeune, Range Control by electronic means. Examples of non-tenant units include: any active component unit from Department of Defense Sister Services (i.e. U.S. Army, Air Force etc) not stationed aboard MCB, Camp Lejeune, Reserve and National Guard units, units from foreign countries, non-tenant U.S. Coast Guard units, local and national law enforcement agencies, civic or fraternal organizations and any other organization not considered a tenant command or unit.

2. Units are required to report occupation of and departure from training areas. This must be done by VHF radio to BLACKBURN. Units are required to monitor BLACKBURN 38.60 FM when occupying the training areas so Range Control (BLACKBURN) can pass information that will have an impact on weather, fire conditions and would serves as an emergency net in case the using unit(s) require MEDEVAC/CASEVAC.

Weapons Training Battalion and Special Operations Training Group (Stone Bay) are responsible for the daily accounting into RFMSS, of the utilization of training areas and ranges in their charge to include the number of people trained, weapons utilized and the number of rounds fired by type of ammo. This information will be reported to Range Control the last day of each quarter.

CHAPTER 4

MEDICAL EVACUATION PROCEDURES

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4000. GENERAL.

BLACKBURN shall facilitate and coordinate all medical/casualty evacuations involving injury to personnel training within Camp Lejeune's training areas, live fire ranges and training facilities. BLACKBURN is manned 24 hours a day, 365 days a year unless otherwise published by Naval message. All MEDEVAC/ CASEVACs shall be reported to BLACKBURN.

4001. MEDEVAC/CASEVAC ASSISTANCE PROCEDURES.

1. In the event of MEDEVAC/CASEVAC, the ROIC/RSO shall immediately contact and remain in constant communication with BLACKBURN until directed otherwise.

a. The ROIC shall inform BLACKBURN of the following information:

(1) Type of request--air or ground MEDEVAC/CASEVAC

(2) Number of patients

(3) Type of injury(ies)- patient(s) condition and whether a corpsman is present.

(4) Location of patient(s) - grid coordinates, main roads prominent terrain feature(s), or site name/range number.

(5) Hazards to aircraft at pick-up point – if applicable.

(6) Method of marking site (i.e., panels, smoke, lights, etc.) – if applicable.

(7) Source of injury (e.g., gunfire, automobile, shrapnel, etc.).

(8) Patient(s) age, sex, and blood type.

(9) Patient(s) name, grade, SSN.

b. Personnel reporting emergencies will not break communications with BLACKBURN. Ground transport is the primary means for a MEDEVAC/CASEVAC at Camp Lejeune. Use either organic vehicle or request one through BLACKBURN. There is no dedicated Helicopter MEDEVAC/CASEVAC available at Camp Lejeune. If a helicopter is airborne and available, BLACKBURN will coordinate the MEDEVAC/CASEVAC with the helicopter aircrew. However, at

most Camp Lejeune ranges, ground ambulance can arrive at the evacuation site more rapidly with more sophisticated equipment and EMS qualified personnel. Requesting units should be prepared to provide guides from a main service road to the exact location on the ground, if possible, dependant upon injuries and onsite corpsman evaluation, the injured person could be moved to a better location for pick up by ground ambulance.

c. This information must be provided via telephone and will not be transmitted on a radio. If a telephone is not available, it will be transmitted to BLACKBURN via radio. All information will be relayed to the using unit’s command by the OIC/RSO of the unit conducting the training.

d. BLACKBURN will put the affected range in a "Check-Fire" condition, as necessary. BLACKBURN will notify the Naval Hospital and continue to monitor the net. Radio checks for all ranges will be suspended (unless the unit has an emergency, i.e., MEDEVAC/CASEVAC, dud, etc...) until the situation is resolved.

e. BLACKBURN will notify appropriate Commanders, the Provost Marshal, and the RCO.

2. If BLACKBURN cannot be contacted, the unit commander/ROIC will contact the unit in the rear - or the MCB Command Staff Duty Officer at 451-2414 and provide the above information and the request.

3. The above information must be reported to BLACKBURN even if the unit arranges its own MEDEVAC/CASEVAC.

4. Under no circumstances will the names or units of anyone killed or injured on government property be released to media representatives or other members of the public. The appropriate Commander shall notify the Public Affairs Office which will release any required official statement.

4002. CASUALTY EVACUATION PROCEDURES FOR DIVING/INTERNAL PASSENGER HELICOPTER AIRCREW BREATHING DEVICE (IPHABD) ACCIDENTS.

1. Prior to conducting any diving/IPHABD operations, coordinate with the Master Diver at 2d Reconnaissance Battalion Dive Locker 450-7710. This is mandatory to ensure proper start up and assignment of the personnel to man the Transportable Recompression Chamber System (TRCS).

2. Diving accident casualties will be evacuated directly to a recompression capable facility without referral to the Naval Hospital, Camp Lejeune unless their medical condition dictates otherwise.

3. In the event of a dive casualty where the local TRCS is used, all dive/IPHBD training will cease until the TRCS becomes available.

4. The senior member of the diving unit/ROIC must:

a. Identify and evaluate patient.

b. Make decision on transportation required (air/ground).

c. Contact BLACKBURN, 451-3064, 38.60 FM or 325.0 UHF.

d. Provide patient location and transportation requirements.

e. Arrange for patient to be received by one of the following locations:

(1) Primary: 2d Reconnaissance Battalion’s TRCS.

(2) Secondary: Duke University Medical Center Chapel Hill (919-684-8111).

f. Provide medical support to accompany patient regardless of mode of transportation.

5. The RCO must:

a. Contact Base Operations, Marine Corps Air Station (MCAS), Cherry Point, (582-2233/2671/3632/3549) if air transportation is necessary. Inform MCAS, Cherry Point, when air transportation cannot exceed 800 foot altitude (air embolism is involved).

b. Contact Emergency Consolidated Communication Center (ECCC), **(911)** to request an ambulance if ground transportation is necessary.

4003. AIRSPACE MANAGEMENT DURING EMERGENCY RESPONSE REQUIRING CIVILIAN/MILITARY AIRCRAFT EVACUATION.

Regardless of the situation, emergency response aircraft entering the restricted airspace shall contact BLACKBURN on 325.0 (Military) or 119.0 (Civilian). BLACKBURN shall route

emergency response aircraft in the most expeditious manner as possible to the location requested by the “On-Scene Commander”. At all times, the emergency response aircraft shall maintain communications with BLACKBURN and shall adhere to all aircraft safety requirements as set-forth in this SOP.

CHAPTER 5

FIRING WEAPONS SYSTEMS

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5000. GENERAL.

1. Firing of flat trajectory/high velocity weapons must conform in all respects to appropriate SDZs. See MCO P3570.1_. Units firing machineguns shall ensure the down range area is cleared of all personnel. The proximity of major highways, adjacent ranges or maneuver areas demands that careful consideration be given to the range and impact point of flat trajectory projectiles to ensure that they impact within established SDZs.

2. For further guidance or specific information reference MCO P3570.1_.

5001. CHEMICAL AMMUNITION AND SMOKE.

1. The use of lethal or incapacitating chemical agents in training is prohibited.

2. Riot Control Agents (RCAs):

a. Types of RCAs authorized for use at CLNC are limited to CS, CSX, CS-1, CS-2, and CR.

b. Use of RCAs in training requires supervision by personnel specially trained in field behavior, individual protection, and first aid for RCAs.

c. RCAs will not be used under conditions that are dangerous to life, property or endangered species. Minimum safe distance to tank trails, improved trails, and TLZs is 300 meters. Minimum safe distance to public roads, built-up areas and endangered species sites is 500 meters. No RCA will be used within 1000 meters of the installation boundaries. CS can be used on tank trails/roads for armored units as long as the distance from paved roads is more than 500 meters. Road guards should be used to prevent other units/vehicles from entering the area.

d. Ensure all commanders conducting field exercises with RCAs have conducted an ORM to include but not limited to: heat condition, training of Marines, protective gear, open wounds, and contact lens use.

3. Smoke/Smoke Pots: The use of smoke in training poses special health and safety issues. Smoke may be used only under the following guidelines:

a. Personnel will carry a protective mask when participating in exercises that include the use of smoke.

b. Special care must be taken when using hexachloroethane mixture (smoke) or high capacity (HC) to ensure that appropriate protection is provided. Consideration must be given to weather conditions and potential down wind effects of smoke.

c. HC smoke is not authorized for use within the Red-Cockaded Woodpecker cluster sites. Cluster sites are marked with single bands of white paint on perimeter trees.

d. Smoke will not be used in public demonstrations, displays, or ceremonies unless positive dissipation of the smoke can be assured and no exposure to the public or non-participating personnel is expected.

e. Smoke pots must be kept dry and will not be ignited during visible precipitation. Minimum safe distance to a smoke pot is 30 meters.

5002. SIMUNITIONS/SESAMS.

1. HQMC will continue the fielding of the Special Effects Small Arms Marking Systems (SESAMS) to units stationed at Marine Corps Base, Camp Lejeune. Though simunitions/SESAMS training is less dangerous than live fire/ball ammunition, it still affords the possibility of inflicting serious injury to simunitions/SESAMS users and others training/traveling through the training areas. Simunitions/SESAMS rounds travel at approximately 500 feet per second and can cause damage to soft, unprotected tissues including the eyes, throat, genitals and exposed skins. The unit Commander using simunitions/SESAMS has full responsibility for the safe usage of this innovative training system in its assigned training location.

2. Scheduling simunitions/SESAMS usage. All requests to use simunitions/SESAMS will be initiated via RFMSS. The using unit will identify the weapon caliber to be used: 5.56, .9mm, .38cal, or 45cal and scheduled "hot times." Units can request a specific location such as Combat Town, Military Operations in Urban Terrain (MOUT), a Tactical Landing Zones/Gun Positions or an entire training area. Scheduling simunitions/SESAMS in the MOUT, Combat Town or a TLZ/GP will amount to exclusive use of the facility and an area 150 meters around it. This distance will provide a buffer area to mitigate the chance for inadvertent contact or injury. The daily range fire warning

order will highlight training locations where simunitions/SESAMS will be used. This will serve as a warning to trainers and all other personnel. Other units are authorized within the MOUT as long as the 150 meter rule is in place and coordination has taken place between the two units.

3. Safety guidance. The using unit commander is responsible for conducting training on simunitions/SESAMS characteristics, hazards, and safety procedures. The using unit Commander will ensure no live ammunition is located in the training area where simunitions/SESAMS are to be used.

a. The following face-body protection will be used by all participants:

(1) Full face/eye protection; as provided by goggles and balaclava for example.

(2) Scott Extreme Stalker Mask

(3) Jt Spectra System Mask

(4) MCU-2A/P gas mask (CQB gas mask) with outer plastic eye shield and canisters attached.

(5) Neck and throat protection can be accomplished by wrapping the neck with a towel or using commercial throat protection.

a. Overall skin protection. Camouflage utilities sleeves down, gloves, and mask should be worn during simunitions/SESAMS training events. The groin can be protected by using an athletic cup.

b. A safety vehicle and corpsman will be present just as with all live fire training events. If the safety vehicle or corpsman departs simunitions/SESAMS training will cease.

4. Rules of engagement.

a. Shots to the head or face will not be taken at personnel at all. No shots will be taken at a distance closer than 5 feet.

b. Prior to firing simunitions/SESAMS, clear identification of the target must be made, to include identification that the target is wearing appropriate facemask and protective clothing.

c. When training is being conducted in “plastic film” training structures, the RSO will ensure all personnel are wearing required protection prior to the start of training.

d. Full face and eye protection will be worn until the RSO/designated authority ensures all weapons are holstered, rendered safe and a "cease fire" call has been given.

5. Ground safety measures.

a. The using unit will secure a perimeter 150 meters around the simunitions/SESAMS training location to deny non-exercise personnel entry into the SESAMS training area.

b. Simunitions/SESAMS will not be used within 250 meters or across a civilian traveled road on MCB CLNC; i.e. Sneads Ferry Rd, Marines Rd, Hwy 172, Onslow beach road and others.

6. Communication procedures.

a. The ROIC or the RSO will call in to BLACKBURN to request permission to "go hot” with simunitions exactly as if requesting to "go hot" on a live fire range. Once BLACKBURN provides the simunitions/SESAMS brief and authorizes the use of simunitions/SESAMS, the ROIC/RSO will make normal radio checks every thirty minutes (on the hour & half-hour) stating: "Combat Town, TLZ Gull, Training Area Hotel-Hotel simunitions/SESAMS in use.” This will notify other trainers aboard MCB CLNC that simunitions/SESAMS are in use.

7. Upon completion of training, the RSO will request to "go cold" and report rounds expended, personnel trained, and conduct a police call. Once BLACKBURN places the unit in a cold status, all simunitions/SESAMS training is terminated for the day.

5003. SMALL ARMS.

1. General.

a. Range and field firing of small arms, which is .50 cal and below, includes the firing of rifles, pistols, shotguns, automatic rifles, sub-machineguns, machineguns at ground targets.

b. Do not mix blank ammunition with live ammunition. Ensure all Blank Firing Adaptors (BFAs) have been removed before all live fire events or properly attached for all blank firing

events. Ensure strict accountability of all blank/live ammunition at all times.

c. Ensure all weapons have proper Prefiring Inspection/ Limited Technical Inspections (PFI/LTIs) before firing. Requirements for scheduled PFI/LTI are based on TM 4700. Weapons should be properly cleaned and lubricated with the proper/authorized lubrication.

d. Overhead or flanking fire is authorized only as prescribed in MCO P3570.1_. Ammunition must be cleared for overhead fire.

e. Ensure all safety rules are followed and enforced IAW MCO P3570.1_.

f. All Marines will be knowledgeable on immediate action/misfire procedures for the weapon system being used.

2. Machineguns.

a. Field firing for machineguns includes the firing of 5.56mm linked, 7.62mm linked, and .50 caliber linked machineguns at ground targets.

b. Ammunition should be stored properly on all live fire ranges (BO P8020.1_).

c. No firing will be done until an RSO has ascertained that a cleaning rod and dry patch have been run through the bore from the muzzle of each gun.

d. No weapon will be loaded or half-loaded until a command to do so has been given by the RSO. The RSO shall check direction/azimuth of fire with a compass and the weapon or weapon system is pointing down range when loading ammunition.

e. No one will be allowed forward of the gun for any purpose unless/until authorized by an RSO. The ROIC or RSO will not direct anyone to go forward of the gun until they have ordered and ascertained that each weapon is in condition 4 and that all other safety rules are in place and enforced by all personnel. This does not apply to tactical exercises involving blank fire.

f. Machineguns may be fired over unprotected individuals in firing exercises provided the provisions of MCO P3570.1_ and appropriate firing tables and field manuals are followed.

Ammunition used must be cleared for overhead fire. Ammunition for overhead fire must be cleared for the same.

g. After machineguns are fired, and prior to dismounting or removing them from firing positions/vehicle mount, each gun will be inspected by an RSO to see that it is unloaded and in condition 4.

h. Units firing machineguns shall ensure the SDZ is cleared of all personnel.

5004. MORTARS.

1. Mortars are not cleared for overhead fire. At Camp Lejeune, mortars will not fire over numbered or named highways. Requests to fire from other than established mortar positions (MPs) will be handled on an individual basis with a Special Range Request ten (10) days in advance.

2. Mortars shall be fired only into G-10 and K-2 impact areas. The minimum range for 60mm mortars is 300 meters and for 81mm mortars is 400 meters.

3. A positive means to observe round impact is required.

4. All Marines who take part in mortar firing shall wear approved protective helmets, flak jacket, and hearing protection.

5. Increments removed before firing will be placed in a metal or wooden covered container located outside the firing position at a safe separation distance (25m). Unused increments will be handled and destroyed in accordance with FM 23-90. Fire fighting equipment will be on hand in all fire conditions. When burning increments/powder bags, ensure all conditions are met in accordance with fire regulations.

6. All mortar safety checks for 60/81mm mortars are mandatory before firing live ammunition. Mortar sights will be bore sighted before live fire events. Ensure mortars have required bore scope and pullover tests as required.

7. The RSO will calculate, by charge for each mortar, the left and right deflection limits and the minimum and maximum quadrant elevations that can safely be fired from that position. Units firing mortars will have applicable firing tables on the range during the event.

8. The ROIC of the live fire event will ensure each mortar leader has in their possession a copy of the safety information calculated by the Range Safety Officer. It will be written on a range card in the form of a SAFETY T. The Fire Direction Officer/Fire Direction Control (FDC) will have a copy of the safety information for that mortar unit. Mortar Ballistic Computers (MBC) are authorized. In addition to the MBC, a secondary means of computing mortar data must be used.

9. Firing restrictions and limitations in TM 43-0001-28 apply to all cartridges and fuses. Cartridge M720 will not be fired in the 60mm in the hand held mode greater than Charge 1.

10. Light Armored Vehicles (LAVs) will observe all restrictions in TM-086-55A-10A for LAV-M variants.

11. When the fire direction center calculates the firing data, the data will be checked against the "SAFETY T" by the appropriate persons for each mortar to ensure that the data calculated is safe and that the data placed on the mortar is safe. Only then can a round be fired.

12. When computing firing data, the MBCs should match exactly for range and deflection. When using an M16 plotting board to verify the firing data from the MBC, deflections should check within 10 mils and ranges should check within 25 meters.

MORTAR POSITION	GRID LOCATION
MP 1	18S TD 90273765
MP 2	18S TD 91313159
MP 3	18S TD 92493731
MP 4	18S TD 93423739
MP 5	18S TD 95143719
MP 6	18S TD 95433535
MP 7	18S TD 89763471
MP 8	18S TD 92603186

5005. HAND GRENADES.

1. It is the responsibility of the using unit of hand grenade ranges to contact Explosive Ordnance Disposal (EOD) at least five working days prior to the scheduled date of use to coordinate “on-call” support in case of a dud. It is also the responsibility of the ROIC/RSO to notify EOD prior to calling the range in “hot” so an EOD team can be placed on alert. The “on-call” EOD team will be standing by to check/clear the range upon completion of use. BLACKBURN will notify EOD that the range is “cold.” The using unit is required to remain on the range until cleared by EOD. EOD must sweep the range before the OIC/RSO is allowed to go cold.

2. Hand grenades will be thrown on dedicated grenade ranges. Once the safety pin has been pulled, the grenade will be thrown. Do not attempt to re-insert the safety pin.

3. Only one high explosive hand grenade shall be thrown at a time. Do not make unauthorized modifications to hand grenades.

4. Targets will not be placed on grenade ranges as they cause an additional hazard to EOD personnel during render safe and destruction operations of dud grenades. Throwers must consider the flight path of the grenade to make sure no obstacles alter the flight of the grenade or cause it to bounce back.

5. Live grenades will not be thrown into standing water, deep snow, or dense vegetation.

6. White phosphorous grenades will not be thrown on grenade ranges.

7. Protective helmets, body armor, and hearing protection are mandatory.

8. Before live grenade training begins, all personnel must be knowledgeable of and proficient in the safety precautions for handling and throwing live grenades. It is mandatory that individuals have successfully completed grenade training with practice grenades prior to use of a grenade range. Hand grenades will not be milked or delayed before throwing. Additional information on grenades can be obtained in FM 3-2330.

9. When a grenade fails to function, the ROIC will:

a. Cease all hand grenade throwing in the effected impact area.

b. Notify BLACKBURN of the dud hand grenade and request EOD personnel.

c. Ensure all personnel remain under cover until EOD personnel have cleared the dud.

d. Hand grenade duds are to be rendered safe, or destroyed only by EOD personnel. They will not be marked, handled, or moved except by EOD personnel.

e. Observe a minimum of a 30-minute waiting period from the time of the report to clearing a dud grenade.

f. Standby to render assistance to EOD personnel as to the location of dud grenade.

g. Request permission from BLACKBURN to continue throwing hand grenades after the dud has been cleared.

10. Cease all handling and throwing of live hand grenades one hour prior to sunset.

11. Do not move down range unless accompanied by EOD personnel.

12. Use caution or delay training during inclement weather (i.e., rain, snow, sleet) that would interfere with the grip and/or throwing of grenades.

5006. 40MM GRENADE LAUNCHERS.

1. Personnel firing the M203 and MK19 Grenade Launcher shall be instructed in the proper use, safety precautions, and immediate action procedures for the launcher prior to firing live rounds. A minimum of 6-meter separation is required between firing positions/weapon systems. Minimum target engagement is 310 meters with HE/HEDP for MK-19. When firing from a vehicle mounted with a MK-19, ensure the vehicle remains stationary with the T&E mechanism in place. Ensure the weapon system is properly mounted and locked down.

2. HE/HEDP grenades will only be fired on authorized ranges and into a dedicated impact area. Hazardous fragmentation from HE/HEDP grenade ammunition maybe experienced up to 165 meters from point of detonation.

3. Dud 40MM HE rounds are extremely dangerous due to sensitive fuzing and should not be disturbed in any fashion. Report all duds to BLACKBURN.

4. Protective helmets, body armor, and hearing protection are mandatory.

5. Proper eye protection should be worn when firing.

6. 40mm illumination/smoke (signaling devices) rounds can be used in the training areas for unit training. Ensure all safety rules and weapon conditions are supervised and enforced with the M203 40mm weapon system. Ensure all safety rules are in effect during the fire season to prevent forest fires.

5007. GUIDED MISSILES AND ROCKETS.

1. Field firing for guided missiles and rockets consists of firing TOW, MK153 SMAW, M136 AT-4 and M98 Javelin. Care should be taken with all training devices, i.e. 9mm Trainers/Miles/ Javelin. Firing unit shall recover the wire from the missile before departing the range.

2. Before firing, the danger zone (back blast area) to the rear will be cleared of personnel, material, vehicles and vegetation when firing SMAW/AT-4/TOW. Firing the AT-4 from foxhole/prone position is not authorized.

3. All loading preparations for firing and unloading will be done on the firing line, with the weapon pointed down range. Sighting systems or missiles will not be loaded behind the

firing lines. Firing of anti-tank rockets over personnel is not authorized. Single hearing protection is required. Prefire inspection of all rockets/missiles is required.

5008. ARTILLERY.

1. General. Artillery will only be fired from designated gun positions (GP) unless an SRR has been approved for other areas/sites.

2. Impact areas for G-10, K-2, and BT-3/N-1 are described in Appendix B of this manual.

3. A positive visual means to observe round impact is required.

4. Installation public roads approved for use by personnel during artillery firing must have signs posted warning the public that artillery rounds may be fired over the roads. During extreme weather conditions, Range Control may impose additional restrictions to reduce noise levels.

5. Personnel access to Area E, as depicted in MCO P3570.1A, Chapter 11, Page 11-4 within the SDZ is prohibited. Weapon crews firing from an approved tactical configuration and operational personnel involved in the firing exercise with a valid need to enter this area may do so with the approval of the RCO. The firing unit will emplace necessary downrange/road guards or barriers. Traffic on main and secondary roads may be delayed intermittently for short periods of time (5 minutes) when properly scheduled and coordinated with the RCO/BLACKBURN.

6. Artillery Safety. Artillery unit safety certification programs, to include specific artillery safety billets, will be in compliance with MCO P3570.1_ and the artillery JtRegtO P3570.1B. Review MCO P3570.1_ for additional information on field artillery safety requirements.

a. Ensure all safety checks are completed before live fire events.

b. Ensure all safety personnel are properly trained and proficient in duties.

7. Danger Areas.

a. The Secondary Danger Area (SDA) grid coordinates listed in Appendix B under the appropriate range, define the outer limits of the surface danger zone. Surface danger zones

constructed manually will use these grid coordinates and the procedures listed in MCO P3570.1_.

b. The Primary Danger Area (PDA) grid coordinates listed in Appendix B under the appropriate range will be used as "initialization points" in the Automated Range Safety System (ARSS) for the safety computation.

8. Ammunition and Propellants.

a. Alteration of fuses/ammunition is prohibited.

b. Unused powder increments will be burned in position in accordance with MCWP 3-1.6.23 and unit SOP. If conditions preclude the firing unit from burning powder increments in the current position, they may be removed for burning to the next position. Range Control will be notified prior to and upon completion of burning powder increments. Fire fighting equipment will be on hand in all conditions. Powder increments will not be burned during high fire readiness condition.

c. Firing of ICM and antipersonnel-type projectiles in training is prohibited.

d. Prior to firing artillery illumination, check with BLACKBURN for aircraft flights to minimize interference with night vision flights/night flights.

9. The maximum ordnance will not exceed the restricted airspace outlined in Chapter 8 of 17,999 feet.

10. Check rounds will be fired upon initial occupation of any artillery firing position. The target for the check rounds will be located near the center of the target area.

11. Any projectile that bursts or lands outside the impact area will require immediate action and investigation in accordance with the artillery JtRegtO P3570.1B.

12. The only authorized Artillery Direct Fire range is the G-7 Range. A separate listing of safety rules and policies will be provided to the firing unit from 10th Marines.

13. The only gun position authorized for the construction of howitzer pits (Artillery Fire Base Training) and the training of artillery regimental engineers and the use of engineer equipment is GP-23 as approved by Commanding General, Marine Corps Base,

Camp Lejeune Decision Memorandum 01-39. Engineer training at this gun position satisfies the requirements of MCO 3501.26A (ARTILLERY T&R MANUAL) (Section – Regt Engineers – 200 Level (SC-RE-202) and MCO 3501.26A (ITS 1345.2.4, 1345.2.5, 1345.4.1, 1345.6.6. Request to conduct engineer operations in this gun position will be submitted as a SRR.

a. No earth moving/disturbing activities will be conducted within 20 meters of a delineated wetland.

b. Berms will be no higher than five feet. Each pit will not exceed 20 meters in width or 25 meters deep. Only three sides of the berm will be constructed. With a maximum of six howitzer pits being constructed, dirt for the berms will be pushed from the outside of the howitzer pit and no holes will be dug. If additional dirt is required, it may be obtained from the dredge spoil site on Weil Point Road.

c. All excavation sites will be leveled out and graded at the end of each training evolution. At no time will trash/dunnage/tactical wire/other items be burned or buried.

d. No petroleum products including fuel, oil and lubricants will be stored or used (temporarily or permanently) at this gun position.

e. The only tactical formation authorized is battery on line when engineer operations are conducted.

f. Coordination for engineer support is the responsibility of the using unit.

g. No clearing of existing forest is authorized.

h. Engineer training at GP-23 will not exceed six evolutions on this gun position.

i. Unused propellant charges are authorized to be burned on this gun position.

j. Prior to the unit departing. GP-23, the GP shall be inspected by a range inspector

ARTILLERY GUN POSITIONS	**GUN POSITION GRIDS**
GP-1	18S TD 89774226

GP-2	18S TD 91334132
GP-3	18S TD 92804082
GP-4	18S TD 90313792
GP-5	18S TD 93873721
GP-6	18S TD 95103682
GP-7	18S TD 96213551
GP-8	18S TD 95423514
GP-9	18S TD 97003507
GP-10	18S TD 91623074
GP-11	18S TD 92503188
GP-12	18S TD 92702995
GP-13	18S TD 91642860
GP-14	18S TD 90122930
GP-15	18S TD 90612833
GP-16	18S TD 88693088
GP-17	18S TD 89382920
GP-18	18S TD 89602750
GP-19	18S TD 89362679
GP-20	18S TD 88682545
GP-21	18S TD 87593117
GP-22A	18S TD 87092623
GP-22B	18S TD 87192607
GP-23	18S TD 86673396
GP-24	18S TD 86453140
GP-25	18S TD 85863090
GP-26	18S TD 85832920
GP-27	18S TD 85122862
GP-28	18S TD 84723295
GP-29	18S TD 85353235

GP-30	18S TD 84593046
GP-31	18S TD 82573076
GP-32	18S TD 81333022
GP-33	18S TD 80553117
GP-34	18S TD 78523693

5009. TANKS AND LIGHT ARMORED VEHICLES.

1. Tanks equipped with 120mm main gun and LAVs equipped with 25mm chain gun are authorized to fire at ranges designated in Appendix A. Only training practice ammunition will be fired on SR-7 and SR-10.

2. Although the Commander of the unit is responsible for safety during all phases of firing, vehicle Commanders are responsible for the safe firing and operations of their vehicles.

3. Static firing. During daylight and good visibility, the firing vehicle will display flags. At night and during reduced visibility, the firing vehicle will display lights.

a. Color Displays.

(1) Red. Vehicle engaged in firing, weapons must be pointed at the target area.

(2) Green. All vehicle weapons are clear and elevated. Any live ammunition in the vehicle is properly stowed.

(3) Yellow. Vehicle has malfunction. Yellow is used only in conjunction with red or green.

(4) Red and Green. Vehicle is performing prep to fire checks or the crew is performing a non-firing exercise. Weapons are clear, but not elevated.

(5) Red and Yellow. Vehicle has a malfunction or misfire. Weapons are not clear and are pointed at the target area.

(6) Green and Yellow. Vehicle has a malfunction. All weapons are clear.

4. Firing on the move and battle runs. Once a vehicle begins its battle run and passes the start firing line, all weapons are considered to be loaded and ready to fire. Flags or lights are not required to be displayed, but their use will provide a greater degree of control when more than one vehicle is firing on the move. Cross-range firing of weapons is not authorized on SR-7 and SR-10. Using units will police all range roads on SR-7 and SR-10 and remove all ammunition dunnage/brass/links/tank round canisters from the range.

5. Completion of firing. When the vehicle has completed its battle run and the vehicle's weapons have been cleared and checked by the RSO, it will move to the rear of the range and out of the firing area or maneuver box. Review MCO P3570.1_ for additional information on tank and light armored vehicles firing.

6. Exiting the range. The Tank Commander or the RSO will ensure the main gun is aligned within the envelope of the vehicle width when traveling off range on the roadways or tank trails. Report all maintenance problems on tank trails/road crossing pads to BLACKBURN or a Range Inspector.

5010. AERIAL GUNNERY.

1. Safety measures, ranges and firing requirements for aerial gunnery, including rockets and missiles, can be found in Appendix B of this Manual. This training will be handled as a SRR. Ensure procedures are in place for jammed/runaway gun.

2. Pilots and gunners will be familiar with the impact area, firing limits, SDZs, Battle Positions (BPs) and Safety regulations for the range on which they will fire.

3. Communication will be maintained between ROIC/RSO, firing aircraft, (Navy Boat Crew when applicable), and BLACKBURN at all times.

4. Aircraft weapons system will be loaded or unloaded only at approved areas.

5. The master arm switch will be placed in the safe position before leaving any firing position.

6. Door Gunnery operation will be conducted in accordance with the appropriate gunnery manual established by MAWTS-1 and appropriate TMs.

7. The Aircraft Commander will ensure that his aircraft is properly oriented with the primary direction of fire on the range before firing.

8. When conducting Close Air Support (CAS) or Simulated CAS, aircraft will be under positive control of a Forward Air Controller/Forward Air Controller Airborne (FAC/FAC(A)).

9. Before all live fire, each aircraft will conduct a cold pass of the target area to ensure unsafe conditions do not exist.

10. FAC/FAC(A) procedures shall adhere to the Joint CAS Publication JP3-09.3.

11. Review MCO P.3570.1_ for additional information on aerial gunnery firing.

5011. AIR DEFENSE WEAPONS.

1. Safety measures, ranges, and firing requirements for air defense weapons can be found in Appendix A of this Manual.

2. The E-1 range is the only location for live fire of air defense weapons. Ensure procedures are in place for jammed/runaway gun, primarily the stinger and avenger weapon site.

3. Review MCO P.3570.1_ for additional information on aerial defense weapons.

4. Ensure all environmental policies for turtles are enforced and supervised during the turtle nesting season.

5012. DEMOLITIONS.

1. General. The use of high explosive demolitions will be confined to designated demolition ranges (ETAs). However, requests for the use of demolitions in other training areas/ranges will receive consideration once approved by a SRR. Demolitions used to simulate support fires, when authorized, will be limited to the use of 1/4-pound blocks of TNT. Review MCO P3570.1B, Chapter 17 and FM 5-250 for additional information on demolition training.

a. Charges will be fired in specially prepared pits, per MCO P3570.1_ with positive means to keep personnel at safe distances to protect hearing, injury from fragmentation, and inadvertent/premature detonation.

b. Ensure that all personnel wear appropriate safety equipment (helmets, flak jackets and hearing protection).

c. All demolition operations must be discontinued during or on approach of a thunderstorm.

d. All non-participating or observing personnel will either be in a bunker or outside of the SDZ of the demolition training pit during firing of live explosives.

e. Mixing of live and inert demolition for training is prohibited.

f. Cratering charges will not be exploded in roads leading into or adjacent to the range. A plan must be in place to fill in all holes that may have been made by a cratering charge.

g. The use of field expedient demolitions/devices (i.e., modified/improvised Claymore Mines, Bangalore Torpedoes, and cratering charges) is not authorized unless approved by Range Control via a SRR (10) ten workdays in advance of planned use.

5013. MINES, BOOBY TRAPS, AND PYROTECHNICS.

1. Mines and Booby Traps.

a. These regulations apply to the use of all types of mines and booby traps. For additional information on mine/booby traps, review MCO P3570.1_.

b. The use of live mines and booby traps will be confined to controlled firing demonstrations. Such demonstrations may be conducted on any ETA of approved size for that quantity of explosive.

c. All personnel will wear flak jackets and helmets with chinstrap buckled and hearing protection.

d. Units firing a M18A1 Claymore mine will strictly follow procedures in FM 23-23.

e. Practice mines and booby traps may be used in all maneuver/training areas and on all demolition ranges provided necessary safety precautions are taken as stated in MCO 3570.1A, Chapter 18, Para 18-11. The using unit will remove all devices after the training event.

f. Utmost care will be taken to ensure no live, practice mines, or booby traps with any type of explosive device are left on any range or in any training area. Such items will be counted before issue and retrieved on completion of the demonstration or training. The using unit will sweep the range/ training area after a training event and remove all ammunition dunnage.

5014. FIRE AND MANEUVER.

1. Fire and maneuver exercises will be conducted only on designated ranges. Review MCO P3570.1_ for additional information on live fire and maneuvers ranges. Commanders whose units are participating in live fire exercises will ensure all individual weapons teams/crews have fired and passed a qualification course for the weapon or weapon systems they will fire in the live fire movement exercise.

2. Sufficient Safety Officers in addition to OIC/RSO, shall be designated whenever fire and maneuver exercises are conducted to ensure every Marine is positively controlled.

3. Each Safety Officer shall be located so that all personnel under his/her jurisdiction are within observation at all times. The Safety Officer shall be equipped with an appropriate signaling device to affect a CEASE FIRE in the event of danger or an emergency. Firing exercises conducted during darkness will require stricter control measures, using appropriate signaling devices. Safety Officers shall be present for all walk throughs and rehearsals.

4. The ROIC, the RSO, and designated Safety Officers shall be thoroughly familiar with safety provisions of MCO P3570.1_, which describes the criteria for flanking/frontal firing.

5. The ROIC shall conduct a detailed safety brief of the planned exercise.

6. Using units are required to perform an ORM for all live fire and maneuver events.

7. Make certain all weapon system gunners have conducted gun drills, BZO/Zero/ISMT training, and live fire qualification with the weapon system assigned to him.

8. The ROIC will instruct firing personnel as to lanes, limits of fire, direction of fire, and the safety regulations for that range.

9. All using units will conduct rehearsals/dry run exercises prior to live fire events using the same conditions on the assigned range (example night rehearsal for night attack).

a. Train subordinate commanders and safety/controller personnel before conducting live fire exercises on the live fire scheme of maneuver/timeline and other safety requirements before the live fire event.

b. Submit a coordinated/detailed plan to the RCO. This plan will include, but is not limited to:

(1) A detailed scheme of maneuver and fire support plan including SDZs (with required data).

(2) A list of weapons, ammunition, lasers, pyrotechnics, smoke, and chemicals to be used.

(3) Unit control measures, including means of communications.

(4) Terrain features and facilities required.

(5) Any other pertinent information concerning the proposed live fire exercises that will assist in evaluating the safety of the event.

(6) ORM worksheet; see Appendix E, Operational Risk Management (ORM).

c. Provide for safety checks of each weapon system before/after firing live ammunition.

d. Brief participants on the capabilities of the weapons used by other units/components in the live fire exercise.

10. Aircraft participating in fire and maneuver exercises shall have communications with either a FAC/FAC(A), BLACKBURN, or an approved airspace control agency at all times.

11. Only authorized ammunition will be fired for live fire and maneuver events. Ammunition must be cleared for overhead firing.

5015. PISTOL RANGES/MILES 2000

1. All Camp Lejeune pistol ranges are set up by a civilian contractor and require 24 hour advance scheduling. Range operators are not provided. Using unit must provide a trained PITS operator for the remote control unit (RCU).

2. Training on the remote control unit and the PITS system is available by the contractor Monday through Friday on a walk-in basis by contacting 451-5491 at Building 1404 on Elm Street.

3. When the range is signed for at Building 54 Range Control, the using unit will be issued a key for the range shed. In the shed will be the support box/can containing a staple gun, box of staples, target paster, white/black and target faces. It will also contain the remote control unit RCU which will operate the PITS targets. Using unit must protect the RCU from the weather and should handle it with care. Once training is completed, the support/box can and RCU will be placed inside the storage shed and locked.

4. Using unit will be responsible for a complete and detailed police call of the entire range to include parking lot firing lines and target/bullet trap area.

5. Any problems with the operation of the PITS systems/RCU, contact the contractor at 451-5479. Report all damage to MCB contractor representative at 451-7394.

For MILES 2000 equipment, use the website www.miles-2000.net Personnel are required to be trained prior to obtaining equipment. Contact the MILES warehouse (451-9009) to schedule training or obtain equipment.

CHAPTER 6

ENVIRONMENTAL PROCEDURES

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6000. GENERAL.

1. It is the responsibility of each individual to preserve our natural resources for training and military operations. As professional Marines, we should strive to provide realistic training while protecting Camp Lejeune's natural environment for future generations. The following guidelines were developed to support the best utilization of Camp Lejeune’s training areas and also protect the environment. Regulations concerning environmental restrictions are mandated by Federal Law and are applicable to all Federal agencies including military reservations, which are public lands. Additional guidance on how to train and preserve the environment can be found in “The Environmental Handbook.” This handbook is an excellent source of information and can be obtained by calling the Range Control Office.

6001. PROTECTED SPECIES.

1. Camp Lejeune is home to nine Federally listed threatened or endangered animals and plants and multiple state-protected plants:

a. Red-Cockaded Woodpecker (RCW)

b. Sea Turtles (Loggerhead, Green, Kemps Ridley, Leatherback and Hawks Bill)

c. American Alligator

d. Manatees

e. Migratory Shorebirds

f. Bald Eagle

g. Whales (Migratory)

h. Rough-Leave-Loose Strife

i. Seabeach Amaranth

j. Hirst’s Panic Grass (Proposed)

k. Venus Fly-Trap and Coastal Goldenrod are of special concern to the state of N.C. and are afforded special protection.

1. Commanders, Officers-in-Charge and NCOICs will ensure strict compliance with applicable regulations regarding these protected species listed in BO 110156C, BO 110157C and BO 110153B.

2. The endangered red-cockaded woodpecker (RCW) habitat is marked with a single band of white paint around area trees and further marked with signposts. The only authorized activities in RCW habitat (clearly marked) are: blank small arms firing, movement on foot, and use of wheeled or tracked vehicles on existing well-defined main roads/trails through such habitat. Endangered plant species populations are clearly marked in the same manner as RCW habitat, with the same training restrictions as applicable to the RCW. Site-specific information can be obtained from the Environmental Conservation Branch (ECON), Environmental Management Division (EMD), Installations and Environment Department (I&E) personnel at 451-5063.

6002. ENDANGERED ANIMALS.

1. Red-Cockaded Woodpecker (RCW). The RCW is an endangered species protected by Federal law. Red-Cockaded Woodpeckers are cavity-nesting birds and depend on live pine trees for their survival.

a. The Base Commander has implemented the following program to protect RCW habitat: Buffer Zones extending 200 feet out from each cluster of cavity trees are marked with single bands of white paint on the trees and signs reading:

Restricted Area Endangered Species
No Vehicles Allowed
And
Endangered Species Colony Buffer Zone

b. The following actions are prohibited under Public Law 93-205, Endangered Species Act of 1973, and Base Orders concerning the RCW and marked buffer zones:

(1) The use of any vehicle, wheeled or tracked, off designated trails in the buffer zone.

(2) The cutting or damaging of pine trees of any size within the buffer zone.

(3) Any excavating or digging within the buffer zone.

(4) Bivouacking and the establishment of command posts within the buffer zone.

(5) "Tree topping" of antennas, girdling of pine trees with communications wire, burying of cable and the climbing of pine trees with tree gaffs within the buffer zone.

(6) The firing of artillery or mortars within 200 meters of a cavity tree.

(7) The removal or destruction of signs marking a restricted area.

(8) Cutting down or damaging any type of tree in any training area unless authorized by the Assistant Chief of Staff, Installations and Environment.

c. Failure to comply with the above actions may result in punitive action.

d. The following actions are authorized inside or within the RCW buffer zone:

(1) Transient foot travel.

(2) Transient vehicular traffic ONLY on EXISTING MAINTAINED trails/roads.

(3) Blank small arms firing.

(4) The cutting of hardwood foliage is permissible for camouflage and concealment.

2. Sea Turtles. Although there are many types of sea turtles, Camp Lejeune beaches are most frequently visited by the green sea turtle and the Atlantic loggerhead turtle. These threatened species are particularly vulnerable to predators and poachers during the May-October nesting season. Federal law prohibits disturbance of the turtles, their nests, or eggs.

a. A wire cage surrounds all known nests and have signs posted reading:

LOGGERHEAD TURTLE NEST
DO NOT DISTURB

or

ENDANGERED SPECIES NEST
DO NOT DISTURB

b. The following rules for the protection of the sea turtles apply:

(1) Use of Onslow Beach between Risley Pier (901264) and Onslow South Tower (883251) is authorized. All other areas of Onslow Beach are subject to restrictions during the nesting season of May through October.

(2) During the nesting season, night landing exercises should be reduced to the minimum level.

(3) During the nesting season, night lighting on the beaches should be kept to a minimum or eliminated, if possible.

(4) Vehicular traffic on the beaches is restricted to the tidal zone except within the identified operating area, providing all turtle nests have been removed from the operating areas prior to any landings.

(5) The Environmental Management Division (EMD), Installations and Environment Department must be notified immediately at 451-5063 upon discovery of any sea turtle nest that has not been marked/protected to ensure its successful relocation.

(6) During the nesting season, nighttime use of the beaches for recreation will be restricted to those uses not requiring artificial lighting or fires.

(7) Off road recreational vehicles (ORRVs) utilizing Onslow Beach are subject to regulations in BO11017.1D. A base beach sticker is required for all privately owned vehicles on the beach. The beach sticker can be obtained from the Base Game Warden.

(8) Nests between Risley Pier and South Tower will be relocated to other safe locations. Only EMD personnel shall accomplish the relocation of the nest.

3. American Alligator. The American alligator is on the Federal Threatened Species list. Camp Lejeune's wetlands provide a suitable habitat for alligators in both fresh and salt-water estuarine areas. Precautions should be taken between the months of May and June when the female alligator usually lays her eggs. She lays 20-60 eggs in a nest consisting of

mounds of vegetation. Areas known to contain alligators are marked with signs saying:

DANGER
THREATENED SPECIES HABITAT
AMERICAN ALLIGATOR
STATE PROTECTED
DO NOT DISTURB OR FEED ALLIGATORS
SWIMMING BY PERSONNEL OR PETS
STRICTLY PROHIBITED

4. Manatees. Manatees have been sighted in the waters adjacent to Marine Corps Base Camp Lejeune. Specifically, manatees have been observed in Mile Hammock Bay and the AIWW. Manatees are a very slow moving mammal. As such, boat collisions are a significant source of manatee mortality from both impacts and propeller damage. Manatees can grow to 15 feet in length and are uniformly gray or gray-brown in color. Everyone conducting waterborne operations should be alert for possible sightings/encounters. If a manatee is sighted, immediately slow to a no-wake speed. Allow sufficient room for the manatee to maneuver and proceed cautiously away from the encounter area. Under no circumstances approach the manatee. Report all sightings to the Camp Lejeune Fish and Wildlife Branch at telephone number 451-5063.

5. Piping Plover. The southern section of Onslow Beach provides a unique and important nesting habitat for Piping Plover and several other migratory shorebirds showing dramatic population declines. At least five species of birds nest along the sparsely vegetated beach area and among the accreting and/or eroding sand dunes at this location. From April-August, portions of the New River Inlet beach are closed to vehicle traffic with signs, which state:

SHORE BIRD
NESTING AREA
VEHICLES
PROHIBITED

6. Bald Eagle. The JD Training Area near the Sneads Ferry Gate has been established as a Temporary Wildlife Restricted Area due to the nesting of Bald Eagles. The temporary wildlife restricted area will be in the JD training area east of highway 172. The Endangered Species Act requires that certain restrictions be placed near the nest site. The nest is located at GC 803297. During the nesting season (Oct 1-May 15),

unauthorized human entry must be avoided within the primary zone. The occupation of helicopter/fixed-wing aircraft are restricted to 500 feet or higher vertical distance and 1,000 feet or longer horizontal distance from the nest as they are considered detrimental to the nesting eagle. Aircraft using the LHA Deck will only ingress/egress from the north, south, or west of Highway 172. Additional Bald Eagle nests may exist but are as of yet undocumented on the Installation. Bald Eagle sightings occurring from January – June should be reported to EMD personnel at 451-5063.

7. Whales. The northward migration of the Right Whale, an endangered species, occurs February through April each year. The possibility exists that females and calves can migrate as close as 1/4 mile off Onslow Beach. If a whale is spotted, all live fire operations into coastal waters (N1/BT-3 Impact Area) should be halted and EMD notified at 451-5063. During this period of halted operations, extended air sweeps will be conducted prior to resuming live fire operations into the N1/BT-3 Impact Area.

6003. ENDANGERED PLANTS.

1. General. Two federally protected and one state protected plant species are found aboard Camp Lejeune.

a. Rough-Leaved Loosestrife. The Rough-Leaved Loosestrife is a federally listed endangered plant usually found in or adjacent to wetlands. Sites containing Rough-leaved Loosestrife are clearly marked as restricted areas, with a single band of white, non-toxic latex paint on the lower portion of tree trunks and signs reading "Restricted Area Endangered Species Site," or "No Vehicles Allowed." This restricted area will extend 100 feet from the outermost plant. Within this area, vehicular traffic, digging and extended occupation are prohibited.

b. Seabeach Amaranth. Seabeach Amaranth is a federally listed endangered plant found on the frontal dunes of Onslow Beach. Any Seabeach Amaranth sites will be posted with “No Vehicles Allowed” signs. All vehicles must stay off and out of these sites.

c. Venus Flytrap. The Venus flytrap is an extremely rare species and is protected by North Carolina Law. Digging up Venus flytraps is prohibited.

6004. OFF ROAD VEHICLE MOVEMENT.

1. General. Do not drive around or open any gates and drive through any chain-link fences or enter any areas that are posted as “Hazardous Waste Site,” or “Authorized Personnel Only.” When grasses and shrubs are damaged or removed, particularly as a result of vehicle movement, the bare soil is subject to erosion. Over time, erosion results in a barren area of deep ruts, large holes and flooding, greatly restricting foot and vehicle movement. Report excessive damage to road, trails, and vegetation to Range Control so damage may be assessed and necessary corrective measures may be taken. Marines on foot should not cross into any area marked as a “HAZMAT” site.

a. Tracked vehicles must be kept to tank trails transiting to/from designated training areas, i.e. tactical landing zones accessible by tank trails, freeplay tracked vehicle training areas designated by Range Control (Mobile Assault Course), MOUT CTF and Combat Town. Consult Chapter 3 regarding scheduling of the above mentioned.

b. Tracked vehicles must cross railroad tracks and paved roads at tank pad crossing sites. Using unit will/must sweep roads after crossing.

c. Road guards will be used when crossing paved roads and remove all debris from the tank pad crossing generated by the tracked vehicles. At night, ensure all safety gear, vests, flashlights, etc., are worn by road guards.

d. Tracked vehicles are to avoid the wetlands which occur throughout much of MCB Camp Lejeune. If a vehicle operator is not sure if an area is a wetland, move to higher ground. All vehicles will avoid freshwater fish ponds.

e. All vehicle travel through marked woodpecker habit areas is restricted to established trails.

f. Tracked vehicles are to avoid road shoulders of paved roads.

g. Trees will not be knocked down.

h. Trench systems and tank traps are authorized in designated free play tracked vehicle areas after approval by Range Control and the Environmental Management Division (EMD).

i. Tracked vehicle movement and off road movement by any vehicle is prohibited on Jarretts Point south of a line from grid coordinates 81552970 to 81752970. Signs on that line identify a federally protected archaeological site.

j. Take measures to reduce silting of streams caused by all vehicles at fords and approaches. All areas subject to or showing signs of erosion will be avoided, especially by heavy equipment and tracked vehicles. No digging or land contouring is allowed in these areas.

k. Tracked vehicle movement and off road movement is prohibited on marked archeological sites, which have signs that state:

RESTRICTED AREA
EXCAVATION, DIGGING, VEHICLES PROHIBITED
BY ORDER CG, MCB

6005. FIGHTING POSITIONS.

1. General. Fighting holes, trench systems, tank traps, hull-down positions for tanks and artillery, and other fighting positions are an important part of training and are authorized. However, everything you dig should be refilled and leveled after you've finished training! This will prevent erosion and enable other units to use this area safely.

a. All ground repairs will be done within 72 hours of the end of the training. Only the Base Range Control Officer may grant extensions. You must observe the following when conducting ground repairs:

(1) Do not dig any manner of hole nor deposit any manner of fill in wetlands. If you think you are in wetlands, go to higher ground before digging.

(2) Do not dig up any drums or other potentially hazardous waste material. If drums or other unknown materials are encountered during excavation, stop and immediately notify the Installation Restoration Division at 451-9461.

(3) Do not cut tank traps, dig fighting holes, or create obstacles in TLZ.

b. When placing expedient roadblocks during tactical exercises, ensure that they are kept under observation and manned while in use, as emergency vehicles and/or official

observers may require access. When not in use, remove all tactical wire.

c. Any excavating or digging within the RCW buffer zone is prohibited.

d. Due to continued assessment and remedial activities by Environmental Quality Branch (EQB) aboard MCB, Camp Lejeune, groundwater-monitoring wells may be encountered during training maneuvers. If a monitoring well is discovered and inadvertently damaged, immediately contact EQB at 451-5068 for further instructions.

e. Any excavation or digging within the marked boundary of an archeological site is prohibited unless coordinated with the Base Archaeologist at 451-7230/5063.

f. The excavation of fighting holes for training exercises involving larger than platoon size unit participation must be coordinated with the Base Archaeologist.

6006. LAYING CABLE AND FIELD WIRE.

1. General. Use of communication wire and concertina/barbed wire is essential during training, but when these wires are left behind, they become real hazards. Old wire lying in the underbrush and along the road can become tangled around Marines, animals, and tracked/wheeled vehicles; it also impedes forestry operations. When laying cable field wire, you must:

a. Recover and police all communications and concertina/barbed wire. It is expensive and can normally be used again.

b. Double check to see if you've picked up all trip wires, especially those connected to pyrotechnics. It is the using units responsibility to remove training devices such as flash bangs and trip flares.

6007. CUTTING BRUSH AND TREES.

1. General. Forested areas are an extremely important resource on Camp Lejeune for both training and the environment. When cutting brush and tree limbs or trees, you must abide by the following:

a. When it is necessary to cut brush and hardwood tree(s) limbs for camouflage, do not cut or knock down any standing

hardwood trees or tree limbs that are larger than the diameter of your arm.

b. Taking down any size tree by explosive methods and the cutting or knocking over of trees on any engineer training range is prohibited.

c. The cutting or damaging of pine trees of any size within the RCW buffer zone is prohibited. At no time will any pine tree(s)or pine foliage be cut for camouflage aboard MCB, Camp Lejeune.

6008. ARCHEOLOGICAL SITES.

1. General. Many archeological sites are present throughout the Training Areas of Camp Lejeune. BO 11000.19A provides for the protection against unauthorized excavation, removal, alteration or defacement of archeological resources. Sites that are evaluated as significant will be marked with signs through coordination with Range Control. Sites not yet evaluated for significance will not be marked/signed, but potential impacts will be assessed on a case-by-case basis. Potential training related impacts to archeological sites determined significant will be assessed and appropriate measures to minimize or mitigate adverse effects to the site will be undertaken.

a. Established areas with signs posted indicating an archeological site, training is restricted as follows:

(1) Walking across these areas are permitted. However, at no time should you dig, pick up, or tamper with anything in these areas. Driving or parking vehicles on these sites is strictly prohibited.

(2) These areas are to be used only for non-vehicular training, except for existing trails, in order to preserve these unique natural resources. For clarification of training impact adjacent to these areas, contact MCB, EMD at 451-2148.

(3) Wheeled vehicle and troop maneuvers may continue in areas presently designated for those activities. Tracked vehicles are restricted to existing trails. Operations or projects on or around marked sites require approval from the Base Archeologist.

(4) Collecting bone or artifacts from any archeological site is strictly prohibited.

(5) If human remains are discovered or suspected, immediately stop all ground disturbing activities to avoid further disinterment. Notify EMD at 451-5063, the Base Archeologist at 451-7230, and the Provost Marshall so that it can be determined if the remains are of an archeological nature.

b. Portions of Jarrett's Point Training Area located in the JC Area are designated archeological sites. Training is restricted as follows:

(1) No troop training south of line GC 81552970 to 81752970. Restricted area signs mark this line.

(2) Helicopters conducting external lifts using HRST personnel may operate south of the line.

(3) Ingress and egress to this area is restricted to foot and wheeled traffic on existing trails.

(4) Road grading and any other engineer training, which will disturb the soil, is prohibited without written consent of CG, Marine Corps Base, AC/S T&O.

c. Glenoe Stock Farm/Onslow Hall located in the KB area, General Edward Ward Plantation located in the HC area and Mitchell-Montford-Ward Grist Mill located in the FA area are all archeological/historic sites delineated by signs saying:

RESTRICTED AREA
ARCHEOLOGICAL - HISTORIC SITE
EXCAVATION, DIGGING, VEHICLES PROHIBITED
BY ORDER CG, MCB

6009. FIELD WASTE DISPOSAL.

1. General. Field mess facilities generate four types of waste: liquid, garbage, rubbish and human waste. The disposal of this waste must not create conditions that endanger troop health. Unit commanders have a responsibility to supervise and inspect training areas and live fire ranges to ensure that they are policed properly and field wastes disposed of properly.

a. Liquid Waste. In the field, bathing and liquid field mess wastes (gray water) may be disposed of in the soil by using a soakage trench.

(1) Camp Lejeune soil conditions make the use of a soakage trench the only allowable method for disposal of liquid waste. A soakage trench consists of a central pit, two feet on

a side, one foot deep. A trench is dug outward from each side of the pit at least six feet. It must be one foot wide and one foot deep at the central pit and increase to one and a half feet deep at the far end. The bottom of the pit and trenches are filled with small rocks. One soakage trench can absorb the liquid waste from 200 diners for up to two weeks. If the field mess is to be used for more than two weeks, construct two trenches for each 200 diners and rotate them daily.

(2) In order for the soil to absorb gray water, grease, scrap food, and other suspended solids must first be removed by a grease trap. A grease trap must be placed between the field mess or shower unit and the soakage trench. It may be of the filter or the baffle type.

(3) Field showers/mess units must be located on adequately drained soils, at least 150 feet from nearest surface water and at least 500 feet from nearest drinking water well.

(4) Contact EMD at 451-5063 to have site evaluated for soakage trench use. In the event that soil conditions are not suitable for soakage trenches, portable facilities shall be used.

(5) Requirements for soakage trench closure are:

(a) Spray the trench contents and the closest two feet of the surrounding area with an approved residual insecticide.

(b) Fill the trench with successive layers of earth, packing each layer down before adding the next.

(c) Mound the trench with at least one foot of compacted dirt.

(d) Spray the mound with an approved residual insecticide.

(e) Ensure the Preventive Medicine Unit, Naval Hospital, at 451-5707, inspects soakage trenches <u>BEFORE</u> use and after closing.

b. Garbage.

(1) Garbage is the solid or semi-solid wet waste that results from food preparation, cooking and serving. Because it is composed of organic material, garbage attracts flies and

animals that spread disease. It also quickly decomposes, causing unpleasant odors. At Camp Lejeune, return garbage to an administrative mess hall for proper disposal. While in the field, and during transportation to a mess hall, keep it in covered containers or plastic garbage bags.

(2) Garbage when improperly handled and disposed of, will attract wildlife to field mess facilities and bivouac/encampments, which greatly increases the risk of disease transmission and personal injury. Plan to avoid these conflicts that will provide for a safe training environment and not result in unnecessary harassment or destruction of wildlife.

(3) Follow these handling guidelines for garbage:

(a) Do not leave garbage on the ground overnight, even if it is contained in plastic bags.

(b) Store food in lockable or animal proof containers.

(c) Locate dumpsters away from tents, high pedestrian traffic areas, and high-speed roads.

(4) DO NOT FEED WILD ANIMALS.

c. Trash. Habits formed with regard to trash handling pay off in combat. Disciplined units leave no "intelligence" track for the enemy to exploit. Expeditionary operations generate trash. To ensure that we will be able to continue training at Camp Lejeune, the following is required:

(1) Police your area. Each unit utilizing a training area is responsible for its state of police upon completion of training. For all trash accumulated, recycle when possible. Segregate trash by type--ammo dunnage, brass, links, metal, cardboard, wood--and transport to the Recycling Center or landfill as appropriate. Use dumpsters when available, but only for small trash intended for the landfill. At no time will trash be buried/burned in a training area.

(2) Crush and flatten all cardboard boxes and transport to the Recycling Center when cardboard recycling containers are unavailable; otherwise place in green “cardboard only dumpsters.” Cardboard that is not acceptable for recycling, or placement into cardboard dumpsters are paste or paperboard, wax-coated, plastic-coated, and food contaminated materials.

(3) Do not place grass, leaves, pine straw, lumber, metal, pallets, dirt, or other weighty materials in or next to the dumpsters.

(4) Process ammunition boxes with reusable value through the Defense Reutilization and Marketing Office (DRMO). Transport scrap wood and unserviceable wooden boxes to the Base landfill located on Piney Green Road to be weighed. Each vehicle must receive a weight ticket from the Base Landfill scale master prior to transit to the appropriate disposal facility. Once weighed, transport the wood debris to the wood-waste site across the road from the landfill. “Usable pallets” will be taken to the Recycling Center, Bldg. 978, next to the landfill.

(5) Do not place any type of explosives, ammunition, or ammunition boxes/containers with the recyclable materials being transported to the Recycling Center.

(6) Remember, MRE wrappers are not biodegradable. They must be picked up throughout the training area and disposed of in dumpsters.

d. Human Waste. The use of large, field expedient head facilities is authorized at Camp Lejeune; i.e., slit trenches, four holers. Consult local preventative medicine units (PMU) for guidance on using slit trenches and four holers. Contact EMD for site evaluation for human waste disposal. General guidance for use of slit trenches and sanitary chemical toilets (port-a-johns) are available. Requests are submitted through normal unit logistics channels. "Cat holes" are permissible in remote training/maneuver areas. Units need to ensure proper procedures are conducted in closing sites and all holes are filled in. Bivouac sites established for longer than three (3) days require sanitary chemical toilets (port-a-johns).

6010. HAZARDOUS MATERIALS, POL SPILLS, AND SPOILAGE AREA.

1. Spills of hazardous materials, fuels, and POL's of any quantity on land and water must be reported promptly to the Base Fire Department by telephoning 911. After reporting, the unit responsible for the spill will follow guidance received from the Base Fire Department or senior on-site EMD representative and assist as necessary in clean up of the spill and management of the recovered product and any contaminated soil. Higher authority must arrange contract spill response for any spills occurring on or having the potential to reach the Atlantic

Ocean, the Atlantic Intracostal Waterway (AIWW), New River, or salt marshes. Oil soaked dirt must be dug up by the spilling unit, placed in plastic bags or on plastic sheeting, so that it is not washed away by rain. Unit personnel will coordinate with their command/unit Environmental Compliance Coordinator and will be responsible for the transportation of the contaminated soils to the Base Hazardous Material/ Hazardous Waste Consolidation Site personnel at 451-1482, building 977.

2. Battery Waste. Proper disposal of all waste batteries will be arranged through the unit hazardous material disposal officer. Using units are responsible for turn in of battery waste to their designated unit hazardous material manager. Command unit Environmental Compliance Coordinators may coordinate with the Base Hazardous Material/ Hazardous Waste Consolidation Site managers at 451-1482 for the receipt of battery waste directly from field operations. At no time will batteries be buried in the field.

3. Fuel Storage Restrictions. The Range Control Officer at 451-1235 must approve locations for tactical fuel farms. Prior to approval, unit personnel must receive a briefing on fuel storage and spill response requirements from EMD personnel. Containers having a 300-gallon or greater capacity must be placed within a berm, with soil or sandbags and with an impervious liner. Each storage or use area must be marked as set forth within BO 11090.3A, have a current and properly posted spill contingency plan and have appropriate spill response and communication equipment immediately available at the site. A complete list of requirements will be provided from the EMD. Contaminated oil, fuel and anti-freeze in the field should be stored within properly marked containers and returned to the unit motor pool or the unit must have coordinated with Base EMD for the removal from the field. Coordination for the required briefings, spill response, and fuel storage requirements or coordination for removal of contaminated oils, fuels, transmission fluid, anti-freeze may be completed by calling 451-1482. Call MCB EMD at extension 5468 for disposal instructions.

4. Handling and disposal of munitions that land off range (Rounds Out of Safe). 40 CFR 266.202(d) defines when a “Round out of Safe” should be considered a solid waste and therefore subject to Resource Conservation Recovery Act (RCRA) corrective action authorities (i.e., if the munition lands off-range and is not promptly rendered safe and/or retrieved, the munition will be subject to RCRA authority and considered a solid waste). A worksheet is currently used by the respective commands to

document all “Rounds out of Safe” and should be included as a reference in the Range Control SOP. (A copy of the worksheet can be obtained by accessing the Base Adjutant website or contacting Environmental Quality Branch (EQB) at 451-9607, if one is not available with the SOP).

5. Leaking Equipment. Any vehicle, generator, or other equipment identified as leaking anti-freeze or other petroleum oils, fuels or lubricants will be immediately removed from service and the training area. Incidental leaks will be captured by placement or absorbent matting under the area of discharge. Using units are responsible for the turn-in of contaminated matting to EMD after coordination with the unit Environmental Compliance Officer.

6. The spoilage containment berm located from GC 86772616 to 86742619 to 86472638 to 86806393 has been designated a restricted area and it is off limits to all unauthorized personnel. This berm contains the dredging spoil from the Mile Hammock Bay dredging project. This spoil is the consistency of quicksand and poses a severe hazard to any human or animal that should inadvertently enter it.

6011. BEACH OPERATIONS.

1. General. Any marine environment is very fragile and extra caution is required to ensure that the balance of nature is not disturbed. Camp Lejeune, with its ocean beaches, Atlantic Intracostal Waterway (AIWW), inlets, marshes, and bays is no exception. As Marines, we depend on these waterways for training and recreation. We also have a responsibility to protect waterways for civilian use and the wide variety of plants and animals living there.

2. Camp Lejeune's ocean beaches are important assets. By following these simple rules during training or recreational use, we should be able to preserve our beaches:

a. Never disturb or remove grass or plants from the beach. Dune plants help prevent erosion.

b. Exit and enter the beach only at designated areas marked by black and yellow striped poles.

c. Keep all heavy equipment and track and wheeled vehicles off the sand dunes and vegetation.

d. Leave the sand fences alone. They help build new sand dunes and prevent erosion to existing dunes.

e. Bivouac on the north side of the beach road, not the beach itself.

3. Rules regarding the recreational use of the beach are covered in BO 11017.1D, Off-Road Recreational Vehicles (ORRVs). Copies of the order may be obtained be calling the Environmental Conservation Branch at 451-5063. Permits and POV beach stickers are required to drive ORRVs on the beach. They can be obtained at the Game Warden’s office at 451-2196 or at the Onslow Beach Caretaker’s office at 450-7502.

4. Training exercises will generally be limited to the operating area between Risely Pier (901264) and the Onslow South Tower (883251). In all cases, training exercises shall be confined to the minimum amount of beach necessary to complete the training objectives. Requests for use of other than the identified operating area will be addressed to the Base Range Control Officer.

a. Special-use Area (North of Risely Pier) The area from the pier northeast 750m is available in the event of concurrent operations when more maneuver/landing area is required.

b. Special-use Area (North of North Tower) The area from Onslow North Tower northeast 500m is available for live fire exercises (Stinger shoots, etc.) following coordination with Range Control. During the sea turtle nesting season, specific measures must be implemented to prevent illegal taking of hatchlings.

5. Egress from the beach to the road behind the sand dunes shall be at designated egress routes. Vehicular traffic is prohibited on or between the dunes. Access points for military traffic are marked with black and yellow striped posts in the vicinity of the following grids:

(878248)	(883251)	(885253)	(887254)
(889256)	(887254)	(891257)	(893258)
(895260)	(897261)	(899263)	(900264)
(901264)			

6. There are two access points for ORRVs: Risely Pier (901264) and South Tower (883251), per BO 11017.1D.

7. Causeway use will be coordinated/scheduled in advance with Base Range Control at extension 451-5803/2102.

8. The collection of archeological material (stone tools, pottery, bone) is prohibited on Onslow Beach by BO 11000.19A

6012. ENVIRONMENTAL ASSESSMENT.

The National Environmental Policy Act (NEPA) requires that careful considerations be given to environmental impacts of proposed projects or actions. Further, it requires the consideration and documentation of alternatives to the proposed action. Some training exercises require the preparation of an Environmental Assessment (EA). Examples include: training with impacts on wetlands, endangered species, or archeological sites and any training exercise taking place on or over non-military property. In those cases, and whenever there is any potential for significant environmental impact, exercise planners should consult the appropriate directives and then contact the Range Development Officer, Range Control Division, Training, and Operations Department MCB, Camp Lejeune. Point of contact for more information about environmental assessment is the Base EA Specialist, ECON, 451-5063.

6013. SUMMARY.

1. Protecting the environment is everyone's job at Camp Lejeune. When you damage plants, animals, and other natural resources, the Marine Corps, Camp Lejeune, and your training all suffer. Damage could curtail training, and, in the case of Endangered Species, result in legal action. Caring for our natural resources isn't something that takes a lot of time; it takes just a little planning.

The Geographical Information System Office (GIS) is a very important asset available to trainers at all levels. Maps of all types and scales are available thru the Integrated Geographic Information Repository (IGIR). Everyone planning to train aboard MCB Camp Lejeune should access the IGIR website at http://gis.lejeune.usmc.mil/igir/. The layers of data available in map format are extensive and include aerial photography.

CHAPTER 7

ENVIRONMENTAL INFLUENCES

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7000. FOREST FIRE DANGER RATINGS.

1. Brush and wild fires, regardless of size, even those fires which have been extinguished, are to be reported immediately to BLACKBURN on frequency 38.60 MHZ or 451-3064, who will notify the Base Fire Department. Training units will provide fire-fighting details to combat any grass or brush fires that may occur. At no time will unit fire fighting details be allowed down range or in an impact area without approval of the RCO. Units should not use military 782 gear to fight fires, i.e. flak jackets/ponchos.

2. Fire Readiness Planning and Readiness Plans. Fire Readiness planning is an action plan that provides a degree of readiness commensurate with the fire danger. Readiness planning reduces the cost of fire supervision efforts, the loss of public and private property, and the impact on training from wildland fires by being prepared to respond to any wildland fire incident. Readiness levels are set by the N. C. Forestry Service located in New Bern and includes Cherry Point, Camp Lejeune, and the surrounding counties. Readiness plans are used to establish associated training restrictions when the forest fire danger is significant, the possibility of wildland fire is likely, and as conditions become more conducive for ignition and rapid spread. The relationship between the various fire readiness plan and training are as follows: Forest fire danger ratings. Each March/September, Range Control will publish the fire readiness plan message to remind all units of their responsibilities during the forest fire season.

a. Readiness Plan 1. Fire danger is low. No restrictions on authorized ranges and training areas. Normal safety precautions will be followed.

b. Readiness Plan 2. Occasional fire activity. Little or no chance of fire. No restrictions on authorized ranges and training areas. Normal safety precautions will be followed.

c. Readiness Plan 3. Fire danger is moderate. The use of ranges and training areas will be at the discretion of the commanding officer of the training unit. Caution shall be exercised in the use of all pyrotechnics.

d. Readiness Plan 4. Normal fire season. When Readiness Plan 4 is reached, Range Control Duty Officer (BLACKBURN) will notify all training units. Heat tabs and warming fires will be used only in designated places under supervision of a

Noncommissioned Officer. Pyrotechnics are restricted to authorized ranges.

e. Readiness Plan 5. Fire danger is very high/severe.

(1) Pyrotechnic/incendiary ammunition will be restricted to the BT-3/N-1, G-10, and K-2 Impact Areas.

(2) Tracer ammunition is restricted to the BT-3/N-1 G-10, and K-2 Impact area. Authority to use tracer ammunition in GSRA is a situational MCB command decision. After consulting with the AC/S ISS, AC/S T&O, AC/S I&E, Base Forestry and 2D Marine Division G-3, 2nd FSSG G-3, the Chief of Staff (C/S) or Commanding General, Marine Corps Base, RCD will issue a decision regarding the firing of tracers in the GSRA.

(3) In all field areas, smoking is permitted only in locations specifically designated by the training unit commander. These areas will be fireproofed and supervised by a NCO.

(4) The use of generators will be restricted to areas that have been fireproofed to mineral soil for a 50' diameter around each generator.

(5) Heat tabs will be used only in fireproofed areas designated by the training unit commander and under the supervision of a NCO.

(6) Warming fires are not authorized.

f. Readiness Plan 6. Fire danger is critical. All military training in forested areas and other activities likely to start forest fires will be suspended. Only ball ammunition, fragmentation hand grenades, demolition materials and high explosive artillery, and mortar ammunition on designated ranges/ impact areas can be used during Readiness Plan 6.

g. Readiness Plan 7. Fire danger is extreme. All training will cease and troops will come out of the field. Request to train during Readiness Plan 7 will be submitted to the CG, MCB Camp Lejeune via AC/S Training & Operations (Director, Range Control Division).

h. Blow-up Alert. Worse fire conditions than Readiness Plan 7 may occur on Readiness Plan 4 and above. All training will cease and troops will come out of the field.

3. Wildland Firefighting personnel will allow fires in the impact areas to burn until they reach the buffer zone. Firefighting personnel will not enter the impact areas.

a. Controlled burning is accomplished and controlled by the Base Forester. Controlled burning is done to stimulate new growth, control insects, and to clear underbrush, which feeds forest fires and to open up areas for better training for military personnel.

b. Catalytic converters and vehicle exhausts can get very hot, so hot that nearby ground cover can catch fire during dry periods. Do not park or leave engine running over dry leaves/grass.

7001. DESTRUCTIVE WEATHER.

1. General. Storms are a potential and continuous threat to naval shipping, aircraft, and all military installations. Adequate and timely warning, coupled with prompt and effective actions by commanders, will reduce loss of life and damage to property due to destructive weather conditions. BLACKBURN will notify all training units that have established communications with BLACKBURN of impending destructive weather. For additional information on destructive weather see Base Order P3440.6D.

7002. DESTRUCTIVE WEATHER CONDITIONS.

1. Destructive Winds. Destructive weather of this category generally affects localized areas and is usually short in duration, but the onset could be very sudden and treacherous.

a. Warnings.

(1) Local wind warnings. A local wind warning is issued when potentially hazardous winds, between 20 to 33 knots, are anticipated. They are issued from MCAS for the information of the Camp Lejeune area so as to initiate appropriate precautions in daily, training, and recreational activities.

(2) Small craft warnings. A term used by the U.S. Navy and the U.S. Weather Bureau to describe wind speeds of 18 to 33 knots over coastal areas and inland waters only. As the name implies, this warning is intended to alert operations of small craft to take appropriate precautions to avoid damage to craft or injury to personnel.

(3) Gale warnings. Sustained winds of 34-47 knots, not associated with a tropical cyclone system, are expected in the

warning area during the period stated (usually within 12 hours). Winds are steady and of sufficient force to cause heavy turbulence and high seas. This warning is primarily for mariners use.

(4) Storm warnings. Sustained winds of 48 knots or greater, not associated with a hurricane, are expected in the warning area during the period stated (usually within 12 hours).

b. Destructive Wind Conditions. Storm condition settings for localized destructive weather.

(1) Destructive Wind Condition II.

(a) Destructive winds are reported or expected in the area within six hours.

(b) Be prepared to secure from field training.

(c) Initiate the progressive preparations of personnel, facilities, buildings, equipment, and material for the developing destructive weather.

(2) Destructive Wind Condition I.

(a) Localized storm conditions are imminent or in progress.

(b) Activities in the Camp Lejeune area will continue without substantial operational or service interruption.

(c) Progressive actions toward preparing personnel, facilities, buildings, equipment, and materials against the effects of destructive winds will be ongoing.

(d) Secure from field training as required.

(e) Take immediate safety precautions and seek shelter.

2. Thunderstorms. Thunderstorms are small-scale storms produced by cumulonimbus clouds, always accompanied by lightning and thunder. These storms may develop within sight and do not have a destructive appearance until shortly before passing overhead. Often, hail is associated with thunderstorms and may inflict major damage. Thunderstorms may be accompanied by

extremely strong winds, heavy rainfall, and near zero visibility. Lightning strikes are common and North Carolina ranks second in the nation for fatalities from lightning strikes.

a. Advisories.

(1) Watch. Thunderstorm is possible within or adjacent to the watch area.

(2) Warning. The occurrence of a thunderstorm has been confirmed by observation on weather radar

(3) Local thunderstorm warning. A warning issued by the MCAS, New River Weather Service to notify of potentially hazardous weather. Warning is issued for the Camp Lejeune area to initiate appropriate precautions in daily training and recreational activities. BLACKBURN broadcasts the thunderstorm warning, on the Range Control radio net, to all units training on the field.

b. Destructive Thunderstorm Conditions.

(1) Thunderstorm Condition II

(a) A thunderstorm is reported or expected in the Camp Lejeune area within 6 hours.

(b) Be prepared to secure from field training.

(c) Be prepared to take immediate safety precautions and shelter.

(2) Thunderstorm Condition I

(a) A thunderstorm is imminent or in progress in the Camp Lejeune area.

(b) Secure from field training as directed by the unit commander or as required.

(c) Take immediate safety precautions and seek shelter.

3. Tornadoes. A tornado is a violently rotating column of air generally spawned from thunderstorm clouds and touching the ground. Maximum winds created by tornadoes may exceed 300 MPH.

Tornadoes move at speeds of approximately 54 MPH and have an average lifespan of 20 minutes.

a. Advisories.

(1) Tornado Watch. The conditions for tornado formation are favorable and a tornado is likely. “Tornado watch” is a standard term used by the National Weather Service (NWS). MCAS, New River Weather Service will issue a Tornado Watch Advisory for the Camp Lejeune area when such as advisory has been issued by the NWS.

(2) Tornado Warning. A tornado has a strong potential to develop, is about to strike, has been detected by radar, or has been spotted in or adjacent to the locale for warning the warning is issued. “Tornado Warning” is a standard term used by the NWS. MCAS, New River Weather Service will issue a Tornado Warning Advisory for the Camp Lejeune area when such an advisory has been issued by the NWS.

b. Tornado Conditions.

(1) Tornado Condition II.

(a) Conditions aboard Camp Lejeune are favorable for tornado activity.

(b) Initiate the progressive preparation of personnel, facilities, buildings, equipment, and material for the developing destructive weather.

(c) Be prepared to secure from field training.

(d) Take precautions to ensure an appropriate state of readiness on short notice.

(2) Tornado Condition I.

(a) A tornado is about to strike or has been spotted aboard Camp Lejeune or the surrounding area.

(b) Activities in the Camp Lejeune area will continue without substantial operational or service interruption. Actions toward preparing personnel, facilities, buildings, equipment and material against the effects of tornadoes will be on going.

(c) Secure from field training as directed by the unit commander or as required.

(d) Take immediate safety precautions and seek shelter.

4. Tropical Cyclones.

a. Tropical cyclones are systems of rotating winds characterized by a rapid increase in pressure and increase in winds speed toward the center of the storm. These dimensions vary from 60 to over 1000 nautical miles. Three stages of intensity are associated with tropical cyclones:

(1) Tropical depression is weather associated with a tropical cyclonic system with wind speeds up to 34 knots.

(2) Tropical storm is weather associated with a tropical cyclonic system with wind speeds between 34-63 knots.

(3) Hurricane is a tropical cyclone associated with high winds, 64 knots or greater and torrential rain.

b. Destructive Weather Condition (DWCs). Specific actions and staff responsibilities during DWCs are contained in BO 3440.6D.

(1) Destructive Weather Condition V. Potential for occurrence of destructive weather is elevated but no specific system threatens the Camp Lejeune area.

(2) Destructive Weather Condition IV.

(a) A specific destructive weather system with sustained winds of 34 knots or greater is forecast to affect the Camp Lejeune area within 72 hours.

(b) Initiate the progressive preparation of personnel, facilities, buildings, equipment, and material for the developing destructive weather.

(3) Destructive Weather Condition III.

(a) A specific destructive weather system with sustained winds of 34 knots or greater is forecast to affect the Camp Lejeune area within 48 hours.

(b) Secure all loose gear and continue preparations for destructive weather.

(c) Secure all non-essential personnel as directed.

(4) Destructive Weather Condition II.

(a) A specific destructive weather system with sustained winds of 34 knots or greater is forecast to affect the Camp Lejeune area within 24 hours.

(b) Secure all field training prior to DWC I.

(5) Destructive Weather Condition I.

(a) A specific destructive weather system with sustained winds of 34 knots or greater is forecast to affect the Camp Lejeune area within 12 hours.

(b) Release all non-essential personnel.

(c) Ensure the completion of all preparations and staging of equipment, material, and personnel.

(d) Restrict personnel to base liberty.

(6) Destructive Weather Condition I, Caution.

(a) A specific destructive weather system with sustained winds of 34 knots or greater is forecast to affect the Camp Lejeune area within 6 hours.

(b) Close Base to all incoming traffic.

(c) Secure all activities.

(d) Secure liberty.
(e) Secure all non-essential personnel to quarters.

(7) Destructive Weather Condition I, Emergency.

(a) Camp Lejeune is currently experiencing a specific destructive weather system with sustained winds of 34 knots or greater.

(b) Only functions crucial to essential operations, and emergency response necessary to protect life and preserve law and order will be the only authorized activities.

(8) Destructive Weather Condition I, Recovery. The destructive weather system has passed the Camp Lejeune area, but safety and storm hazards remain.

5. Winter Storms. Winter storms may bring any combination or all of the following: freezing temperatures, wind, sleet, freezing rain, and the accumulation of ice and or snow.

a. Advisories.

(1) Hard Freeze Advisory. The temperature is forecast to drop to 20 degrees Fahrenheit or below for more than 24 hours.

(2) Light to Moderate Snow Advisory. Expected accumulation of less than 2 inches of snow in the local area is forecast, not requiring the setting of a Winter Storm Condition.

(3) Heavy Snow Warning. An accumulation of 2 inches or more of snow is expected which may be accompanied by freezing rain or sleet.

(4) Blizzard Warning. A considerable amount of falling and/or blowing snow. These types of storms present dangerous wind-chill factors.

(5) Light to Moderate Ice Advisory. Freezing rain will result in the glazing of exposed surfaces with the possibility of some measurable accumulation. Bridges and metallic surfaces will likely glaze first with other flat surfaces to follow.

(6) Ice Storm Warning. Freezing rain will result in the measurable accumulation of one-quarter inch of ice.

(7) Winter Storm Watch. Severe winter weather conditions are forecast for the area and time designated. These conditions may include freezing rain, sleet, snow, wind, and/or ice conditions.

(8) Winter Storm Warning. Severe winter weather conditions are imminent or occurring in the forecast area. These conditions may be freezing rain, sleet, snow, wind, and/or ice conditions.

(9) Wind-chill. This is the still air temperature that would have the same effect on exposed flesh as the current combination of still air temperature and wind.

b. Winter Storm Condition II.

(1) A winter storm of ¼ inch ice or 2 or more inches of snow is forecast within 24 hours.

(2) Initiate the progressive preparation of personnel, facilities, buildings, equipment, and material for the developing destructive weather.

(3) Be prepared to secure from field training.

c. Winter Storm Condition I.

(1) A winter storm of ¼ inch ice or 2 or more inches of snow is forecast within 12 hours.

(2) Ensure the completion of proper preparation and response actions.

(3) Secure from field training as directed by the unit commander or as required.

d. Winter Storm Condition I, Emergency.

(1) A winter storm of ¼ inch ice or 2 or more inches of snow is imminent, or in progress.

(2) Take immediate safety precautions and seek shelter.

e. Winter Storm Condition I, Recovery. Winter storm activity has abated or ceased such that initial response and recovery operations may commence.

7003. WET BULB GLOBE TEMPERATURE INDEX (WBGTI).

1. Readings for WBGTI are taken from 1 May to 30 September. When the temperature is over 85 degrees, WBGT readings may be obtained from BLACKBURN between the hours of 0800-1900 daily.

2. WBGTI Index Readings.

a. Green Flag - When the WBGTI reads from 80 to 84.9 degrees, heavy exercises for personnel not acclimatized should be conducted with caution and under constant supervision.

b. Yellow Flag - When the WBGTI reads from 85 to 87.9 degrees, strenuous exercises, such as marching at standard cadence, should be suspended for troops who are not acclimatized in their first 2 or 3 weeks. Outdoor classes in the sun are to be avoided.

c. Red Flag - When the WBGTI reads from 88 to 89.9 degrees, all physical training should be halted for those troops who have not become thoroughly acclimatized by at least 12 weeks of living and working in the area. Those Marines who are thoroughly acclimatized may carry on limited activity not to exceed 6 hours per day. BLACKBURN will notify all training units with established communications when the WBGTI reaches red or black flag conditions.

d. Black Flag - When the WBGTI exceeds 90 degrees, all strenuous activity should be halted for all troops.

e. The WBGTI readings are relayed hourly by BLACKBURN when the reading reaches 85 degrees.

Dissemination. Inquiries regarding information on WBGTI may be found by dialing the Marine Corps Base Automated Information System. The number is 451-1717. Area Commanders will maintain accurate and timely WBGTI information within the Automated Information System IAW BO 6200.1A.

CHAPTER 8

AIRSPACE, AIRCRAFT OPERATIONS AND FACILITIES

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8000. GENERAL.

1. This chapter describes the airspace, aircraft operation procedures, and facilities at Camp Lejeune, and sets forth instructions concerning their use in conjunction with ranges and training/maneuver areas at the Base. All airspace over Camp Lejeune is controlled to permit multiple use with the least interference and the most safety. All firing and aircraft operations must conform to airspace regulations contained in this section.

2. All airspace over Camp Lejeune is subject to Federal Aviation Administration (FAA) regulations. A major portion of Camp Lejeune lies within airspace designated by the FAA as Restricted Airspace R5306D, R5306E, R5303 A/B/C, and R5304 A/B/C, through a Joint Letter of Agreement, dated 01 April 1998, signed by Marine Corps Base, Camp Lejeune, Commanding Officer, MCAS New River, Regional Airspace Coordinator, Marine Corps Airbases East and DOT/FAA MCAS Cherry Point. R5303 and R5304 were further divided into a southern sub area, SR6/7 sub area and SR-10 sub area through a Joint Letter of Agreement dated 15 Oct 2002. Under MCO P3570.1, Range Control, Marine Corps Base, Camp Lejeune and Cherry Point is the scheduling authority for these restricted airspaces. BLACKBURN shall notify Cherry Point Air Traffic Control Facility (ATCF) of the intended use of air space by 1600 on the preceding day(s). This notification shall consist of, but is not limited to:

a. Date(s).

b. Areas (R5306D, R-5306E, R5303 A/B/C, R5304 A/B/C).

c. Time period (Zulu time(s)).

d. Altitude block(s).

NOTE: Notification shall be documented by both the RCDO and Cherry Point ATCF and be kept for a period of 18 months. The ATCF supervisor shall coordinate with RCDO when air traffic requirements take priority over pre-scheduled air space.

3. Requests to change the intended use of airspace after 1600 shall not be approved except for emergency type training directed by higher authority, i.e., CG, II MEF.

4. Restricted Airspace R-5306D. This includes the airspace from surface to 17,999 feet Mean Sea Level (MSL) within the area

from Lat. 34 degrees 44’51”N, Long. 77 Degrees 14’39”W (Grid 18S TU 9457 4734); to Lat. 34 Degrees 34’31”N, Long. 77 Degrees 08’59”W (Grid 18S UD 0281 2804); to Lat. 34 Degrees 30’21”N, Long. 77 Degrees 15’49”W (Grid 18S TD 9219 2057); to Lat. 34 Degrees 33’01”N, Long. 77 Degrees 18’59”W (Grid 18S TD 8746 2561); to Lat. 34 Degrees 36’06”N, Long. 77 Degrees 26’07”W (Grid 18S TD 7668 3157); to Lat. 34 Degrees 40’01”N, Long. 77 Degrees 21’59”W (Grid 18S TD 8317 3866); to Lat. 34 Degrees 39’11”N, Long. 77 Degrees 20’49”W (Grid 18S TD 8492 3708); to the point of beginning.

5. Restricted Airspace R-5306E. This includes the airspace from surface to 17,999 feet Mean Sea Level (MSL) within the area from Lat. 34 Degrees 40’21”N, Long. 77 Degrees 21’11”W (Grid 18S TD 8288 3928); to Lat. 34 Degrees 40’01”N, Long. 77 Degrees 21’59”W (Grid 18S TD 8317 3866); to Lat. 34 Degrees 36’06”N, Long. 77 Degrees 26’07”W (Grid 18S TD 7668 3157); to Lat. 34 Degrees 38’13”N, Long. 77 Degrees 25’59”W (Grid 18S TD 7698 3548); to the point of beginning.

6. Restricted Airspace R5303 A GSRA. Designated Altitudes: Surface to 6,999 FT MSL, excluding the Airspace 1,500 FT AGL and below within a 3NM radius of Sky Manor Airport. Restricted Airspace R5303B, GSRA Designated Altitudes, 7,000 FT MSL to 9,999 FT MSL. Restricted Airspace R5303C, GSRA designated Altitudes 10,000 FT MSL to 17,999 FT MSL. Time of designation 0600-1800 Monday-Friday; other times by NOTAM at least 24 hours in advance. Boundaries for the R5303A, B, and C begins at Lat. 34 Degrees 41’40”N, Long. 77 Degrees 33’09”W (Grid 18S TD 6619 4212); to Lat. 34 Degrees 39’16”N, Long. 77 Degrees 28’31”W (Grid 18S TD 7316 3751); to Lat. 34 Degrees 36’51”N, Long. 77 Degrees 29’01”W (Grid 18S TD 7228 3306); to Lat. 34 Degrees 36’13”N, Long. 77 Degrees 31’51”W (Grid 18S TD 6792 3199); to Lat. 34 Degrees 37’03”N, Long. 77 Degrees 35’25”W (Grid 18S TD 6250 3368); to Lat. 34 Degrees 38’49”N, Long. 77 Degrees 37’31”W (Grid 18S TD 5938 3702); to the point of beginning.

7. Restricted airspace R5304 A GSRA. Designated altitudes: surface to 6,999 FT MSL, excluding the airspace 1,500 FT AGL and below within a 3NM radius of Holly Ridge Airport. Restricted airspace R5304B, GSRA designated altitudes 7,000 FT MSL to 9,999 FT MSL. Restricted airspace R5304C, GSRA designated altitudes 10,000 FT MSL to 17,999. Time of designation 0600-1800, Monday-Friday; other times by NOTAM at least 24 hours in advance. Boundaries begin at Lat. 34 Degrees 37’03”N, Long. 77 Degrees 35’25”W (Grid 18S TD 6250 3368); to Lat. 34 Degrees 36’13”N, Long. 77 Degrees 31’51”W (Grid 18S TD 6792 3199); to Lat. 34

Degrees 36’51”N, Long. 77 Degrees 29’01”W (Grid 18S TD 7228 3306); to Lat. 34 Degrees 32’16”N, Long. 77 Degrees 30’13”W (Grid 7024 24633); to Lat. 34 Degrees 29’43”N, Long. 77 Degrees 35’15”W (Grid 18S TD 6548 20003); to Lat. 34 Degrees 32’42”N, Long. 77 Degrees 34’54”W (Grid 18S TD 6309 2561); to the point of beginning.

8. The restricted areas shall be managed on a real-time basis to minimize the impact on non-participating aircraft. The lowest sub-areas, R-5303A and R5304A, shall be the most frequently used areas. When non-participating aircraft on V-139 are unable to transit above the restricted area altitudes in use, the range activity shall either be capped or a cease-fire imposed to accommodate the aircraft on the airway. On occasion, ATC may vector non-participating aircraft off the airway to the east of the range through restricted areas R5306D and R5306E, which shall be deactivated for that purpose.

9. Warning Area W-122/Area 15. The portion of Warning Area W-122 of concern to Camp Lejeune is the airspace over the Atlantic Ocean 30 miles in radius from a point three miles at sea off Onslow Beach Bridge. Warning Area W-122 is controlled by the Fleet Area Control and Surveillance Facility, Virginia Capes, Naval Air Station, Oceana, Virginia Beach, VA (FACSFAC VACAPES).

10. New River Control Zone. The area within a five nautical mile radius of MCAS, New River and within two nautical miles, either side of the 046 degree and 226 degree (magnetic) bearings from the New River Radio Beacon, extending from the five nautical mile radius zone to eight nautical miles NE and SW of the Radio Beacon. New River Air Station controls this airspace.

8001. AIRCRAFT OPERATIONS.

1. Prior to entering the R-5306D, R-5306E, R-5303 A/B/C, or R5304 A/B/C area, aircraft shall contact BLACKBURN or appropriate controlling agency i.e., Chieftain, FAC/Joint Terminal Attack Controller/Universal Ground Spotters, FAC(A) on 325.0 UHF (primary) or 38.60 FM (secondary) for authorization to enter the airspace. Positive two-way communications with the controlling agency is required at all times for all aircraft.

2. Aircraft will not fly over the Base magazine area west of the G-10 Impact Area and field ammunition storage points.

3. Minimum altitude for aircraft over flying all civilian residential areas is 1000 feet AGL.

4. All aircraft will maintain a two-mile (3.22 KM) radius from parachute operations.

5. Over flights of the G-10, K-2, and N-l/BT-3 Impact areas are prohibited during live firing operations, unless the aircraft is above the minimum altitude prescribed or are involved in the exercise.

6. Fixed Wing Aircraft are not authorized to enter the R5303 A/B/C and R5304 A/B/C Airspace (GSRA) when activated. When the restricted airspace is not activated fixed wing aircraft shall follow VFR rules.

7. No more than one section (two aircraft) of fixed wing will be allowed into the restricted airspace under BLACKBURN control.

8. Simulated Close Air Support (SIMCAS) is authorized in the R5306D and R5306E for Fixed Wing Aircraft and all restricted airspace for Rotary Wing Aircraft. Aircraft conducting Simulated Close Air Support (SIMCAS) in support of the ground units shall maintain positive two-way communications with the terminal controller (FAC/Joint Terminal Attack Controller/ Universal Ground Spotters, FAC(A)) who, in turn, has positive two-way communications with BLACKBURN (or appropriate controlling agency). Additionally, SIMCAS aircraft shall adhere to the boundaries established to conduct SIMCAS simultaneous with other air operations (G-10 operations). These boundaries are located in Annex N (Offensive Air Support Appendix) of the Operation Plan and in the Pilot-Controller Handbook for each specific exercise. Aircraft involved in SIMCAS will/can have inert/captive carrying ordnance items on the aircraft.

9. The following are control points used by BLACKBURN for air traffic within R-5306D and R-5306E:

POINT	GRID	LAT	LONG	AIRSPACE	LOCATION
ALFA	18S TD 850355	34 deg 38’17”	77 deg 20’20”	R5306D	Well Point
BRAVO	18S TD 810320	34 deg 36’07”	77 deg 23’29”	R5306D	Gillette Point
CHARLIE	18S TD 907305	34 deg 35’45”	77 deg 16’56”	R5306D	Intersection of Sneads Ferry Rd and Rt 172
DELTA	18S TD 970356	34 deg 38’45”	77 deg 12’54”	R5306D	Bear Creek at Willis Landing
ECHO	18S TD 947328	34 deg 37’09”	77 deg 14’14”	R5306D	Rt 172
FOXTROT	18S TD 995332	34 deg	77 deg	R5306C	Bear Inlet

		37’17”	10’34”		
GOLF	18S TD 755267	34 deg 33’46”	77 deg 27’01”	Hatteras F MOA	Rt 210
HOTEL	18S TD 723331	34 deg 36’39”	77 deg 29’00”		Dixon Fire Tower
INDIA	18S TD 845461	34 deg 44’03”	77 deg 21’13”		Rt 24 Bridge
JULIET	18S TD 935435	34 deg 42’43”	77 deg 15’13”	R5306D	Hubert Fire Tower
KILO	18S TD 854230	34 deg 31’48”	77 deg 20’13”	Hatteras F MOA	New River Inlet
LIMA	18S TD 822345	34 deg 40’24”	77 deg 22’41”		Hadnot Point (Old Hospital Point)
MIKE	18S UD 060350	34 deg 38’26”	77 deg 06’40”	R5306C	Bogue Inlet (Use below 3000' AGL) requires advance coordination with Cherry Point Air Station Approach/ Control
* NOVEMBER	18S UD 015486	34 deg 45’43”	77 deg 10’08”	R5306C	Silverdale RR Bridge
* OSCAR	18S UD 014405	34 deg 41’11”	77 deg 10’ 05”	R5306C	Queens Creek Bridge
PAPA	18S TD 650410	34 deg 41’05”	77 deg 34’28”	R5303A/B /C	Power line road Junction
QUEBEC	18S TD 610353	34 deg 41’05”	77 deg 36’25”	R5303A/B /C	Road Junction
ROMEO	18S TD 636313	34 deg 36’15”	77 deg 34’39”	R5303A/B /C	Road Bend
SIERRA	18S TD 632234	34 deg 31’40”	77 deg 34’44”	R5303A/B /C	Road Bend/ Intersection
TANGO	18S TD 695230	34 deg 31’35”	77 deg 30’32”	R5303A/B /C	Road Bend/ Power Line
UNIFORM	18S TD 722331	34 deg 37’26”	77 deg 29’05”	R5303A/B /C	Road Junction

* Use below 3500 AGL requires advance coordination with Cherry Point Approach Control.

If additional Control Points (CP) are required by the DASC for utilization during a specific exercise for air traffic within the R5306D/E, they shall be published in the Exercise Air Operation Plan and Pilot-Controller Handbook after coordination with the RCO.

10. Aircraft shall be routed around firing positions, ranges and indirect fire gun target lines (GTL). To safely allow concurrent air operations and indirect firing, aircraft shall not approach CLOSER THAN 1000 feet from Gun Target Lines (GTLs).

11. Flights over Camp Lejeune require the aforementioned meteorological conditions unless unit minimums are more restrictive. Visual flight rules (VFR) apply.

	Day	Night
RW	500 ft/1 mile	1000 ft/3 miles
FW	2000 ft/5 miles	2000 ft/5 miles

12. When departing the R5306D, or R5306E, R5303, or R5304 area, aircraft shall contact the RCDO BLACKBURN or CHIEFTAIN to check out.

8002. COORDINATION AND CONTROL.

1. Forward Air Controller (FAC/Joint Terminal Attack Controller/Universal Ground Spotters).

a. For organizations/units involved in training exercises, e.g., ARGEX, SOCEX, JTFEX, Major Joint or combined exercises, as a minimum, the organization/unit Air Officer must meet with the Range Control Officer or Deputy Range Control Officer at least 10 days prior to the exercise to discuss air ops, use of FAC/Joint Terminal Attack Controller/Universal Ground Spotters, FAC(A)s or a DASC and determine conflicts.

b. Any aircraft participating in live firing operations, bombing, close air support (live or simulated), or combined air-ground exercises require positive control by a FAC/Joint Terminal Attack Controller/Universal Ground Spotters/FAC(A). The FAC/Joint Terminal Attack Controller/Universal Ground Spotters can be on the ground or airborne (FAC(A)). FAC/Joint Terminal Attack Controller/Universal Ground Spotters and Drop Zone (DZ)/Landing Zone (LZ) control officers have the same responsibilities as an ROIC of firing. Paragraph 2007 of this Manual applies.

c. FAC/Joint Terminal Attack Controller/Universal Ground Spotters, DZ Control Officers, and LZ Control Officers for multiple lifts are required to conduct a face-to-face brief with Range Control and BLACKBURN, (Bldg 54) between 1400 the day prior and 0800 the day of range use.

d. FAC(A)s will receive the Range Safety Brief upon entering MCB Camp Lejeune restricted airspaces.

e. All aircraft shall contact the appropriate controlling agency to receive a range brief and authorization to enter the airspace. Upon entering the restricted airspace, controlling agency shall direct fixed wing aircraft to switch to the FAC/Joint Terminal Attack Controller/Universal Ground Spotters.

If communications cannot be established, the pilot shall immediately contact the controlling agency for assistance and further instructions.

f. The minimum altitude for fixed wing aircraft from the Initial Point (IP) to the Pop-up Point (PUP) is 1000 feet AGL outside the Base boundary and 700 feet AGL within the boundary.

g. CAS missions into the Base shall not over fly the Industrial Area or populated/housing areas. Aircraft must be a minimum of 1,000 feet AGL if over flying any civilian housing areas while enroute to or exiting the base in the R-5306D/E airspace.

h. Upon mission completion and when control is released from the FAC/Joint Terminal Attack Controller/Universal Ground Spotters, the pilot shall contact the Controlling Agency before exiting the area.

i. The following are the approved attack heading and altitudes (all headings are magnetic):

IP for G-10 Impact Area

Control Point	Altitude(AGL)	ATK Heading	Offset
Riseley Pier	700 ft	340-070 degree	Either
Bravo	700 ft;1000ft off base	030-100degree	Either
November	1000ft	150-270degree	Either
Oscar	1000ft	150-270degree	Either
Mike	1000 ft	150-300degree	Either
Foxtrot	1000 ft	206-360degree	Either

IP FOR BT-3/N-1 Impact Area

Control Point	Altitude(AGL)	ATK Heading	Offset
Riseley Pier	700 ft	000-120degree	Either
Bravo	700 ft;1000ft off base	180-255degree	Either
November	1000 ft	180-255degree	Either
Oscar	1000 ft	180-255degree	Either
Mike	1000 ft	215-255degree	Either

IP FOR K-2 IMPACT AREA

Control Point	Altitude(AGL)	ATK Heading	Offset
Riseley Pier	700 ft	260-330degree	Either
Charlie	700 ft	260-330degree	Either

NOTE: K-2 pull-offs shall be left and will avoid over flight of the Base Rifle Range, which is "Hot" daily to 500 feet.

j. Weather restrictions for CAS missions into authorized impact areas are in accordance with this SOP.

k. Simulated CAS (SIMCAS) missions in any training area or range shall remain clear of adjacent ranges or impact areas.

2. Direct Air Support Center (DASC) call sign (CHIEFTAIN) and other Airspace Control Agencies.

a. The DASC is the principal air control agency responsible for the direction of air operations directly supporting ground forces. The role of the DASC is to provide the means to process immediate air support requests, coordinate aircraft employment with other supporting arms, manage terminal control assets supporting ground combat and combat service support forces, and control assigned aircraft and itinerant aircraft transiting through its area of responsibility. (FMFM 5-60)

b. The DASC (or approved airspace control agency) will maintain positive two-way communications with BLACKBURN by radio on the range safety net (38.60). Two radios are required, a primary and a backup. If at any time the DASC (or approved airspace control agency) is unable to maintain two-way communications with BLACKBURN, the DASC (or approved airspace control agency) will relinquish control and instruct all aircraft to contact BLACKBURN on the primary air control frequency (325.0) or the range control net (38.60).

c. During selected training exercises, the DASC is normally the primary airspace control agency responsible for the control and coordination of the restricted airspace. Other Airspace Control Agencies such as Tactical Air Control Squadrons (TACRONs) or Airborne Airspace Control Platforms (E2C Hawkeye) may be authorized to control and coordinate the restricted airspace.

d. When the DASC (or approved airspace control agency) has control of the restrictive airspace, the DASC shall exercise procedural control over all aircraft within the restricted airspace. Other control agencies may exercise positive or procedural control based on the controlling agencies capabilities. The following procedures apply:

(1) When the DASC (or approved airspace control agency) has control of the restricted airspace, multiple fixed-wing sections are authorized, as long as positive two-way communication is established with all participating flights on the RIO frequency assigned for the exercise.

(2) CAS aircraft operating in the G-1O Impact Area have positive two-way communication with the terminal controller (Forward Air Controller (FAC/Joint Terminal Attack Controller/Universal Ground Spotters), FAC(A), Terminal Air Controller (TAC)) who, in turn, has positive two-way communications with DASC (or approved airspace control agency).

(3) Prior to entering the restricted airspace, fixed wing and rotary wing aircraft shall contact DASC (or approved airspace control agency) to receive a range safety brief and authorization to enter the airspace.

(4) The DASC (or approved airspace control agency)has the same responsibilities as RCO for airspace control and coordination.

(5) The DASC (or approved airspace control agency)shall switch the aircraft to their terminal controller (FAC/Joint Terminal Attack Controller/Universal Ground Spotters, FAC(A), Terminal Air Controller (TAC)) at which time the provisions of paragraph 8002.1 apply.

(6) Upon mission completion, when released from the terminal controller, the pilot shall contact DASC (or approved airspace control agency) on appropriate TATC/TAD frequency before exiting the restricted airspace.

(7) Additional IPs, altitudes, attack headings, and offsets shall be delineated in appropriate Exercise Operations Plans/Pilot Controller Handbooks, once approved by RCO.

3. Prior to commencement of any exercise involving the DASC (or approved airspace control agency) control in the restricted airspace, all controllers, to include certified FAC/Joint Terminal Attack Controller/Universal Ground Spotters, shall conduct a face-to-face brief with Range Control the day prior to the exercise. This brief shall provide the most current update of changes to range regulations and procedures as well as the current status of ranges.

4. Once the DASC (or approved airspace control agency) has received control of the restricted airspace from Range Control, the DASC (or approved airspace control agency) shall retain control responsibility until completion of the exercise. In the event of an emergency, the RCO shall retain authority to take back the airspace.

5. The DASC (or approved airspace control agency) shall be granted divert authority over all rotary-wing aircraft operating in the Camp Lejeune area for the conduct of actual, urgent medical evacuations from units in the field. The unit requesting the MEDEVAC/CASEVAC shall contact the controlling agency on 325.0, 38.60, or any other available means and provide the following information:

a. Pick up coordinates.

b. Number of personnel injured.

c. Type of injury/injuries.

d. If on board medical assistance is required.

e. LZ mark (smoke, panels, lights).

f. Terminal controller and frequency.

8003. HELICOPTER LANDING ZONES.

1. Tactical Landing Zones (TLZs). All TLZs must be scheduled for rappelling, fast rope, and SPIE Rig training (See Chapter 3 for scheduling procedures). Unscheduled helicopter operations into TLZs may be made after ensuring that the TLZ is not occupied and authorization is granted by BLACKBURN.

TLZ DESIGNATION	GRID	TA	REMARKS
ALBATROSS	18S TD 89632755	IB	GP-18
BLUEBIRD	18S TD 87325670	ID	GP-22
CANARY	18S TD 85312858	IF	GP-27
CARDINAL	18S TD 87403690	KB	GP-34
CONDOR	18S TD 75903572	MF	
COOT	18S TD 90944274	FA	F-5/F-2
CRANE	18S TD 96213559	GE	GP-7
DODO	18S TD 88743098	HB	GP-16
DOVE Note 1	18S TD 85893094	HB	GP-25
DUCK	18S TD 65782158	SV	South Runway

EAGLE	18S TD 78504117	MC	
EGRET	18S TD 84643051	IE	GP-30
FALCON	18S TD 91462932	GG	
FLAMINGO	18S TD 61733528	SG	GSRA W
GOOSE	18S TD 91993098	GG	GP-10
GULL	18S TD 96933506	GE	GP-7
HAWK Note 1	18S TD 89653199	HE	
HERON	18S TD 87623139	HB	GP-21
JAYBIRD	18S TD 87963392	HD	
KINGFISHER	18S TD 71463264	SM	
KITE Note 4	18S TD 81672935	JC	
LARK Note 3	18S TD 94783885	FC	
LHA DECK	18S TD 79693041	JD	
MALLARD	18S TD 78804456	AC	
ORIOLE	18S TD 80583120	JA	GP-33
OSPREY	18S TD 89392925	IA	GP-17
OWL	18S TD 76342882	IC	
PARROT	18S TD 76613902	MB	
PARTRIDGE	18S TD 64723780	SE	GPS Input
PEEWEE	18S TD 69343523	SJ	SR-6 SOUTH
PENGUIN	18S TD 90033770	FD	
PHEASANT	18S TD 66692360	SV	CAMP DAVIS
PHOENIX	18S TD 64902348	ST	GSRA SW
PIGEON Note 5	18S TD 93883830	MO,UT	
PIPIT	18S TD 69343524	SF	SR-6 NORTH
PLOVER	18S TD 85423231	HC	GP-29
QUAIL	18S TD 90452837	IB	GP-15
RAVEN	18S TD 93753838	MOUT	
ROADRUNNER	18S TD 87364283	RB	
ROBIN	18S TD 95104296	QA	
SANDPIPER	18S TD 82613085	DB	GP-31
SNIPE	18S TD 72313729	SD	SR-7
SPARROW	18S TD 85394002	DB	
SWALLOW	18S TD 66672456	SV	
SWAN	18S TD 91344127	FE	GP-2
TERN	18S TD 93903742	GC	
TURKEY	18S TD 70903136	SL	
VULTURE Note 2	18S TD 76093033	LG	
WOODPECKER	18S TD 92804080	QA	GP-3

FIG.8-1 Tactical Landing Zones (TLZ)

2. Administrative Landing Zones (ALZs). Units shall schedule using procedures in Chapter 3 after coordination through the Area Commander.

ALZ NUMBER	GRID	LOCATION	AREA COMMANDER
1	18S TD 79394645	Camp Johnson PT Field	CO, MCSSS
1A	18S TD 79654566	HQ Camp Johnson	CO, MCSSS
1B	18S TD 79034488	Camp Johnson South	CO, MCSSS
2	18S TD 82853951	II MEF HQ	CO, 2d MarDiv
3	18S TD 83533938	Area One/River Road	MEU Commander
4	18S TD 85102000	WPT Hill Field	AC/S, T&0
5	18S TD 84093793	HQ, 2d FSSG	CG, 2d FSSG
6	18S TD 84773722	10th Marines Area	CO, 10th Mar
7	18S TD 91573770	OP #2 (Restricted)	RCO
8	18S TD 83502969	Courthouse Bay	CO, MCES
10	18S TD 82494238	Tennis Courts, Paradise Point (Restricted)	AC/S T&O
11	18S TD 85153919	Molly Pitcher Field	AC/S T&O
12	18S TD 80784388	Golf Course West	AC/S T&O
13	18S TD 82404391	Golf Course East	AC/S T&O
15	18S TD 74804681	Camp Geiger Parade Deck	CO, SOI
15A	18S TD 74964539	Camp Geiger PT Field	CO, SOI
16	18S TD 84783745	6th Marines Ball Field	CO, 10 Mar
18	18S TD 84124524	2nd Marines Ball Field	CO, 2d Mar
20	18S TD 75543046	Rear K-305	CO, SOI
21	18S TD 86573652	French Creek Football Field	CG, 2d FSSG
22	18S TD 90542692	Recon Boat Locker	CO, 2d Recon
24	18S TD 84194524	Naval Hospital	CO, NAVHOSP
26	18S TD 85673631	French Creek (Soffert Field)	CG, 2d FSSG
27	18S TD 75573046	Stone Bay Rifle Range	CO, RR Det
28	18S TD 93803814	MOUT CTF (Restricted)	RCO
29	18S TD 75044105	Camp Devil Dog	CO, SOI
31	18S TD 70903258	CC Road, GSRA	Range Control

FIG.8-2 Administrative Landing Zones (ALZ)

8004. PARACHUTE OPERATIONS (PARAOPS)/PARACHUTE DROP ZONES (DZ).

DZs must be scheduled for troop lifts, paraops, paradrops, rappelling, fast rope and SPIE Rig training.

DESIGNATION	GRID	TA	REMARKS
ALBATROSS Note 1	18S TD 89632755	IB	GP-18
BLUEBIRD Note 1	18S TD 87322567	ID	GP-22
CANARY	18S TD 85312858	IF	GP-27
CONDOR Note 2	18S TD 75903572	MF	
DODO	18S TD 88743098	HB	GP-16
FALCON Note 1	18S TD 91462932	GG	
GOOSE	18S TD 91993098	GG	GP-10
LARK Note 3	18S TD 94783885	FC	
PENGUIN	18S TD 90033770	FD	
PHEASANT	18S TD 66692360	SV	
PLOVER	18S TD 85423231	HC	GP-29
TURKEY	18S TD 70903136	SL	

FIG 8-3. Drop Zones

Notes:

1. Requires safety/recovery boats for parachute operations. Boat support is using unit responsibility. Support from Range Control Navy Safety Boat unit may be requested via Range Control.

2. Requires coordination through MCAS, New River Operations prior to use and scheduling at RCO.

3. Only MC5 Ram Air parachute operations are authorized.

8005. WATER DROP ZONES.

1. Water Drop Zones (WDZs). WDZs must be scheduled three weeks in advance to permit publication of a Notice to Mariners. (See Chapter 3 for scheduling procedures). Safety recovery boats are required and provided by using units.

DESIGNATION	GRIDS	AREA
WDZ Farnell Bay	18S TD 8436	Farnell Bay, New River
WDZ Gator	18S TD 9326	Onslow Bay
WDZ Morgan Bay	18S TD 8141	Morgan Bay, New River
WDZ Shark	18S TD 8722	Onslow Bay
WDZ Stone Bay	18S TD 8336	Stone Bay, New River

Fig 8-4. Water Drop Zones

a. WDZ Farnell Bay.

(1) Maximum altitude for jumpers to exit is 1500ft. AGL.

(2) Minimum water depth is 8 ft.

b. WDZ Gator.

(1) Notice to Mariners required.

c. WDZ Morgan Bay.

(1) Coordinate use of WDZ Morgan Bay with the New River Operations Officer at DSN 484-6316/6317.

(2) Maximum altitude for jumpers to exit the aircraft is 1500 ft. AGL.

(3) Minimum water depth is 8 ft.

d. WDZ Shark.

(1) Notice to Mariners required.

e. WDZ Stone Bay.

(1) Maximum altitude for jumpers to exit is 1500ft. AGL.

(2) Minimum water depth is 8 ft.

8006. ZONE CONTROL.

1. When a TLZ is being used for multiple helicopter lifts, a LZ Control Officer (Sgt or above) shall be established. When a DZ/WDZ is being used for parachute operations, a DZ/WDZ Control Officer (Sgt or above) shall be established. LZ/DZ/WDZ Control Officers shall:

a. Carry out the duties normally associated with a FAC/Joint Terminal Attack Controller/Universal Ground Spotters to include advance coordination with the RCDO (BLACKBURN).Paragraph 8002 applies.

b. Check-in with BLACKBURN at the commencement of operations and monitor the range safety/control net throughout the operation.

c. Inform BLACKBURN of any periods when aircraft are not on station and when operations resume.

d. Inform RCDO when operations are complete.

e. During High Altitude, Low Opening (HALO) jumps, all aircraft must exit the R-5306D and R-5306E airspace.

f. Using unit must schedule adjacent airspace.

2. Use of TLZs on the west side of the New River (Verona Loop area) must be coordinated in advance by the using unit with MCAS, New River Operations and the Tower (360.2 UHF or 120.0 VHF).

8007. SNEADS FERRY LHA DECK.

1. The LHA Deck must be scheduled. Unscheduled use shall be in accordance with procedures set forth in paragraph 8003.1. The term LHA Deck shall be used when scheduling.

2. BLACKBURN shall clear aircraft (either single aircraft or flight lead) into the LHA Deck. If required, BLACKBURN shall pass the aircraft to zone control frequency.

3. Aircraft shall maintain communications with BLACKBURN while training in the vicinity of the LHA Deck.

4. Radio In/Out (RIO) procedures when aircraft are using the LHA Deck are as follows:

a. Aircraft shall check in on UHF 325.0 or FM 38.60 with BLACKBURN, upon entering/exiting the R5306D/E airspace and announce operating intentions.

b. BLACKBURN shall advise entering aircraft of other aircraft operations and hot firing ranges.

c. Aircraft shall maintain communications with BLACKBURN while training at LHA Deck. If single radio aircraft must leave RCDO frequency, aircraft shall notify BLACKBURN and monitor UHF guard.

5. RIO procedures when aircraft are training at the LHA Deck and a control tower/zone control is activated, (simulating ship's Pri-Fly), are as follows:

a. LHA Deck Zone Control shall request permission to clear the LHA Deck "Hot" from BLACKBURN, on the range safety net, either UHF 325.0 or FM 38.60.

b. LHA Deck Zone Control shall maintain communications with BLACKBURN during the period that the Deck is "hot" for training, (half-hour radio checks required). At the conclusion of training, Zone Control shall request permission to go "cold."

c. LHA Deck Zone Control shall work aircraft on a frequency other than the range control safety net.

d. 2d MAW shall provide personnel to man tower or act as Zone Control.

6. Tenant aircraft launching from MCAS, New River which desire to transit the LHA Deck area shall fly "Blue Line" to point "Alpha," point "Alpha" to points "Kilo" or "Charlie," or as directed by BLACKBURN.

7. Pattern restrictions.

a. Maximum number of two aircraft in LHA pattern.

b. Aircraft shall turn to downwind no farther than 1000 meters upwind. The turn to base leg shall be initiated prior to arriving abeam the Sneads Ferry Bridge.

c. Maximum pattern altitude is 400 feet.

d. Aircraft will adhere to the Bald Eagle restrictions when using the LHA Deck IAW paragraph 6002 of this manual.

8008. HELICOPTER OPERATIONS.

1. Helicopter pilots shall inform BLACKBURN when entering and exiting the restricted airspace.

2. The maximum altitude for all rotary wing aircraft entering New River Airport traffic area is 500 feet AGL. Rotary wing aircraft shall not exceed 500 feet AGL when fixed wing aircraft are in the R-5306D/E airspace.

3. Range Control is responsible for all live fire coordination. Helicopter live firing shall engage targets near the center of the impact area. Helicopters shall have positive identification prior to engagement. Aircraft which use lateral weapons engagements shall be routed so as to present minimal hazard to ground troops. See Appendix B of this Manual for routes and headings.

4. External lifts are not authorized in the following area(s):

a. Administrative Landing Zones (ALZs); except ALZ 15 and 22.

b. Administrative areas.

c. TLZ Sparrow.

d. Avoid over flying the 10 acre trailer park at center grid 800285 when transiting the New River Blue Line.

5. Aircraft with external cargo shall not fly over built-up areas on the Base. Contact BLACKBURN immediately in the event cargo is accidentally dropped, giving the grid coordinates and type of cargo.

6. When the DASC (or approved airspace control agency) control the restricted airspace, the following applies:

a. Prior to entering the airspace, assault support aircraft shall contact the DASC (or approved airspace control agency) on an assigned HD frequency. Flight lead shall report his present position (entry/exit point) and exercise mission event number with any exceptions.

b. Non-exercise rotary wing aircraft shall contact the DASC (or approved airspace control agency) on 325.0 UHF (primary) or 38.60 FM (secondary) and provide their present position, number and type of aircraft, mission, destination, and event number.

c. The transient altitude for all rotary wing aircraft shall be below 500 feet AGL.

d. Flight lead is required to establish positive two-way communications during the initial RIO with the DASC (or approved airspace control agency) and maintain communications with the terminal controller/LZ Control at all times.

e. For safety instructions, divert, and tactical instructions, flight lead shall contact the DASC (or approved airspace control agency) on the assigned HD frequency prior to or as soon as possible after take-off from each landing zone (LZ).

f. Upon mission completion, the rotary-wing aircraft flight lead shall RIO with the DASC (or approved airspace control

agency) on the assigned HD frequency before departing the restricted airspace.

7. Helicopters are authorized to land in any training area when the following criteria are met:

a. The Training Area is scheduled.

b. Requesting units coordinated 24 hours in advance with Range Control via email or phone and provides grid coordinates and control method of the LZ.

8009. UNMANNED AERIAL VEHICLES (UAV) OPERATIONS.

1. UAV operations will be scheduled in accordance with Chapter 3 with the following additions:

a. The ETA (Estimated Time of Arrival) block shall correspond to the time the UAV unit assumes responsibility for an area.

b. The ETD (Estimated Time of Departure) block shall correspond to the time the UAV unit shall complete training.

c. The Fire Start/End blocks shall be used for planning and shall correspond to the estimated daily start and end times of UAV operations.

d. Location of Ground Control Station and Portable Control Station (split site operations only).

e. Transponder code (if available).

2. Range Officer In Charge (ROIC).

a. The Commanding Officer of the UAV unit shall designate Mission Commanders and External Pilots for unit exercises. He is responsible for the overall conduct of UAV operations.

b. Mission Commander, as designated by the flight schedule, shall assume ROIC responsibilities for scheduled flight operations. Mission Commanders have the same responsibilities as ROICs as defined in paragraph 2008 of this Manual.

c. External Pilots shall assume the Range Safety Officer (RSO) responsibilities. External Pilots shall equate to and have the same responsibilities as Range Safety Officers (RSOs) as defined in Paragraph 2009 of this Manual.

3. Pre-Flight Preparations. Prior to UAV operations, the Mission Commander shall complete the following actions:

a. Receive transponder code from Cherry Point ATC.

b. Ensure that BLACKBURN has activated the restricted airspace.

c. Obtain a face-to-face range brief and assume training area responsibilities for UAV operations from BLACKBURN after 1400 on the day prior to the UAV flights. Half-Scale/Radio Controlled (RC) training shall not require a face-to-face.

d. Brief UAV missions for the following day with BLACKBURN using the following information:

(1) UAV mission (i.e., test flight, training flight, flight in support of, etc.).

(2) Location of the Ground Control Station (GCS) and the Portable Control Station (PCS).

(3) Take-off and landing times.

(4) Duration of flight.

(5) Altitude block where flight operations shall be conducted.

(6) Intended UAV route.

(7) Transponder code.

(8) Review Emergency Procedures.

(9) Any other pertinent information regarding the conduct of the flight.

e. Establish communications between PCS and GCS on UAV TAC net (split site operations only).

f. Establish communication between GCS and BLACKBURN, (325.0 UHF, 38.60 FM, phone 3064).

g. Obtain a current and forecasted weather brief from MCAS, New River. BLACKBURN will provide updates upon request.

4. Weather Minimums.

a. Take-off weather minimums for pattern work are 1000-foot ceiling and 3 statute miles visibility.

b. Weather minimums for all other UAV operations in the restricted areas are 3000 feet and 3 statute miles visibility.

5. Flight Operations.

a. 30 minutes prior to take-off, the Mission Commander shall contact BLACKBURN and request take-off clearance.

b. BLACKBURN shall activate the UAV Air Traffic Area (UAV-ATA) and give clearance for take-off.

c. The UAV-ATA is defined as that airspace from the surface to 2000 feet AGL within a 1.5 nautical mile radius from the center of the UAV launch/recovery site.

d. Clearance into the operating area shall be obtained from BLACKBURN.

e. Climb or descent of the UAV into or out of the operating area shall be conducted en route or in a holding pattern depending on the aircraft traffic situation.

f. The UAV Mission Commander shall request clearance from BLACKBURN before changing the UAV position, altitude and/or route.

g. UAV operations in conjunction with other aircraft are permitted.

h. 2000 feet is the minimum altitude for UAV operations outside the UAV-ATA.

i. Maximum altitude for UAV operations is 10,000 feet.

j. Flights over impact areas and through weapons safety fans shall be conducted only after determining the flight path of projectiles and in coordination with BLACKBURN and the firing unit. Flights on the gun-target line are prohibited.

k. The Mission Commander shall notify BLACKBURN when the UAV is "safe on deck."

6. Half-Scale/Radio Controlled (RC) Trainer Operations. Half-Scale and RC trainers are scaled models used to train UAV External Pilots and are not subject to the stringent requirements of UAV operations. Half-Scale and RC flights shall be conducted as follows:

a. Half-Scale/RC flights shall be within the scheduled UAV-ATA training area.

b. The External Pilot shall request that BLACKBURN activate the UAV-ATA and permit them to conduct Half-Scale/RC training.

c. Once approved, the External Pilot shall assume responsibility for the conduct of Half-Scale/RC training flights.

d. The External Pilot shall notify BLACKBURN when complete.

7. In-Flight Emergencies. The Mission Commander shall adhere to all safety precautions prescribed in this chapter. He shall manage emergencies by the UAV Emergency Procedure Checklist and the following range procedures:

a. Lost Communications. In the event of lost communication with the controlling agency, the Mission Commander shall perform the following actions:

(1) Follow the last clearance received.

(2) At the position of the last clearance received, orbit.

(3) Notify BLACKBURN immediately. BLACKBURN shall advise all other aircraft in the R5306D/E airspace of the problem.

(4) If no communication is established after 30 minutes or bingo fuel has been achieved (whichever is first), spiral climb to 6,000 feet and return directly to the recovery site. If operating above 6,000 feet, maintain altitude assigned.

(5) Descend using a spiral approach when inside 1.5 nautical miles from the recovery site.

b. Engine Cut. The Mission Commander shall perform the following actions in case of an engine cut:

(1) Notify BLACKBURN immediately.

(2) Maintain the UAV inside the restricted area.

(3) Select and clear the ditching area.

(4) Advise BLACKBURN of the location of the ditching point and recovery procedures taken.

c. Return Home. Loss of communication/controlling up-line to the UAV aircraft shall initiate an automatic return home flight program. The Mission Commander shall ensure that the return home point of this program shall allow UAV recovery in the vicinity of grid coordinate 920 350 (G-1O).

d. Emergency Recovery. The Mission Commander may declare an emergency recovery whenever conditions exist which require the UAV to land as soon as possible. He shall follow these procedures:

(1) Contact BLACKBURN and declare an emergency recovery.

(2) BLACKBURN shall clear the UAV through the most direct route to the recovery site. Clearance from BLACKBURN shall be obtained prior to initiating UAV recovery. BLACKBURN shall divert all other aircraft from the projected UAV flight path.

(3) When within 1.5 nautical miles from the recovery site, the UAV shall commence descent for landing.

8. Safety of manned aircraft, personnel and property is paramount.

9. Using unit will schedule adjacent airspace and publish NOTAMs.

8010. LYMAN ROAD OPERATIONS.

1. ROIC shall check out Lyman Road the morning of the first day of training, Friday for Monday.

2. ROIC shall have a face-to-face brief with BLACKBURN after checkout. ROIC may check out Lyman Road for the entire scheduled period. Subsequent safety briefs for the original ROIC shall be done between ROIC and BLACKBURN by radio or telephone.

3. Should there be a change of ROIC, Lyman Road shall have to be checked out again by the new ROIC and a face-to-face with BLACKBURN effected.

4. ROIC shall have two radios tuned to 38.60 FM at all times and shall use the callsign “PADDLES.”

5. Lyman Road shall be closed to traffic at the intersections of Sneads Ferry Road and Lyman Road and Highway 172 and Lyman Road for the entire period of operations. In addition, all access trails must be closed to traffic.

8011. CONCURRENT LYMAN ROAD AND G-10 OPERATIONS.

1. Lyman Road aircraft shall check in only at Point November and hold at 3500 ft.

2. After the standard brief, aircraft shall switch to PADDLES.

3. PADDLES shall route aircraft to “JULIET” (must be at or above 4000 ft at JULIET) and then into the AV-8 pattern, either in a clockwise or counter-clockwise pattern north of G-10.

4. Lyman Road aircraft shall be restricted from flying south of Lyman Road (including the takeoff).

5. CAS aircraft into the G-10 shall not use control point Silverdale.

6. CAS aircraft shall be restricted from flying North of G-10.

7. If an AV-8 on Lyman Road is armed for CAS into G-10 when it is launched from Lyman Road, he switches to BLACKBURN and is cleared to an IP outside the restricted airspace, briefed by BLACKBURN, and switched to a FAC/Joint Terminal Attack Controller/Universal Ground Spotters. ROIC and road guards must maintain communications on a frequency other than 38.60 FM or 325.0 UHF.

8. Requests for vehicles to traverse Lyman Road to the MOUT or OP-2, while AV-8 operations are in progress, shall be coordinated by the road guard and ROIC. All traffic requiring entrance to the MOUT or OP-2 shall be directed to approach from the Highway 172 intersection.

9. Any aircraft malfunctions, accidents or emergencies shall be reported to BLACKBURN immediately. BLACKBURN shall contact

Cherry Point or the squadron as appropriate. The RCO or Deputy Range Control Officer (DRCO) shall be notified immediately and an incident report along with other appropriate reports shall be filled out.

8012. FORWARD ARMING AND REFUELING POINT (FARP) OPERATIONS.

1. The Commander of the unit conducting FARP operations has ultimate responsibility for the safe conduct of operations within the site and must adhere to all governing policies and unit SOPs. Unit commanders shall ensure the training areas forward of the FARP site are clear of troops and personnel and that the orientation of the FARP site does not pose a danger to military and civilian traffic or facility.

2. FARP operations are authorized at Tactical Landing Zones Coot, Swan, Woodpecker, Crane, Gull, Osprey, Albatross, Bluebird, Dodo, Heron, Plover, Penguin, Condor, Camp Davis (North), and Lyman Road.

3. Lyman road is limited to AV-8 operations only. FARP operations shall be conducted from existing sites along Lyman road. Access roads to Lyman road will be closed during FARP operations.

4. Hot refueling with ordnance is authorized. Appropriate NATOPS/NAVAIR instructions apply.

5. Forward firing ordnance is authorized for all sites. In addition, MK 76 and MK 80 (inert) bombs are authorized on Lyman road. Commanders shall adhere to policy and guidelines as set forth in governing documents, this SOP, and unit SOPs.

6. All Marine Corps tactical refueling systems are authorized for use. If the tactical refueling system requires major construction of berms, excavating earth, cutting vegetation, or anything seen as a potentially significant impact to the environmental integrity of the site, a special range request must be submitted to CG, MCB, Camp Lejeune (attn: Range Control Division) with a request for an environmental impact review (REIR). The REIR is required for FARPs that meet any of the following four conditions:

a. The FARP includes any ground disturbing activities in the above-mentioned locations.

b. The FARP, with or without ground disturbing activities, is proposed for a location other than those mentioned above.

c. The REIR must be submitted 30 days prior to the FARP.

d. A REIR covering FARPs on the above named locations that do not have ground disturbing activities has already been approved.

7. Ground Safety Measures.

a. Using unit shall secure a perimeter around the FARP site in order to deny non-exercise personnel from entering into the FARP site and ensure the area forward of the aircraft shall be cleared and maintained clear until completion of the arming and dearming.

b. Fuels and ordnance storage and activities shall be separated by a minimum of 300 ft.

c. In the event of a spill of any quantity, units shall immediately contact MCB, Camp Lejeune Fire Department by telephoning 911. Units shall promptly implement spill contingency/containment procedures as listed in unit SOP and other governing documents.

8. Scheduling FARP Operations.

a. Units shall schedule authorized FARP sites and/or TLZs via the Range Facilities Management Support System (RFMSS). Units requesting the authorized sites or TLZs via RFMSS will select event type “flight operations.” In the “additional information” block of the RFMSS screen, using units will indicate “FARP operations (hot or cold, with or without ordnance).” In addition to scheduling the FARP site, units shall schedule the surrounding training area for exclusive use. This will assist the commander in ensuring non-exercise personnel do not enter the FARP site.

b. Once scheduled, units shall notify CG MCB, Camp Lejeune AC/S, Installations and Environment, Resource Conservation and Recovery Section (RCRS) at DSN 751-1482/commercial (910) 451-1482 and Environmental Conservation Branch (ECON) DSN 751-5063/commercial (910) 451-5063 of their intention to conduct FARP operations. Notification shall include type of ordnance, amount of fuel to be used in gallons, tactical refueling systems to be used, location of refueling points by grid coordinate, and dates and times of FARP operations.

c. Face-to-Face Brief. Units shall coordinate a face-to-face brief with Resource Conservation and Recovery Section (RCRS), Environmental Conservation Branch (ECB), and range control. The face-to-face brief is a protective measure to ensure the unit is aware of all governing regulations, changes to regulations, and requirements. This brief is intended to protect both the unit and the environment from potential spills. The face-to-face brief shall take place at a minimum of 15 days prior to execution. During the face-to-face brief, units shall brief the following items:

(1) Operations Order or Letter of Instruction.

(2) Spill response equipment and containment procedures.

(3) Type and quantities of fuel and ordnance.

(4) ARFF assets/equipment.

(5) C2 and communications plan.

(6) Medical.

(7) FARP site diagram.

(8) Security/road guard plan.

9. Communications Procedures.

a. ROIC/RSO shall check out the FARP site from range control scheduling section, Bldg 54. NLT 1200 the day prior to execution of FARP operations.

b. ROIC/RSO shall call THE RCDO (BLACKBURN) on 38.60 to request authorization to “go hot.”

c. In order to “go hot,” the ROIC/RSO shall ensure all orders/publication/SOPs concerning FARP operations are followed. Additionally, the ROIC/RSO shall at a minimum:

(1) Establish communications with range control on 38.60.

(2) Ensure appropriate medical personnel and support vehicle are on site.

(3) Ensure spill response equipment is on site.

(4) Ensure aircraft rescue firefighting personnel and equipment are on site.

(5) Ensure training areas forward of the FARP site are clear of training units/personnel.

(6) Establish road guards.

d. Once authorization to “go hot” is received from BLACKBURN, the ROIC/RSO will make normal radio checks on the half hour and hour.

e. Upon completion of training, the RSO will request to “go cold.” Once BLACKBURN places the unit in a cold status, all FARP operations shall be terminated.

CHAPTER 9

LASER OPERATIONS

ITEM	PARAGRAPH	PAGE
GENERAL	9000	9-2
UNIT LASER SAFETY PROGRAM	9001	9-4
COMMANDERS OF LASING UNITS	9002	9-4
LASER RANGE SAFETY OFFICER	9003	9-5
RANGE CONTROL PROCEDURES	9004	9-6

9000. GENERAL.

1. Military LASERs are being integrated into many aspects of training aboard Camp Lejeune. Although LASERs are prohibited from being used directly as a weapon, they enhance the accuracy of many of the weapon systems in the current DoD arsenal.

2. All LASERs are currently divided into four classes: (I, II, III(A&B), IV). All military LASERs are labeled with their appropriate warning and classifications.

Class	Power	Hazard	Safety Control	Remarks
Class I	Very Low	None-Incapable of producing damaging radiation	None-Exempt from any control measures or surveillance	
Class II	Low up to 1mw	Incapable of causing accidental eye injury with continuous intrabeam viewing	Must have CAUTION lable affixed to an external surface	Visible LASERs
Class IIIa	Medium up to 5mw	Incapable of causing injury within a blink of the eye (about .25 sec.) May cause injury through optical devices, intrabeam viewing, or off specular reflections	Must have a CAUTION Safety label affixed to an external surface.- Some have a DANGER label and should be treated as class IIIb.	Eye wear recommended. Visible LASERs
Class IIIb	Medium up to 5w	Incapable of causing injury within a blink of the eye (about .25 sec.) May cause injury through optical devices, intrabeam viewing, or off specular reflections	Must have a DANGER Safety label affixed to an external surface	Eye wear required. Invisible LASERs
Class IV	High over 5w	Will cause injury to eye or skin, fire hazard	Must have a DANGER label affixed to an external surface	Safety eye wear required. Skin covering recommended

FIG 9-1. LASER Operations

a. Class I LASERs. LASERs which by inherent design cannot emit radiation levels in excess of the maximum permissible

exposure (MPE) limits (safe limits are defined in 21 CFR for each wave-length and emission duration). Only a certification label is required.

b. Class II LASERs. Low-power visible LASERs and LASER systems with wavelengths greater than 0.400 micrometers (um) and less than 0.700 um and duration of greater that 0.25 second which can emit a power exceeding the Class I limits but not in excess of one milliwatt. These LASERs cause eye reflexes which generally cause a person to turn away from the beam before eye damage is done. The signal word “Caution” shall be used with all signs and labels associated with the Class II LASERs. Class II LASERs in the wavelength range 0.400 um to 0.700 um having an accessible output power between one and five milliwatts.

c. Class III LASERs. Medium power LASERs and LASER systems (LASERs which cannot produce a hazardous diffuse reflection). A detailed explanation should be obtained from ANSIZ-136.1. Class IIIa LASERs with irradiance less than 2.5 mw/cm2 will be marked with a caution label. Class IIIa LASERs with irradiance greater than 2.5 mw/cm2 and all Class IIIb LASERs will be marked with a danger label.

d. Class IV LASERs. High Power LASERs and LASER Systems. This includes all LASERs in excess of Class II limitations. The signal word “Danger” shall be used on all signed and labels associated with the Class IV LASER.

3. All LASERs have potential hazards and should be treated as a direct fire weapon. Rules of employment are as follows:

a. General LASER Safety Rules.

(1) Treat all LASERs as you would any weapon.

(2) Only remove the lens cap when ready to fire the LASER down range.

(3) Do not leave the power source connected to the LASER while not lasing.

(4) Remove the lens cap before applying power source. NOTE: LASER Systems that do not have lens caps or disconnects from power source must ensure that the down range area of the LASER is clear, that the system is safe, and that the operator is not touching the trigger to the LASER system.

4. Class I, Class II, and Class IIIA LASERs are authorized in all training areas, ranges and training facilities aboard Camp Lejeune. Using unit should be familiar with the Class of LASERs being used as well as the Non-Ocular Hazard Distance (NOHD).

5. Class IIIB and Class IV LASERs are restricted to OPs 2,3, and 5 and Ranges K211, K301, K319, K323, S-7 and S-10. All Range Safety Officers for Class 3B and Class 4 LASERs must be familiar with the Camp Lejeune LASER Range Safety certification binder.

9001. UNIT LASER SAFETY PROGRAM.

1. General. Prior to conducting any LASER operations, units must establish a local LASER safety program. This program shall be established as directed by MCO 5104.1A. A certified Administrative LASER Systems Safety Officer (ALSO) will manage this program. At a minimum, the program will include the following nine items:

a. A local LASER safety organization.

b. Local LASER safety regulations.

c. Activity audit of LASERs.

d. LASER safety-training program.

e. LASER protective goggles/equipment program.

f. Medical surveillance program.

g. Accident investigation/reporting procedures.

h. Record keeping/documentation file.

i. Reporting of annual inventories.

9002. COMMANDERS OF LASING UNITS.

1. In addition to the above, the commanding officer/ officer in charge of the lasing unit will:

a. Select, train, and certify safety personnel necessary to assist them in complying with the provisions of the MCO P3570.1_, MCO 5104.1A and applicable LASER regulations. All LASER safety officers aboard Camp Lejeune,NC must be trained as a ALSO.

b. Provide adequate control of the target area to prohibit entry of unauthorized personnel.

c. Designate a LASER Range Safety Officer (LRSO)/LRSO SNCO for each lasing site (can be the OIC/RSO of Firing/Range Safety Officer provided he is at the lasing site and is LASER safety qualified/certified).

d. Range Safety personnel with LASER safety training and experience appropriate to the exercise or operation shall be present during all LASER operations.

9003. LASER RANGE SAFETY OFFICER (LRSO).

The LRSO will:

1. Receive the Range Control Range Safety Officer Brief.

2. Be knowledgeable of and ensure compliance with this Manual, MCO P3570.1_, MCO 5104.1A, BUMEDINST 6470.23, SECNAVINST 5100.14C, MIL HDBK-828A and applicable FM/TM's and other applicable LASER references.

3. Brief unit personnel who work with LASER devices and any LASER range support personnel on LASER related hazards and safety devices, procedures, and measures.

4. Know the azimuths, elevations and lateral limits of each range, each firing position, and targets to be used.

5. Ensure protective eyewear is used when required. Be sure that unprotected personnel are not exposed to either direct beam or the beam reflected from a specular (reflective) surface.

6. Maintain continuous communication with BLACKBURN and any personnel in the target area. Stop lasing immediately if communications are lost.

7. Stop lasing immediately if positive control of the LASER beam is lost. Approve each specific LASER firing.

8. Comply with applicable duties of the ROIC/RSO as listed in Chapter 2 Paragraph 2007 and 2008 of this Manual.

9. Ensure no specular surfaces are within 30 meters of the target area and only diffuse reflectors are lased along the LASER line of sight.

10. Ensure controls are in place (range guards/barriers with LASER warning signs) to prohibit unauthorized personnel entry

into the LASER surface danger zone (LSDZ).Signs are available from Range Control.

11. Record all LASER firings (time, location of LASER, and target, azimuth to target, type LASER) for unit records in accordance with MCO 5104.1A/OPNAVINST 5100.27.

9004. RANGE CONTROL PROCEDURES.

1. All LASERs will be treated as direct fire weapons. The same hazard control precautions shall apply.

2. All LASER operations must be scheduled through Range Control. Chapter 3 of this Manual applies.

3. The underlying concept of LASER safety is to prevent intrabeam viewing by unprotected personnel. This is done by locating target areas where no line of sight exists between LASERs and uncontrolled potentially occupied areas and by removing specular surfaces from targets. The controls to prevent exposure to hazardous levels of LASER radiation are:

a. Beamstops.

b. Controlled access.

c. Restricted airspace.

d. A buffer zone around the target area.

4. In addition to those requirements listed for the lasing unit commander and the LRSO, the following rules apply to all LASER operations:

a. The LASER range boundary must be marked with signs (DANGER, LASER Range in Use, DO NOT ENTER) and access roads blocked by either signs/barricades or radio-equipped personnel to ensure that unprotected personnel do not enter the range area.

b. Prior to lasing, the target and range area must be visually inspected to ensure no unauthorized personnel are in the hazard area. This includes aircraft and ships/ boats.

c. LASERs will not be activated until the operator has positively identified the target.

d. Only the specific designated run-in headings/flight profiles/LASER range parameters will be utilized.

e. LASERs will not be directed at or above the horizon.

f. Unit LASER firing logs will be maintained for five years.

g. The beam must be terminated on government owned or controlled property or airspace, and within the LSDZ.

h. Personnel movements in areas adjacent to the range area should be known by lasing safety personnel. ROIC of the movement or occupied position adjacent to or across from the lasing range shall be advised of the hazards.

i. The LASER exit port must be covered when LASER-equipped vehicles travel on range roads or public highways or are parked and not engaged in tactical/operations in a controlled environment. This would also include all ground mounted/handheld systems. The LRSO must ensure lens caps are in place. Tanks need to ensure the LASER system is turned off if personnel are working or operating in front of the tank.

5. MILES is a Class IIIA LASER and should be treated with caution.

6. All LASERs that will be used aboard this base will be in compliance with the LASER Range Safety Certification. A copy of this document will be handed out to each LRSO when he/she signs for a LASER range. This document provides the user with specific information such as lasing points, PDF and right and left lateral limits of fire for specific day and night specific targets areas.

7. A copy of the latest Camp Lejeune LASER Survey will be provided in each of the LASER binders issued at Range Control.

CHAPTER 10

WATER OPERATIONS

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10000. GENERAL.

1. Navigable waters over which the Commanding General, Marine Corps Base, Camp Lejeune, exercises authority to control access to and prevent injuries from live fire target practice are described in United States Coast Pilot 4 (USCP 4) and CFR 33 and include the:

a. Atlantic Coast Sector (ACS). Danger Area boundaries are described as below:

(1) On the north, follow a line bearing 105 degrees (true meridian) from grid coordinate 0050 3328.

(2) On the east and south, follow the arc having a radius of 25,000 yards centered at 9187 2765.

(3) On the west, follow a line bearing 205 degrees form 8809 2475.

(4) On the northwest, follow the shore. Sector warning buoys are located as follow:

(5) Sector warning buoys are located as follows:

(a)..Lighted Buoy A (LLNR-631.00) in position 34 36-18.OOON 077-05- 48.000 W bearing 133 degrees true.

(b) Lighted Buoy B (LLNR-631.01) in position 34-35-21.000 N 077-01- 30.000 W bearing 265 degrees true.

(c) Lighted Buoy C (LLNR-631.02) in position 34-30-00.000 N 070-02-06.000 W bearing 255 degrees true.

(d) Lighted Buoy D (LLNR-631.03) in position 34-25-27.600 N 077-05- 36.000 W bearing 134 degrees true.

(e) Lighted Buoy E (LLNR-631.04) in position 34-22-39.000 N 077-11-00.000 W bearing 159 degrees true.

(f) Lighted Buoy F (LLNR-631.05) in position 34-21-54.000 N 077-17-30.000 W bearing 184 degrees true.

(g) Lighted Buoy G (LLNR-631.06) in position 34-23-35.000 N 077-23-37.000W bearing 174 degrees true.

(h) Lighted Buoy H (LLNR-631.07) in position 34-27-55.800 N 077-21-10.200 W bearing 137 degrees true.

b. New River Danger Area. This area is comprised of the eight sectors outlined on the Combat Training Chart - Approaches to New River:

(1) Traps Bay Sector

(2) Courthouse Bay Sector

(3) Stone Bay Sector

(4) Stone Creek Sector

(5) Grey Point Sector

(6) Farnell Bay Sector

(7) Morgan Bay Sector

(8) Jacksonville Sector

c. Atlantic Intracoastal Waterway (AIWW) and navigable waters between Bear Creek, Onslow Beach bridge, and the New River Inlet to include all inlets, streams, bays and the water contained therein.

2. The Regulations.

a. Vessels may proceed along established waterways except during live fire training periods. Warning of military training periods will be given through Notices to Mariners and by displaying, one hour before firing, a red danger streamer during daylight hours or a red light at night from those range towers/poles specified in Appendix A for each range. When these signals are displayed, vessels shall clear the sector immediately.

b. Prior to bombing and firing operations, the ACS and AIWW areas will be searched by aircraft. Watercraft in the area will be warned of the impending live fire by aircraft "buzzing," by the sounding of a siren located atop the observation towers, or by safety/guard boats from RCO. When warned, vessels will leave the area as quickly as possible by the most direct route.

c. Prior to any firing over New River sectors, the area will be visually inspected to ensure it is clear of personnel or vessels. In addition to the above warning streamer/light requirement, see instructions for firing artillery across the New River in Appendix B of this Manual.

d. When firing into the BT-3/N-1 impact area, the training unit will provide tower guards and will be in place and in communications with the range ROIC/RSO and Navy Safety Boat radio operators before the aircraft range sweep.

e. All navigable waters in the area between the south bank of Bear Creek and the north bank of the north connecting channel between the AIWW and Browns Inlet are closed to navigation at all times. There are highly sensitive unexploded projectiles within the limits of this area. Vessels will proceed through the AIWW during non-military use without stopping except in an emergency.

f. All waters of the Atlantic Intracoastal Waterway (AIWW) and connecting waters, from Bogue Sound-New River Light 58 (LLNR 39210) at approximate position 34 Degrees 37 Minutes 57 Seconds North, 77 Degrees 12 Minutes 18 Seconds West, Bear Creek Grid Coordinates 9785-3445) and continuing in the AIWW Southwest to Bogue Sound-New River Day beacon 70 (LLNR 39290) at approximate position 34 Degrees 33 Minutes 7 Seconds North, 77 Degrees 20 Minutes 30 Seconds West (Cedar Point Grid Coordinates 8540-2500), comprise a Safety Zone approximately 10 Nautical Miles. Weapons firing on authorized ranges, G-5/G-6/G-7, will be allowed on even hours (e.g., 0800; 1000). Vessels may transit the range area on the odd hours (e.g., 0900-1100). The Navy Safety Boats will be on station during live firing to control vessel traffic.

g. Each willful violation of the regulations prohibiting entry into the target area(s) during military use (live firing) is punishable in U.S. District Court by confinement or a fine.

3. Military Operations on the waters of and surrounding Camp Lejeune.

a. All operations involving military watercraft in the Camp Lejeune area, to include but not limited to U.S. Navy ships, Navy and Marine Corps small boats, and military swimmers fall under the jurisdiction of this Manual.

b. Military operations involving Assault Amphibious Vehicles (AAVs), Light Armored Vehicles (LAVs), small boats, swimmers, LCUs, LCACs, etc. in waters surrounding Camp Lejeune must be scheduled through Range Control a minimum of 21 days prior to use. This time frame is required to permit the coordination mandated by Federal law with appropriate agencies external to the Marine Corps and to permit the publication of the appropriate Notice to Mariners. Any unauthorized military waterborne operations conducted without a published Notice to Mariners which injures civilians or damages civilian property could result in the training unit commander being held personally liable in Federal Court.

c. LCAC route operations to and from Mile Hammock Bay is as follows: location of entry point approaching from the sea is 855243 and location of exit point towards Mile Hammock Bay is 864255. LCACs desiring to cross Onslow beach need to coordinate operations at least 21 days in advance with the RCO and EMD.

d. Military water operations are scheduled in the same fashion as training areas. Chapter 3 of this Manual applies.

e. Open water refueling requires a SRR and a REIR. Point of contact for REIRs is the Base NEPA section, Environmental Conservative Branch at 451-5063.

f. Requests to place ropes, wires, cables, trees, fuel hoses, pipes, etc. across navigable waters must be submitted 15 days in advance of the scheduled event to the Commanding General, MCB Camp Lejeune (Dir, RCD). Requests are to contain grid coordinates of the obstruction, type of obstruction, and dates and times of emplacement. Obstructions must be manned on both sides and easily removed to allow waterborne traffic to proceed. Waterborne traffic will not be impeded. All obstructions are to be completely removed upon completion of training.

g. Naval ships involved in operations in Onslow Bay and adjacent waters falling under the jurisdiction of the Commanding General, MCB must request area clearance prior to entry. Area clearance is required because three of Camp Lejeune ranges fire into the Atlantic Coast Sector. Message address is CG MCB CAMP LEJEUNE NC//BRCO//.

10001. NAVY SAFETY/GUARD BOAT CREW.

1. Support provided. The Navy Boat Crew is organized, staffed, and equipped to support training involving the navigable waters

within the jurisdiction of the Commanding General, MCB Camp Lejeune. Routine support includes:

a. Downrange safety/guard boats will be located on the NE (Bear Tower) and SW (Onslow North Tower) points of the AIWW to ensure boat traffic safety during live firing into the BT-3/N-1 Impact Area.

b. Safety/guard boat may provide back-up support for parachute operations into or near navigable waters of MCB, Camp Lejeune. Scheduling of safety/recovery boats remain the primary responsibility of the training unit. The Boat Crew provides this service on an "as available" basis and is not equipped for recovery operations with special type equipment that will be provided by the unit requesting the support.

c. Escort or guide boat service for amphibious vehicles (AAVs or LAVs) transiting navigable waters, primarily the New River.

2. Areas of responsibility. The Boat Crew operates within the jurisdictional control of the Commanding General, MCB as defined in U.S. Coast Pilot 4 and CPR 33. This is generally defined as the New River Inlet, the Atlantic Ocean sector from the New River Inlet to Bear Inlet, and seaward 25,000 yards, and the AIWW within MCB, Camp Lejeune boundaries. Boats are equipped with marine band radios and the capability to communicate with BLACKBURN, ROICs and RSOs (on 38.60 FM). Coxswains will operate their boats in accordance with this Manual, Coast Guard, and applicable regulations. As small craft, they will adhere to applicable warnings and will secure from operations as dictated by safety. The senior Navy Boat Coxswain on station will make the final decision to secure boats operations or to seek temporary safe harbor in the event of foul weather. He will inform BLACKBURN of his decision and ensure that the range being supported is "cold" before leaving.

3. Requesting Procedures.

a. For scheduled firing into the BT-3/N-1 Impact Area and artillery fire across the New River into the K-2 impact area, RCO will routinely provide guard boat support; separate unit requests are not required.

b. For all other boat support, unit requests must be submitted via the chain of command to the Commanding General,

MCB Camp Lejeune (RCO) 14 days in advance of the Monday of the training week.

4. Emergency Support.

a. Support may be requested directly to BLACKBURN on 38.60 FM or phone 451-3064, or RCO 451-2102/5803. Because of the location of boats (trailered at Building 1409), emergency response times will vary. The Base Fire Department is the primary source of water rescue assistance on Base under the current edition of BO 3130.1. At sea, the Coast Guard Station at Fort Macon, telephone (252)247-4570; No DSN/Channel 16,83A,22, or the Search and Rescue (SAR)(PADRO)helicopters provides assistance from "COMCABEAST" at (252)466-5247 DSN 582-5247, Frequency 323.7 UHF/Channel 83A. BLACKBURN will contact the aforementioned to request emergency support.

5. All units that operate small boats or amphibious crafts must ensure that they comply with standard procedures at no wake zones with particular attention to the Sneads Ferry Bridge to prevent damaging civilian watercraft.

10002. AMPHIBIOUS VEHICLE SPLASH POINTS.

1. Fifty splash points have been established for amphibious vehicles to enter or leave the water. Use only existing splash points. Do not widen existing splash points. Do not make new splash points. If an authorized splash point is eroded, report it to Base Range Control at 451-5803/2102.

SP	Grid	Description
1	18S TD 97573410	SP Bear Tower
2	18S TD 95943227	SP Old Brown’s Tower
3	18S TD 93863052	SP Freeman Beacon
4	18S TD 92102855	SP TLZ Falcon E
5	18S TD 91912841	SP TLZ Falcon
6	18S TD 91632811	SP TLZ Falcon W*
7	18S TD 91022755	SP Onslow AIWW
8		Inactive
9	18S TD 90102693	SP TLZ Albatross N
10	18S TD 90202677	SP TLZ Albatross S

11	18S TD 87792540	SP TLZ BLUEBIRD S*
12	18S TD 87612545	SP TLZ Bluebird N
13	18S TD 86732604	SP Mile Hammock Bay
14		Inactive
15	18S TD 85813379	SP Duck Creek N
16	18S TD 85923373	SP Duck Creek S
17		Inactive
18	18S TD 85642768	SP Traps Bay S
19	18S TD 85552784	SP Traps Bay N
20	18S TD 85523526	SP Weils Point
21		Inactive
22	18S TD 84273378	SP Tank Trail 1
23	18S TD 84903451	SP Tank Trail 2
24	18S TD 84533750	SP 6th Marines
25	18S TD 83973870	SP 8th Marines
26	18S TD 83663298	SP Tank Trail 3
27	18S TD 82863013	SP Courthouse Bay N
28	18S TD 82233951	SP Hadnot Point
29	18S TD 82873188	SP Tank Trail 4
30	18S TD 82673551	SP Rhodes Point
31	18S TD 82442996	SP Courthouse Bay
32	18S TD 82283132	SP TLZ Sandpiper
33		Inactive
34	18S TD 82172972	SP Courthouse Bay S
35	18S TD 81762928	SP TLZ Kite
36	18S TD 81843834	SP Town Point
37		Inactive
38	18S TD 81203853	SP Town Point W
39		Inactive

40	18S TD 80793146	SP Gillette Point
41	18S TD 80413132	SP Oriole
42	18S TD 80393886	SP Magnolia Lane
43	18S TD 76214080	SP Ragged Point S
44	18S TD 78674242	SP Ragged Point N*
45	18S TD 78552807	SP Everett Creek
46	18S TD 77313359	SP Foys Landing
47		Inactive
48	18S TD 76724039	SP Stone Creek Landing
49	18S TD 85002820	SP Traps Bay
50		Inactive

FIG. 10-1. AAV Splash Points

*Notes:

TLZ Falcon Landing - exercise extreme caution to avoid damage to telephone cable.

When using Tank Trail Splash Point at GC 877254, avoid the waterfowl improvement area.

Everett Creek - exercise extreme caution to avoid damage to the telephone cable.

Stone Creek Landing - requires prior coordination with the Rifle Range. Call Rifle Range S-3.

CHAPTER 11

RANGES

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11000. ESTABLISHMENT OF RANGES.

1. Ranges for live fire will be established only by the Commanding General, MCB CLNC. No other individual or organization will establish new ranges or alter existing ranges except with prior approval of the Commanding General, MCB CLNC.This shall not be construed as prohibiting the placing of suitable targets on certain existing ranges by the using organization after observing all safety precautions and regulations regarding the entering of impact areas. All unit-placed targets will be removed at the completion of training.

2. Recommendations to improve ranges and training facilities are invited, and should be provided to the Commanding General, MCB, Camp Lejeune, (AC/S, T&0).

3. Proposed new target ranges or range mission changes, with new or increased environmental impact, requires an environmental assessment (EA) per paragraph 12104.5.A (8) of MCO P5090.2. See Chapter 6 paragraph 6012 of the Range Control SOP.

11001. MODIFICATION OF RANGES.

1. All requests for repair of existing training complex facilities will either be submitted by memorandum to Director, Range Control Division or reporting problems with the range to the range inspectors by filing out the range report at the conclusion of training at a particular range.

2. Requests for minor modifications to facilities, such as fencing, minor erosion control efforts, range road improvements, and small construction projects shall be submitted to the Range Control Officer.

3. Request for major modifications to existing facilities and all construction projects must be submitted to Director, Range Development Division (RDD) via AC/S T&O. Project submission under $300,000.00 must include complete justification based on a requirement, (ITS or METL) duration and frequency of use projections, and an impact statement. Projects in excess of $300,000.00 require additional documentation. A complete project narrative will be provided and will address the following: (1) requirement, (2) current situation, (3) impact (4) consideration of alternatives, (5) analysis of deficiency, and (6) an environmental impact review.

4. No temporary or permanent modification of a range will be made without prior approval of the Range Control Division.

11002. MAINTENANCE AND OPERATION OF RANGES.

1. Maintenance of Ranges. The maintenance of ranges will be accomplished by AC/S, Training and Operations Department or by AC/S, Installation and Environment. Which section does the work is based on the level and extent of work required. No other unit or individual is authorized to perform structural maintenance on any range or training facility unless the work is first approved by the Commanding General, MCB Camp Lejeune (AC/S, T&O). Commanders or individuals desiring maintenance or modifications to existing facilities must submit a work request with full justification to the Commanding General, MCB Camp Lejeune (AC/S, T&O) for consideration.

2. Operation of Ranges.

a. All ranges and facilities are assigned to the Commanding General, MCB Camp Lejeune and, in those cases where certain units are primary users, they inherit no title to those ranges and possess no authority to modify nomenclature, purpose, or design of any range or facility.

b. Range Control personnel are authorized access to all ranges and training facilities for the purpose of inspection, operation, or maintenance at all times. These personnel, except in emergency situations or to enhance training, will not disrupt unit training. Training units will not interfere with these personnel in the performance of their duties even if the range or facility is in use.

c. All ranges equipped with electrical targets or simulators, except those at the Base Rifle Range, will be operated by contracted personnel only.

3. When the scope of work exceeds the AC/S T&O capability and funding, the request should be forwarded to AC/S I&E, in accordance with Base Order B11014.1J, to compete with other maintenance priorities for funding.

11003. AUTHORIZATION TO FIRE.

1. General. A Range Firing Warning and Airspace Utilization Order will be produced daily by the Range Control Officer and promulgated by the Commanding General, MCB Camp Lejeune in the form of a Naval Message. No firing will be conducted unless it is specifically listed in the Range Firing Warning Order, or as authorized by the RCO. In addition, authorization to fire must be obtained from BLACKBURN immediately prior to firing.

Procedures for requesting and scheduling training facilities are contained in Chapter 3 of this Manual.

11004. RESTRICTIONS.

1. Unauthorized persons are prohibited from entering the installation-training complex. No persons will enter a designated impact area see (Appendix B) without prior approval of the RCO.

2. Live firing will be conducted only on the ranges/training areas set forth in the Manual, and then only when authorized in the Range Firing Warning Order. This shall not be construed as prohibiting the controlled use of simunitions, training devices, blank ammunition, pyrotechnics, or noisemakers in established maneuver areas. Instructions for the use of these devices may be found in Chapter 5 of this Manual.

3. The use of chemical ammunition will be in strict compliance with Chapter 5 of this Manual.

4. Firing must conform to the airspace restrictions contained in Chapter 8 of this Manual.

5. Privately owned weapons are only authorized on designated MCCS ranges (F-11) during stated times in which MCCS personnel are operating the range. They are not authorized on other ranges unless authorization is granted by the Commanding General, MCB Camp Lejeune (AC/S, T&O).

6. Civilians and military personnel not specifically scheduled to be on ranges are not authorized. Unit-sponsored/command-sponsored functions, which include civilian participation, may be requested through the Commanding General, MCB Camp Lejeune, (AC/S, T&O). Chapter 1 applies.

7. Transporting military weapons and military ammunition in privately owned vehicles (POVs) is not authorized.

8. Using units are not authorized to bivouac on any of Camp Lejeune’s live fire ranges without submitting a Special Range Request ten (10) working days before the scheduled event.

9. No digging is authorized on any live fire range/TLZ.

11005. RANGES AND FIRING POSITIONS.

1. Ranges, which may be used for firing, are described in Appendix A of this Manual. All dud-producing ordnance must be

fired into one of the three designated impact areas as described in Appendix B of this Manual.

2. All normal vehicular and foot traffic approaches to ranges and impact areas will be secured by road guards who are properly instructed in their duties, or closed off by appropriate barriers /gates. All road guard positions and gate locations requirements are described in Appendix A with the corresponding range.

3. Firing may be conducted from other positions meeting the safety criteria set forth in MCO P3570.1_. In this case, a SRR including an ORM with attached overlays illustrating the proposed safety danger zones and scheme of maneuver, will be provided to the Commanding General, MCB Camp Lejeune (RCO) for approval 10 working days prior to the first date of the requested training.

4. Deviation from the MCO P3570.1_ may be authorized for special demonstrations or circumstances. Requests for a deviation of MCO P3570 will follow the format sited in MCO P3570.1_ (Chapter 1, paragraph 6) and are only approved for each scheduled event or in some cases up to a year. Deviations will be resubmitted and reviewed every fiscal year by Commanding General, MCB, CLNC.

11006. RANGE SIGNS AND MARKERS.

1. Range signs and markers are provided on all ranges, mortar and artillery/gun positions to indicate firing lines, lateral limits, range number, and other information. Firing lines and lateral limits are not indicated at artillery/gun and mortar positions. Using unit shall avoid firing at range signs. If range signs are damaged/missing report it immediately to BLACKBURN or the Range Inspectors.

2. Surveyed points are placed near the center of all firing lines, GPs and MPs.

3. Funding, fabrication and installation of range signs and markers are the responsibilities of the AC/S T&O.
4. Lateral Limits. The following applies to lateral limit markers:

a. Left Lateral Limit Marker. 4' x 8' black background with international orange diagonal stripes pointed inward to the right.

b. Right Lateral Limit Marker. 4' x 8' black background with international orange diagonal stripes pointed inward to the left.

c. Lateral Limit Markers are not to be used as targets.

5. Additional signs, self-explanatory in nature, announcing specific instructions or precautionary measures, will be posted on certain ranges as deemed necessary by the RCO.

6. All range signs and markers are essential for safe and effective training and will not be removed or otherwise disturbed. Training units who accidentally disturb a range sign or marker or discover one which has been removed or disturbed should report the discrepancy to the RCO or Range Inspectors as soon as possible.

11007. POLICE OF RANGES.

1. General. Police of ranges, training/maneuver areas, and training facilities is the responsibility of the using unit. Commanders of using units will be held responsible for police calls of ranges and training areas.

a. Before securing from a range, training/maneuver area or training facility, each using unit will thoroughly police the area and remove all trash/dunnage/target material.

b. The ROIC/RSO of units on live fire ranges and training facilities will request a Range Inspector from Range Control approximately 30 minutes prior to securing. BLACKBURN shall instruct the ROIC/RSO to have a SNCO or Officer available to meet the Range Inspector. If a Range Inspector is not available, a time will be arranged by BLACKBURN when the inspector can meet with the unit representative as soon as possible after firing is completed.

c. Units securing on live fire ranges or training facilities during hours of darkness will be notified that the range will be inspected the following day. A unit representative will be available to meet with the Range Inspector.

d Training/maneuver areas will be randomly inspected and the previously scheduled unit will be notified of discrepancies.

e. Units are required to carry trash bags after policing the area, deposit the trash bags at the nearest trash receptacle.

f. At no time will metal or wood products be placed in dumpsters. Wood products will be taken to the Base landfill. Scrap metal will be placed in the Base recycling program containers at the Base Recycling Center.

g. The last using unit will be held accountable for the state of police of the range/training area. If, upon arriving at a range or training facility, the area is in an unsatisfactory state of police, the unit ROIC should immediately report the discrepancy to BLACKBURN so corrective action may be promptly initiated. The state of police and actions taken will be entered on the Range Report and turned into Range Control at range check-in. Units failing to report discrepancies accept responsibility for corrective action.

2. Inspectors from Range Control will conduct random inspections to verify strict adherence to safety regulations, ensure proper police, note required maintenance, and report all violations to the RCO.

3. Unit commanders and their representatives are encouraged to report discrepancies and any unsafe use, police, or maintenance of all training areas and ranges to the RCO.

4. The ROIC of the unit on live fire ranges and training facilities is responsible for all damages incurred during the scheduled period. If upon arrival at a range or training facility damage is noted, the ROIC is to notify BLACKBURN immediately and note such damage on the Range Report to be turned into Range Control. Failure to report damages will be considered as having assumed responsibilities for all damages.

5. Damage to training/maneuver areas discovered during random inspections will be investigated. Responsibility will be determined based on Range Control records of scheduled units.

11008. PRIVATELY OWNED VEHICLES (POVs).

1. General. Privately owned vehicles (POVs) are authorized off hard surface roads for specific reasons such as hunting, fishing, wood cutting, and approved environmental survey. All POV use off hard surface roads will be in accordance with the following:

a. POVs are not authorized on live-fire ranges, in any impact area, surface danger zone, security area, behind any locked range gates, barricaded roads, training/maneuver areas, TLZs, artillery positions, mortar positions, parachute drop zones, or areas posted with a sign which prohibits entry.

b. Recreational POV use is governed by this regulation as authorized by the following Base orders:

(2) Base Order 11017.1

(3) Hunting Fishing Regulations 1710.20

c. During the period 1 September through 1 June (hunting season), all POV use off hard surface roads, not specifically authorized above, must be by permit issued by the Game Warden. The Game Warden's telephone number is 450-5226/2196.

2. Special event POV use/parking (CAPEX, SOCEX) instructions will be published by special bulletin.

3. POV traffic off hard surface/gravel roads is discouraged because of poor trafficability.

4. Motorcycles, dirt bikes, ATVs and four-wheeled drive vehicles are not authorized on ranges/training areas. Violators will be prosecuted.

11009. RECREATIONAL USE OF RANGES, TRAINING/MANEUVER AREAS, AND TRAINING FACILITIES.

1. Requests for recreational firing of weapons on ranges by military personnel, their dependents, and guests, will be in accordance with paragraph 1003.

2. F-ll range is available for recreational shooting on weekends for handguns. Contact Director, MCCS at 451-2106/3125 for times/information. MCCS maintains a separate SOP for procedures at F-11 which Range Control has reviewed and approved.

3. The Marine Corps Base Weapons Training Battalion sponsors National Rifle Association shooting events. Contact the Weapons Training Battalion S-3 at 450-2918/2917 for details.

11010. HAZARDS OF ELECTROMAGNETIC RADIATION TO ORDNANCE (HERO).

1. HERO is concerned with the accidental actuation of Electro Explosive Devices (EEDs) or otherwise activating electrically initiated ordnance due to radio frequency electromagnetic fields.

a. EEDs. EEDs such as squibs, blasting caps, igniters, and similar electrically initiated, sensitive explosive devices are

particularly susceptible to initiation when they are exposed to radio frequency (RF) fields. Therefore, these devices will be packaged and kept in completely enclosed metal containers until immediately prior to use.

b. Responsibilities. Ammunition and Explosives must be protected from the hazards of electromagnetic radiation to ordnance. It is imperative that all commands storing, transporting, or training with ammunition and explosives, especially when dealing with aviation ordnance, comply with the requirements of NAVSEA OP 3565, Volumes I and II/NAVAIR 16-1-529 Vol 2.

c. Munitions Affected. The following lists contain the most often used DODICs that are HERO sensitive. This is not intended as an all-inclusive list. Using units are responsible to understand all capabilities and limitations of the ammunition they train with.

Ground:

DODIC	Nomenclature
C868	81mm HE, M821 w/Fuse M734
C995	84mm, M136 Launcher & Anti-Armor Cartridge
HX05	83mm SMAW Rocket, MK 3-0
J143	5” Rocket Motor, MK22 (Mod 2 and Mod 3)
K143	M18A1 Anti-Personnel Mine (Claymore)
K869	Smoke Pot, AN-M7A1 Floating or Ground
L596	Artillery M110 Elec Simulator & Squib
M130	Blasting Cap, Elec initiated, J2 and M6
M174	.50Cal Blank, Elec initiated impulse charge
PB96	TOW, Surface Practice, BTM-71A-2
PU68	TOW, Surface Attack, BGM-71A-5

Air:

DODIC	Nomenclature
A679	20mm A/C TP-T, PGU-30/B
A871	20mm, Elec, HEI, MK 106-2
PA66	TOW, Air-to-Surface, BGM-71A
PB92	TOW, Air-to-Surface, BGM-71C

2. HERO UNSAFE Ordnance Area. The MARS station located at Building PT-5 is no longer operational and poses no HERO

concerns. Refer to NAVSEA OP 3565 Volumes I and II for a list of HERO UNSAFE or SUSCEPTIBLE ORDNANCE.

11011. EXPLOSIVE ORDNANCE DISPOSAL (EOD).

1. The MCB EOD is organized, staffed and equipped to support training involving the ranges and training areas within the jurisdiction of the Commanding General, MCB Camp Lejeune and Commanding Officer MCAS, New River. EOD is under the cognizance of the Director, RCD. Emergency Assistance is available on a 24-hour basis to all units/organizations located at Camp Lejeune. Contact EOD through the RCDO (BLACKBURN) at 38.60 FM or 451-3064 for emergencies.

2. Area of Responsibility. The MCB EOD Team operates within the jurisdictional control of the Commanding General, MCB and Commanding Officer, MCAS, New River. This is generally defined as Camp Lejeune Military Reservation. MCB EOD is equipped with Motorola Radios and the capability to communicate with RCDO (BLACKBURN), ROICs, RSOs on 38.60 FM. MCB EOD Technicians will operate in accordance with this manual (BO P3570.1_), and all applicable references pertaining to EOD. When involved in demolitions they will adhere to applicable warnings and secure from operations as directed by safety. The senior EOD Technician on site will make the final decision to secure from operations in the event of foul weather. He will inform RCDO (BLACKBURN) of his decision and ensure that the range/impact area is “cold” before leaving.

3. Routine Support. Routine requests for EOD support should be submitted in writing at least 14 days in advance of the requested date for support to the Commanding General, MCB, Camp Lejeune, Director, Range Control Division. Range Control scheduling will notify EOD and de-conflict with any other units. Upon approval, Range Control will reply to using unit for confirmation and forward request and confirmation to EOD. The day prior to requested support or last working day before weekend support, contact EOD directly for final coordination. The EOD Office is located at Building G800 at Camp Geiger and can be contacted during normal working hours at extension 449-0558/0334. After normal working hours, weekends, and holidays contact EOD through RCDO (BLACKBURN). Examples of routine EOD support are:

a. Downrange escort forward of any live firing range within the G-10 or K-2 impact areas.

b. Escort vehicles through impact areas for range maintenance and target replacements, Environmental Management Division, and Wildlife Management.

c. Provide unclassified information on ordnance. This information is available to the ROIC's and RSO's who desire a better understanding of the ordnance they will encounter/firing. This information may be obtained at Building G800 during normal duty hours, Monday through Friday.

4. Emergency Support. Contact EOD through the RCDO (BLACKBURN) at 38.60 FM or 451-3064.

a. Located unexploded ordnance aboard Camp Lejeune and MCAS New River installations.

b. Lodged, stuck or hung ordnance that cannot be removed from any gun/weapon system or aircraft.

c. Hazardous munitions not serviceable or damaged and cannot be turned into the Ammunition Supply Point or Station Weapons.

d. Any suspicious item, ordnance or improvised explosive device (IED) found or placed on or near training facilities or ranges and poses a threat to personnel and property.

5. Required EOD Support.

a. EOD must be informed when high explosive hand grenades are thrown on any hand grenade range to provide "on call" assistance for the safe disposal of unexploded ordnance incurred during training. It is the responsibility of the using unit to contact EOD five working days prior to the throwing date to coordinate or cancel this support. It is also the responsibility of the ROIC/RSO to notify EOD prior to calling the range in "hot" so an EOD team can be placed on alert. The ROIC/RSO will obtain the sunset time and provide EOD with enough time to search and clear the downrange area prior to one hour before sunset and compliance with the manual (no handling or throwing of hand grenades one hour prior to sunset).

b. EOD Personnel are required to escort any unit/individual that enters a designated impact area (G-10/K-2/N1-BT3). The only exceptions are ranges with limited troop penetration beyond the firing line, as authorized by this manual.

6. Unexploded Ordnance. Unexploded ordnance, with the exception of hand grenade ranges, that occur within a designated impact area do not require an EOD response, but will be reported to the RCDO (BLACKBURN). Unexploded ordnance that are found outside an impact area, maneuver area, or any or near training facilities or ranges and poses a threat to personnel and property, must be reported immediately to the RCDO (BLACKBURN) or directly to EOD, in the most expeditious manner. An exact location of the unexploded ordnance is required and a guide made available to relocate the item, if possible. The unexploded ordnance will be clearly marked with a visible item approximately 5 feet away, and all personnel shall be kept clear of the area. DO NOT DISTURB UNEXPLODED ORDNANCE IN ANY MANNER.

7. Explosive Actuated Tools. The use of organic tools for EOD operations, explosive actuated, such as .50 caliber dearmer, JROD, robot disrupters and rocket wrench, utilized to render safe ordnance or improvised explosive devices (IEDs), must have the approval of the BRCO. These explosive actuated tools will use the .50 caliber electric impulse cartridge, or .50 caliber ball ammunition, minus the projectile, for use to function the EOD unique tools. Request for approval will contain the following:

a. Date, Time and Location.

b. Exact placement, quantity and composition of set-up.(Electric or non-electric)

c. Measures for control and safety of personnel, property and surrounding area (Distance X)

8. Explosive actuated tools maybe used in the performance of proficiency by EOD aboard MCB Camp Lejeune and MCAS New River for training or Anti-Terrorism/Force Protection Exercises. This manual and all applicable EOD publications regarding safety will be followed.

9. Range Sweeps. Impact areas are periodically swept in conjunction with semi-annual retargeting operations for purposes of neutralizing hazards associated with unexploded ordnance. In addition, ranges that have a high frequency of use, or those which accumulate an excessive number of unexploded ordnance will be swept as often as scheduling permits. The RCO will be informed by the OIC, EOD Team of required range sweep schedules and results.

APPENDIX A

LIVE FIRE RANGES

A. GENERAL.

1. All directions of fire are listed in magnetic azimuths.

2. Requests to conduct live firing on ranges and positions will be submitted in accordance with Chapter 3 of this Manual.

3. Movement beyond the firing line on static firing ranges must be approved by RCO.

4. Movement beyond the limits designated for each range must be approved by RCO.

5. Direction of fire must remain within the limits of the SDZ at all times and at distances up to and including the maximum range of allowable ammunition/charge restrictions. All azimuths appearing in degrees will be read magnetically; all azimuths appearing in mils will be read in relation to Grid North.

6. Chapter 11 of this Manual governs range use for recreational shooting.

7. Safety regulations for firing on ranges are contained in Chapter 5 of this Manual and this Appendix.

8. Information concerning range operators and maintenance is contained in Chapter 11 of this Manual.

9. Range Officers in Charge and Range Safety Officers will be alerted to the danger of ground fire to low-flying aircraft. When low-flying aircraft are observed approaching the limits of a range while firing is in progress, the ROIC/RSO of firing will command "cease firing" until the aircraft clears the limits of the range, and call BLACKBURN immediately with description of the aircraft that violated your surface danger zone. The foregoing procedures are also applicable to Engineer Training Areas, Gun Positions and Mortar Positions.

10. The RCO is authorized to permit deviations from this Manual with regard to allowable weapons, when such deviations are for a specific purpose to enhance training and within established range safety criteria.

11. All ranges and firing positions are "off limits" to all personnel and units except when scheduled in the Range Firing Warning Order or when authorized by the RCO.

12. Medical personnel with first-aid equipment will be present on all ranges when training is in progress. Additionally, a safety vehicle must be located at all ranges during training. Vehicle operators will be familiar with the route to the nearest medical facility. Whenever possible, this vehicle should be an ambulance; however, any military vehicle capable of transporting casualties may be utilized. The presence of one hospital corpsman and one safety vehicle is the minimum requirement. Use of POVs as safety vehicles for training events is not authorized.

13. For units checking out a range, the ROIC/RSO will indicate anticipated time of use and type of training to be conducted and type of ordnance to be used. Request to extend range-firing time will be submitted to RCO/DRCO.

14. Personnel. We train as we fight. Helmets and flak jackets will be worn on all live fire ranges, engineer training areas, observation posts, and artillery/mortar positions while taking part in, observing or directing live fire, except where otherwise specified in this Appendix. Requests to waiver the aforementioned must be submitted via the chain of command, to include the General Officer in the chain of command of the firing unit, and will be submitted to the Commanding General, Marine Corps Base, (AC/S, T&O), 21 days in advance of the first day of scheduled training. Permanent waivers will be considered, if requested, via the General Officer level chain of command, on a case-by-case basis. Hearing protection will be worn during all firing.

15. BLACKBURN has the authority to extend range firing times up to one hour. Requests for extension beyond one hour will be submitted to the RCO/DRCO. Requests to fire beyond 2400 will be submitted using naval letter format to Range Control within ten (10) days of the scheduled event.

B. COMMUNICATIONS.

1. Dual Communications

a. Two means of communication are required between the training unit conducting training and BLACKBURN. Radio will be used as the primary means of communication. If a landline telephone is available at the range, it can be used as the secondary means of communication.

b. If a unit fails to maintain required communications, BLACKBURN will place that unit "in a check fire status" until satisfactory communications are reestablished. If a unit cannot maintain satisfactory communications, BLACKBURN will place that unit "COLD" for the remainder of the day and will so notify the RCO.

c. The responsibility for proper communication with BLACKBURN rests with the ROIC.

d. Emergency Procedures. During any MEDEVAC/CASEVAC, all units will suspend radio checks (unless they have an emergency) until the situation is resolved with the unit having the emergency. All units will continue to monitor the range safety/control net. Training may continue unless BLACKBURN issues a "check fire" order to all firing units. All units will render assistance, as requested by BLACKBURN. Further guidance on MEDEVAC/CASEVAC can be found in Chapter 4 of this manual.

e. Units must check in at the beginning of training in a training/maneuver area and at the completion of the event. Units conducting non-live fire in maneuver/training areas are not required to conduct radio checks with BLACKBURN; however, it is recommended that the Range Control frequency 38.60 FM, be monitored for safety purposes. Units can establish internal safety tactical nets allowing parent units to pass unit location to BLACKBURN by telephone or radio. Units will be allowed to report in and out of training areas and not be required to maintain a continuous monitoring watch on range control frequencies. This applies to non-live fire training in training areas only. If using simunitions, radio checks are required every thirty minutes on the hour and half-hour.

C. SAFETY EQUIPMENT.

1. Using unit’s commanding officer is responsible for conducting an Operational Risk Assessment and implementing the proper procedures to mitigate all safety concerns regarding

uniform and equipment unless dictated by a higher authority such a MCO P3570.1_.

2. Scarlet streamers or red flashing lights (for night firing) must be displayed from range flagpoles and light poles before and during all live firing. If any of these items are taken down, the range will cease firing until they are replaced.

3. Red smoke grenades and red pyrotechnics will only be used as emergency signaling devices, but are not required.

4. All forward observers and air sentries will use binoculars when observing airspace and navigable waters.

D. BARRICADES, ROAD GUARDS, AND TOWER GUARDS.

1. Using unit is responsible for closing approaches to danger areas created by firing to ensure that unauthorized personnel or vehicles do not enter. In most cases at Camp Lejeune, barricades combined with appropriate warning signs are adequate, and road guards are not required except in special cases. When the ROIC/RSO checks out the range at Range Control, a map will be provided with grids and locations of all barrier/road guard positions for that range. It is the ROIC/RSO’s responsibility to ensure that that barriers/road guards are in the correct position to support the live fire event.

2. Barricades.

a. There are two types of barricades:

(1) Portable barricades consisting of a sawhorse-like structure at least two feet high placed directly across the road. The barricades should be painted a bright color.

(2) Permanent barricades consisting of range gates will be locked in place or have a sentry on duty.

b. Range Maintenance Section maintains portable barricades for placement as required. Training units desiring or required to use portable barricades will do so on a temporary basis and will return the barricades to the Range Maintenance Section upon completion of use.

c. Permanent barricades are emplaced at all major road and trails leading into the impact areas. Other permanent barricades are emplaced on various ranges to prevent down range movement or lateral movement into danger areas. Report damaged

barricades to Range Control. Permanent barricades must be kept closed at all times except when authorized access is required. Using unit should never remove a permanent barricade.

d. Firing units must ensure that barricades are in place prior to commencing firing. Specific requirements for each range are listed in this Appendix.

3. Road and Tower Guards.

a. Road guards will be posted by firing units to prevent entry into the danger areas of specific ranges that cannot otherwise or which do not lie within the established impact areas. Ordinarily, range access roads are not within this category and do not require a road guard.

b. The ROIC or RSOs may post other road guards as deemed necessary to ensure safety; however, the arbitrary blocking of roads or the denial of access, to other than a danger area, will not be permitted.

c. Road guards will be provided with a positive means of communication by the unit posting them.

d. Tower guards will be posted when firing over or into the waterways adjacent to Camp Lejeune as specified in Chapter 3 Paragraph 3007. Using unit will conduct police call of the area where tower guards are placed and at no time will trash and garbage be left at these sites. Road guards and tower guards must be competent personnel who are familiar with range procedures and capable of taking immediate, positive action in emergency situations. Tower guards must be familiar with communication procedures, thoroughly briefed and equipped with binoculars.

E. OBSERVATION POSTS.

1. Observation posts must be requested in the same manner as other training facilities. Observation Posts (OP) are designated and identified as follows Annex OP.

F. POLICE.

1. Upon completion of training, Commanders, RSOs and OICs will ensure a thorough police call of the ranges and training areas is made to ensure that no trash, ammunition boxes, or other debris/dunnage has been left in the area and all holes have been filled in. All areas occupied during the conduct of training will be thoroughly policed; if a training area has not been

policed upon the occupation of the using unit, the unit must notify BLACKBURN of the situation or will held responsible for the training area/live fire range. When an area is found by Range Control personnel to be in a poor state of police, the last known using unit will be required to return to the training areas/live fire ranges and police it up thoroughly.

G. PRIVATELY OWNED VEHICLES (POVs).

1. Privately owned vehicles (POVs) are prohibited in any tactical training area or bivouac area, and impact area. POVs are prohibited from parking on roads traversing or providing access to these areas. POV’s are prohibited from parking on ranges or roads adjacent to ranges and will not be used for transporting of military personnel or equipment to or from ranges or training areas. No privately owned motorcycles, dirt bikes, three or four wheeled all terrain vehicles (ATVs), bicycles, or any other off road vehicles are authorized in the Camp Lejeune training complex or on any live fire range or training area.

H. NIGHT VISION GOGGLE DRIVING.

1. Night vision goggle driving will be in accordance with MEF/Division orders with a maximum speed of no more than 15 mph.

I. USE OF PYROTECHNICS NEAR MARINE CORPS BASE LANDFILL.

1. The use of pyrotechnics is prohibited 500 meters from the center of the Base Landfill.

J. RANGES.

NOTE: The table below is a quick reference to all ranges aboard Camp Lejeune. For a complete description of each range, see the referenced page number.

RANGE	LOCATION	PRIMARY USE OR DESCRIPTION	PAGE
A-1	18S TD 790443	Pistol Qualification/ Requalification Range	A-10
B-12	18S TD 743451	Pistol Qualification/ Requalification Range	A-12
D-9	18S TD 854396	Skeet/Trap Firing Range	A-14
D-29A	18S TD 839382	Pistol Qualification/ Requalification Range	A-16

D-29B	18S TD 839380	Pistol Qualification/ Requalification Range	A-18
D-30	18S TD 851369	Pistol Qualification/ Requalification Range	A-20
E-1	18S TD 937292	Anti-Aircraft Range	A-22
ETA-1	18S TD 842281	Engineer Demolition Training	A-25
ETA-2	18S TD 865271	Engineer Demolition Training	A-29
ETA-3	18S TD 878408	Engineer Demolition Training	A-32
ETA-4	18S TD 910325	Engineer Demolition Training	A-35
ETA-5	18S TD 824359	Engineer Demolition Training	A-38
ETA-5A	18S TD 824359	Breeching Operations	A-42
F-2	18S TD 907429	Squad Automatic Rifle Transition Range	A-45
F-4	18S TD 918421	Rifle Familiarization Range	A-48
F-5	18S TD 910428	Squad Live Fire Maneuver Course	A-52
F-6	18S TD 877383	Hand Grenade Qualification	A-55
F-11A	18S TD 870395	Basic 30 Meter Firing Range (ZERO)	A-58
F-11B	18S TD 870396	Pistol Qualification/ Requalification Range	A-60
F-17	18S TD 876384	Fast Roping	A-62
F-18	18S TD 872392	Machinegun Field Fire Range	A-64
G-3	18S TD 898344	Infantry Weapons Range	A-68
G-3A	18S TD 892357	Vehicle Mounted Smoke Grenade Launcher Range	A-72
G-5	18S TD 942323	Infantry Weapons Range/AAV/LAV Gunnery Range	A-74
G-6/CBC	18S TD 947330	Infantry Company Battle Course (Company Live Fire and Maneuver)	A-79
G-7	18S TD 957345	Field Artillery Direct Fire Range/Infantry Weapons Range	A-83
G-8	18S TD 901373	Grenade Launcher Range	A-88
G-9	18S TD 903376	Light Antiarmor/Antitank Weapons Range	A-90
H-1/2/3	18S TD 953307	Riverine Assault Range Waterborne Gunnery Range	A-92
I-1	18S TD 842276	Pistol Qualification/ Requalification Range	A-96

K-211	18S TD 784355	Grenade Launcher Range	A-98
K-212	18S TD 781355	Infiltration Course	A-101
K-212A	18S TD 781355	Live Fire Ambush Range (SOI)	A-104
K-301	18S TD 789360	AT-4 Light Antitank/Antiarmor Weapon Range	A-107
K-302	18S TD 792360	Battle Sight Zero and Machinegun 10 Meter Qualification Range Rifle Familiarization Range	A-110
K-303	18S TD 796360	Rifle Familiarization Range	A-113
K-304	18S TD 805365	Infantry Weapon Firing Range	A-117
K-305	18S TD 801365	Infantry Weapon Firing Range	A-121
K-309	18S TD 805361	Machinegun Zeroing and Field Fire Qualification Range	A-126
K-315	18S TD 809361	Infantry Familiarization Firing Range	A-130
K-317	18S TD 811360	Close Combat Range	A-133
K-319	18S TD 814360	Fire and Movement Range (Short Distance)	A-136
K-321	18S TD 818360	Squad Automatic Weapon Transition Range	A-139
K-322	18S TD 819357	Rifle Familiarization Range	A-142
K-323	18S TD 821357	Grenade Launcher Range	A-145
K-325	18S TD 823356	AT-4 Light Antitank/Armor Weapon Range	A-148
K-402	18S TD 777351	Individual Tactical Training Range	A-151
K-402A	18S TD 778351	Military Operations in Urbanized Terrain (MOUT)(Shoot House)	A-154
K-405	18S TD 775349	Hand Grenade Qualification	A-157
K-406A	18S TD 777347	Basic Room Clearing Range	A-161
K-406B	18S TD 775346	Close Combat Range	A-164
K-407	18S TD 777343	Live Fire Ambush Range	A-167
K-408	18S TD 775341	Military Operations in Urbanized Terrain (MOUT)	A-170
L-5	18S TD 735309	Infantry Live Fire Maneuver Range	A-173
MAC-1	18S TD 935377	Urban Quick Kill Range, Basic Room Entry and Clearing Range	A-176

MAC-2	18S TD 935377	Search and Kill Range, Basic Room Entry and Clearing Range	A-179
MAC-3	18S TD 935378	MOUT Obstacle Course, Clearing MOUT Type Obstacles	A-182
MAC-4	18S TD 936378	Fire Team MOUT	A-185
MAC-5	18S TD 936379	Basic Squad MOUT Range	A-188
SR-6S	18S TD 719329	Infantry Platoon Battle Course (Fire and Maneuvers)	A-191
SR-6N	18S TD 695355	Inactive	
SR-7	18S TD 722368	LAR Crew Qualification Firing Range	A-196
SR-10	18S TD 656267	Tank Crew Qualification Firing Range (Individual/Platoon through Gunnery Table 12)	A-206
SR-11	18S TD 655265	Pistol Qualification/ Requalification Range	A-217

RANGE NAME:	**A-1**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalification Range
ALTERNATE RANGE USES:	1. MCCS Recreational firing of Pistols 2. Pistol Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 790443
PRIMARY DIRECTION OF FIRE:	164 degrees
WEAPONS ACCOMMODATED:	All pistols(.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	14 firing points
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 Range Tables: 3
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not exceed .45 caliber.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B and 4 lasers not authorized.
6. Hearing protection is required.

Other Considerations:

1. Assigned to Commanding Officer, Marine Corps Combat Service Support School on a priority use basis. Other units requesting use of the range must coordinate through CO, MCSSS S-3, telephone number 450-0989/0904 prior to scheduling with Range Control.
2. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on the range. All vehicles must use the range designated parking area.
4. Scarlet streamers will be flown at the entrance of the range.
5. Safety vehicle and corpsman must be present on the range prior to commencing training.
6. Range guard will be posted near the firing line.
7. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
8. Range must be inspected and cleared by MCSSS prior to departing range/training area.
9. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**B-12**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalificaton Range
ALTERNATE RANGE USES:	Pistol Familiarization Firing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 743451
PRIMARY DIRECTION OF FIRE:	180 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note no armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	10 firing points
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 Range Tables: 3
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not to exceed .45 caliber.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B and 4 LASERs not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. Assigned to Commanding Officer, Marine Corps Air Station, New River on a priority use basis. Other units requesting use of the range must coordinate through CO, MCAS, H&HS at telephone number 449-6662 prior to scheduling with Range Control.
2. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the entrance of the range.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**D-9**
DESCRIPTION:	Skeet Range
PRIMARY RANGE USE:	Skeet / Trap Firing Range
ALTERNATE RANGE USES:	1. Shotgun familiarization firing range
STATUS:	Active
LOCATION:	Grid Coordinate: 854396
PRIMARY DIRECTION OF FIRE:	40 degrees
WEAPONS ACCOMMODATED:	Shotgun
AMMUNITION AUTHORIZED:	28 Gauge 12 Gauge 20 Gauge 16 Gauge 410 Gauge
TARGETS/SIMULATORS/DEVICES:	10 firing points. Skeet/traps for Clay Pigeons.
FACILITIES(Number of each):	Head Facilities: 2(Male/Female) POV Parking Area: 1 Range House: 1 (MCCS) Range Tables: 3 Skeet Houses: 8
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: Yes
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Shot limited to #7-1/2 shot only.
2. Maneuvers are not authorized.
3. Night use is not authorized.
4. Class 3B and 4 LASERs are not authorized.
5. Conflicts with TZL Sparrow and the DF training area.

OTHER CONSIDERATIONS:

1. MCCS operates this range.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Base AC/S, MCCS may conduct firing (shotguns) on Range D-9 from 0830 to ½ hour prior to sunset Sunday through Saturday.
3. This Range will be operated in compliance with this Range Control SOP.
4. A scarlet streamer will be flown at the entrance to the range when it is hot.
5. Notify Blackburn at 451-3064 prior to going hot or cold.
6. A cease-fire will be in effect when there are helicopter operations in TLZ Sparrow or troops are in the immediate vicinity/range fan.
7. Using unit is responsible for a detail police call of range, all facilities, dumpster area, and parking/staging areas when training is completed.
8. Our actual days of operation are currently Thursday through Sunday, but with operational flexibility for using units to request shotgun live fire.

RANGE NAME:	**D-29A**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalification Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Firing Range.
STATUS:	Active
LOCATION:	Grid Coordinate: 839382
PRIMARY DIRECTION OF FIRE:	263 degrees magnetic
WEAPONS ACCOMMODATED:	All pistol (.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	14 Pistol targets (Pits targets).
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 Range House: 1 Range Tables: 1
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines for are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not exceed .45 caliber.
3. Maneuvers are not authorized.
4. Night use is authorized. A Special Range Request is not required.
5. Class 3B-4 lasers not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector and document on the range report.
5. Scarlet streamer will be flown at the range entrance.
6. Safety vehicle and corpsman must be present on range prior to commencing training.
7. A range guard will be placed near the firing line.
8. Using unit is responsible for a detailed police call of range, bullet trap area, all facilities, dumpster area, and parking/staging areas.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
11. It is the responsibility of the using unit to provide port-a-johns for this range.
12. Using unit should provide its own telephone.

RANGE NAME:	**D-29B**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalification Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 839380
PRIMARY DIRECTION OF FIRE:	263 degrees magnetic
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	14 Pistol targets (PITS).
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 Range House: 1 Range Tables: 1
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines for pistols are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not exceed .45caliber.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B-4 lasers not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector and document on the range report.
5. Scarlet streamers will be flown at the range entrance.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
11. It is the using units responsibility to provide port-a-johns for this range.

RANGE NAME:	**D-30**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/Requalification Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 851369
PRIMARY DIRECTION OF FIRE:	220 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	32 firing points
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 Range House: 1 Range Tables: 1 Range Tower: 1
UTILITIES AVAILABLE:	Electricity: Yes Lights: No Water System: Yes
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines for pistols are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not exceed .45 caliber.
3. Maneuvers are not authorized.

4. Night use is authorized.
5. Class 3B-4 LASERS not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the range entrance.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
11. The using unit must provide port-a-johns for this range.
12. It is the using units responsibility to bring a telephone.

RANGE NAME:	**E-1**
DESCRIPTION:	Air Defense Firing Range
PRIMARY RANGE USE:	Anti-Aircraft Range
ALTERNATE RANGE USES:	1. Guided Missile Range
STATUS:	Active
LOCATION:	Grid Coordinate: 937292
PRIMARY DIRECTION OF FIRE:	150 degrees
RIGHT LATERAL LIMIT:	170 degrees
LEFT LATERAL LIMIT:	130 degrees
WEAPONS ACCOMMODATED:	Guided Missile Systems All other weapons (.50 caliber or less)
AMMUNITION AUTHORIZED:	Stinger Missile/Avenger System All other weapon ammunition (.50 caliber or less)
TARGETS/SIMULATORS/DEVICES:	Targets i.e. BATS, RCMAT Drones provided by using unit.
FACILITIES(Number of each):	Range Towers: 2 POV Parking Area: 1 (Officer's Beach)
UTILITIES AVAILABLE:	Electricity: Yes (Tower only) Lights: Yes (Tower only) Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Battalion

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. The range is restricted for migrating whales (November 21 through March 31) and during sea turtle season (May 15 through October 31).
2. Firing will cease if a boat or aircraft enters the missile hazard area.
3. Maneuvers are authorized for Avenger vehicles. Maneuver area is between 936292 and 937293.
4. Night use is authorized—after a night air-sweep, using unit must use radar and night vision goggles to ensure that the surface danger zone is clear.
5. Class 3B and 4 LASERs are authorized.
6. Using unit is required to obtain FACSFAC VACAPES clearance and exclusive use of the W-122H airspace and Cherry Point R5306C Airspace.

OTHER CONSIDERATIONS:

1. Range Control will provide safety boats and request air sweeps.
2. Using unit must schedule Range E-1 at a minimum of one calendar month in advance.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector and document on the range report.
5. Safety vehicle and corpsman must be present on the range prior to commencing training.
6. In addition to the ROIC and RSO, the using unit must have a senior missile director, assistant missile director, visual observers and range guards.
7. Scarlet streamers are flown from flagpoles at Onslow North Tower, Bear Creek Tower, and U.S. Coast Guard Boat Station, Bougle Inlet, Swansboro, NC.
8. Observers posted at Onslow North Tower and Bear Creek Tower must be manned prior to firing. Tower guards must have binoculars, radio communications with ROIC and be in place at least one half hour prior to firing. Sectors of observation are as follows: Bear Creek Tower 58 to 223 degrees and Onslow North Tower 35 to 235 degrees.

9. Navy Boat Crew will position boats at the ocean side of Bear Inlet vicinity 035335 and the ocean side of North Onslow Tower vicinity 930284.
10. Positive communication with road guards, Navy Boat Crew, and Blackburn must be maintained at all times.
11. The range will be put into a check fire or secured if the sea state goes above sea state 3.
12. Ensure that the gyro is in the stabilized mode of operation and no stinger missiles will be fired at a elevation greater than 40 degrees.
13. The conservation measures below are in place to reduce the possibility of sea turtle entanglement, collisions, or disorientation. These are in addition to the Onslow Beach SOP’s as outlined in Base Order P3570.1. The measures apply to special use requests of the area from Onslow North Tower northeast 500m.
    a. No night time lighting.
    b. Firing restricted to the hours from sunrise to 2200.
    c. Remove transport vehicles from beach by 2200.
    d. Driving on the beach from sunset to 2200 hours is discouraged due to nesting turtles. If driving is required during these hours, any vehicle traveling on the beach will navigate using night vision equipment and a sentry will walk ahead of the vehicle to prevent collisions with sea turtles.
    e. A sandbag wall at least 18″ high will surround all other vehicles, targets, or drones to remain on beach. Equipment left on the beach parallel to surf will not exceed 8’ in length.
    f. Turtles nests are protected and marked with a metal wire cage and signs. No digging or placement of equipment is allowed within 50’ of nests.
    g. All vehicular traffic will be confined to the wet sand area below the mean high tide line.
    h. Any deep ruts, depressions, or holes in the beach will be filled and smoothed before leaving the area.
    i. Nightly sea turtle patrols (ECON) will be monitoring exercise for consistency with these measures.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**ETA-1**
DESCRIPTION:	Engineering Training Area (MCES)
PRIMARY RANGE USE:	Engineer Demolition Training
ALTERNATE RANGE USES:	Infiltration Course Urban Mobility Breachers Course
STATUS:	Active
LOCATION:	Grid Coordinate: 842281
PRIMARY DIRECTION OF FIRE:	N/A
WEAPONS ACCOMMODATED:	Demolitions/Pyrotechnics
AMMUNITION AUTHORIZED:	Dynamite C-4 Demolition Charges TNT Demolition Charges Shaped Charges Detonation Cord Claymore Mine Bangalore Torpedo Antitank Mines Cratering Charge Flex Linear Deta sheets RDX Boosters Blasting Caps Pyrotechnics Field Expedient Charges not to exceed 50lbs TNT equivalency -Claymore -Bangalore Torpedo -Shaped Charge -Cratering Charge -Urban Charge -Soap Dish/Omni Charge Note: Field expedient charges require a special range request.

TARGETS/SIMULATORS/DEVICES: Multi-Training area: 3 Demo Pits,1 Urban Mobility Breachers Course, 1 Infiltration Course

FACILITIES(Number of each):
Head Facilities: 2
POV Parking Area: 1
Range Sheds: 8
Range Tables: 3
Range Tower: 1
Indoor Classroom: 2
Outdoor Classroom: 1
Safety Bunkers: 3
Magazines: 5
Infiltration Course: 1

UTILITIES AVAILABLE:
Electricity: Yes
Lights: Yes
Water System: Yes

INSTALLED COMMUNICATIONS: Telephone: Yes 450-7328/7213

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Charges are not to exceed 50lbs net TNT equivalency per shot.
2. Live land mines authorized only for demonstration purposes.
3. Bangalore Torpedoes require a 300M-safety fan for personnel in the open.
4. Maneuvers are not authorized.
5. Class 3B and 4 LASERs not authorized.
6. Night use authorized. Charges will not exceed 1 pound net TNT equivalency per shot.
7. All other demolition training will cease one hour prior to sunset.
8. All charges 45 to 50 lbs net TNT equivalency will be buried in the ground.

OTHER CONSIDERATIONS:

1. Assigned to Commanding Officer, Marine Corps Engineer School (MCES) on a priority use basis. Other units requesting use of the range must coordinate through CO, MCES prior to scheduling at Range Control.
2. Planning and usage must be in accordance with FM 5-250 Explosive and Demolitions.
3. Using unit must have a plan and means to fill in all holes and ditches created by training prior to departing.
4. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
5. Must ensure Traps Bay is cleared of all small crafts/boats.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. A map overlay indicating the range fan and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Report all maintenance problems to a range inspector.
6. The ROIC must visually verify that Traps Bay is clear prior to firing.
7. Scarlet streamers must be flown at the entrance to the range and Traps Bay while range is in use.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will either be in a bunker or outside of the range fan.
10. Cratering charges will not be exploded in roads leading into or adjacent to the ranges.
11. When conducting demolition training, helmets, flak jackets and hearing protection must be worn.
12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the

removal of all dunnage from the range to include inert line charges, tactical wire, wood, and scrap metal.

13. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit responsibility to disposed of explosive material as required by local directives.
14. Range must be inspected and cleared by a MCES SNCO/Instructor before departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**ETA-2**
DESCRIPTION:	Engineering Training Area
PRIMARY RANGE USE:	Engineer Demolition Training
ALTERNATE RANGE USES:	1. Mechanized Assault Course 2. Breeching Operations 3. Constructing Tank Traps
STATUS:	Active
LOCATION:	Grid Coordinate: 865271
PRIMARY DIRECTION OF FIRE:	N/A
WEAPONS ACCOMMODATED:	Demolitions/Pyrotechnics
AMMUNITION AUTHORIZED:	C-4 Demolition Charges TNT Demolition Charges Shaped Charges Claymore Mines Bangalore Torpedo Antitank Mines Inert Line Charge Cratering Charge Detonation cord Blasting caps Pyrotechnics/Smokepot
TARGETS/SIMULATORS/DEVICES:	Trench system
FACILITIES(Number of each):	Head Facilities: None Range Sheds: 1 (CEB) Range Bleachers: 2 Range Towers: 2 Range Tables: 0 Range Bunker (Sandbag): 1 POV Parking Area: 1 (Mile Hammock Boat Launching Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	No

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Charges are not to exceed 27 lbs net TNT equivalency per shot.
2. Only M68A1 inert line charge is authorized.
3. Live land mines authorized only for demonstration purposes. Must be remote controlled fired.
4. Field expedient charges not authorized.
5. Bangalore Torpedoes require a 300M-safety fan for personnel in the open.
6. Red-cockaded woodpecker habitat nearby: no vehicular traffic or training in specifically designated areas.
7. Maneuvers are authorized.
8. Night use is authorized.
9. Class 3B and 4 LASERs not authorized.
10. Demolition training will cease one hour prior to sunset.

OTHER CONSIDERATIONS:

1. Assigned to Commanding Officer, 2d Combat Engineer Battalion on a priority use basis. Other units requesting use of the range must coordinate through CO, 2d CEB S-3 prior to scheduling at Range Control.
2. Requests to use field expedient demolitions and/or devices must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must be in accordance with FM 5-250 Explosive and Demolitions.
3. Using unit must have a plan and means to fill in all holes and ditches created by training prior to departing.
4. Earth may be excavated/disturbed in the construction of tank traps. Tank traps will not exceed 15 feet in width or a depth of 9 feet. Upon completion of training all holes will be filled in and the area graded.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. A map overlay indicating the range fans and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamers must be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will either be in a bunker or outside of the range fan.
9. Cratering charges will not be exploded in roads leading into or adjacent to the ranges.
10. When conducting demolition training: helmets, flak jackets and hearing protection must be worn.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include inert line charges, tactical wire, wood, and scrap metal.
12. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit responsibility to disposed of explosive material as required by local directives.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
15. Upon completion of training involving the construction of tank traps a range inspector will inspect the range prior to the unit departing.

RANGE NAME:	**ETA-3**
DESCRIPTION:	Engineering Training Area
PRIMARY RANGE USE:	Engineer Demolition Training
ALTERNATE RANGE USES:	Infiltration Course Obstacle Course
STATUS:	Active
LOCATION:	Grid Coordinate: 878408
PRIMARY DIRECTION OF FIRE:	N/A
WEAPONS ACCOMMODATED:	Demolitions/Pyrotechnics
AMMUNITION AUTHORIZED:	Dynamite C-4 Demolition Charges TNT Demolition Charges 15lb. Shaped Charge Claymore Mine Bangalore Torpedo Antitank Mine Cratering Charge FLSC/LHFLSC Deta Sheet Pyrotechnics/Smokepots Field Expedient Charges not to exceed 15 lbs TNT equivalency -Claymore -Bangalore Torpedo -Shaped Charge -Cratering Charge -Urban Charge Note: Field expedient charges require a special range request.
TARGETS/SIMULATORS/DEVICES:	Night Infiltration Course Land Navigation Course Ropes Course Combat Obstacle Course Field Fortification/Trench Complex

FACILITIES(Number of each): Head Facilities: 3
Outdoor classrooms: 1
Range Towers: 2
Shower Facilities: 3
Range Sheds: 1 (CEB)
Indoor classrooms: 2
POV Parking Area: 1
Range Tables: 4
Field ASP: 1

UTILITIES AVAILABLE: Electricity: Yes
Lights: Yes
Water System: Yes (non-potable)

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Charges are not to exceed 15 lbs net TNT equivalency per shot.
2. Live land mines authorized only for demonstration purposes—Must be remote controlled fired.
3. Bangalore Torpedoes require a 300M-safety fan for personnel in the open.
4. Red-cockaded woodpecker habitat nearby: no vehicular traffic or training in specifically designated areas.
5. Maneuvers are not authorized.
6. Night use is not authorized.
7. Class 3B and 4 LASERs not authorized.
8. Demolition training will cease one hour prior to sunset.

OTHER CONSIDERATIONS:

1. Assigned to Commanding Officer, 2d Combat Engineer Battalion on a priority use basis. Other units requesting use of the range must coordinate through CO, 2d CEB S-3 prior to scheduling at Range Control. Planning and usage must be in accordance with FM 5-250 Explosive and Demolitions.
2. Using unit must have a plan and means to fill in all holes and ditches created by training prior to departing.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. A map overlay indicating the range fans and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamer will be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will either be in a bunker or outside of the range fan.
9. Cratering charges will not be exploded in roads leading into or adjacent to the ranges.
10. When conducting demolition training: helmets, flak jackets and hearing protection must be worn.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include inert line charges, tactical wire, wood, and scrap metal.
12. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit responsibility to disposed of explosive material as required by local directives.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**ETA-4**
DESCRIPTION:	Engineering Training Area
PRIMARY RANGE USE:	Engineer Demolition Training
ALTERNATE RANGE USES:	Live Fire Breaching Exercises
STATUS:	Active
LOCATION:	Grid Coordinate: 910325
PRIMARY DIRECTION OF FIRE:	365 degrees
WEAPONS ACCOMMODATED:	Demolition/Pyrotechnics
AMMUNITION AUTHORIZED:	Dynamite C-4 Demolition Charges TNT Demolition Charges Shaped Charges Claymore Mine Bangalore Torpedo Antitank Mines Cratering Charge M68 MICLIC (Inert Line Charge) APOBE (Live) (DODIC) MN79 Field Expedient Charges not to exceed 50 lbs TNT equivalency. -Claymore -Bangalore Torpedo -Shaped Charge -Cratering Charge -Urban Charge Note: All field expedient charges require a special range request.
TARGETS/SIMULATORS/DEVICES:	Open demolition area
FACILITIES(Number of each):	Head Facilities: None Bunker: 1 Range Tables: 0 Instructor Stand: 1 POV Parking Area: 1 (Fire Tower) Next to Sneads Ferry Rd

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Charges are not to exceed 50 lbs net TNT equivalency per shot. Only the APOBE will exceed the weight of 50 lbs.
2. Live land mines authorized only for demonstration purposes. Must be remote controlled fired.
3. Bangalore Torpedoes require a 300M-safety fan for personnel in the open.
4. Maneuvers are authorized.
5. Night use is not authorized.
6. Class 3B and 4 LASERs are not authorized.
7. Demolition training will cease one hour prior to sunset.

OTHER CONSIDERATIONS:

1. Requests to use field expedient demolitions and/or devices must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must be in accordance with FM 5-250 Explosive and Demolitions.
2. Requests to conduct live fire breeching with coordinated live fire and demolitions must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. Using unit must have a plan and means to fill in all holes and ditches created by training prior to departing.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range. Must request GA/GF training area.
3. POVs are not authorized on range. All vehicles must use the range designated parking area on Sneads Ferry Road.
4. A map overlay indicating the range fans and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Report all maintenance problems to a range inspector and document on range report.
6. Scarlet streamer will be flown at the entrance to the range on Sneads Ferry Road.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will either be in a bunker or outside of the range fan.
9. Verify range fan when M68 Inert Line Charge is employed. Ensure any and all additional safety precaution and requirements are in place.
10. Cratering charges will not be exploded in roads leading into or adjacent to the ranges.
11. When conducting demolition training: helmets, flak jackets and hearing protection must be worn.
12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include inert line charges, tactical wire, wood, and scrap metal.
13. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit responsibility to disposed of explosive material as required by local directives.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME: **ETA-5**

DESCRIPTION: Engineering Training Area

PRIMARY RANGE USE: Engineer Demolition Training

ALTERNATE RANGE USES:

STATUS: Active

LOCATION: Grid Coordinate: 824359

PRIMARY DIRECTION OF FIRE: N/A

WEAPONS ACCOMMODATED: Demolition/Pyrotechnics

AMMUNITION AUTHORIZED:
Dynamite
C4 Demolition Charge
TNT Demolition Charge
Shaped Charge
Claymore Mine
Bangalore Torpedo
Cratering Charge
Pyrotechnics
Field Expedient Charges not to exceed 20 lbs TNT equivalency.
-Claymore
-Bangalore Torpedo
-Shaped Charge
-Cratering Charge
-Urban Charge
Note: All field expedient charges require a special range request.

TARGETS/SIMULATORS/DEVICES:

FACILITIES(Number of each):
Head Facilities: None
Range Sheds: 2 1-(SOI) 1-(SOTG)
Range Tables: 4
Overhead Cover: 1
Range Observation Bunker: 1
POV Parking Area: 1(K-305 Area)

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with ETA-5A (Breaching House
2. Charges are not to exceed 20 lbs net TNT equivalency per shot.
3. Bangalore Torpedoes require a 300M-safety fan for personnel in the open.
4. Maneuvers are not authorized.
5. Night use is not authorized.
6. LASERs not authorized.
7. Demolition training will cease one hour prior to sunset.

OTHER CONSIDERATIONS:

1. Requests to use field expedient demolitions and/or devices must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must be in accordance with FM 5-250 Explosive and Demolitions.
2. Requests to conduct live fire breaching using ETA-5A breeching house with coordinated live fire and demolitions must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Units must request the Engineering Training Area (ETA-5) and the breaching house (ETA-5A) to support this training.
3. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the Range ROIC/RSO when normal training can resume.
4. Using unit must have a plan and means to fill in all holes and ditches created by training prior to departing.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the range designated parking area across from Range K-305 off K-Range Road.
4. A map overlay indicating the range fans and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Verify range fan when Bangalores Toredoes are deployed. Ensure any and all additional safety precaution and requirements are emplaced. Road guards should be at secondary placements and all open personnel are outside the 300-meter safety fan.
6. Report all maintenance problems to a range inspector.
7. Scarlet streamer will be flown at the entrance to the range on K-Range Road.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will either be in a bunker or outside of the range fan.
10. Cratering charges will not be exploded in roads leading into or adjacent to the range. All demolition training must be conducted in designated demolition areas.
11 Claymore Mine training must be conducted in designated pit area and no further than 50 ft from the target berm. Claymore Mines must be oriented so that the blast effect is absorbed by target berm. The using unit must ensure that the backblast area is cleared.
12. When conducting demolition training: helmets, flak jackets and hearing protection must be worn.
13. All demolition pits and claymore firing points will be restored to their original state upon completion of training. A mound of sand is provided on site for maintenance of the demolition pits and replacements of sandbags.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
15. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit

responsibility to disposed of explosive material as required by local directives.

16. Range must be inspected and cleared by a range inspector prior to departing range/training area.
17. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**ETA-5A**
DESCRIPTION:	Urban Breaching House
PRIMARY RANGE USE:	Breaching Operations
ALTERNATE RANGE USES:	1. Close Quarters Battle (CQB)
STATUS:	Active
LOCATION:	Grid Coordinate: 824359
PRIMARY DIRECTION OF FIRE:	N/A
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle
AMMUNITION AUTHORIZED:	All Pistol Ammunition *Note: No armor piercing type ammunition 12 Gauge Ammunition 12 Gauge Lock Busting Round 5.56mm Ball (only) 12 Gauge Breaching Round Flex Linear/Deta Sheets Expedient Breaching Devices: (requires prior approval) Simunitions
TARGETS/SIMULATORS/DEVICES:	Live Fire Bullet Traps needs to be installed when conducting live fire inside the building
FACILITIES(Number of each):	Head Facilities: None Range Sheds: 2 1-(SOI) 1-(SOTG) Breaching House (multi-rooms) Range Tables: 4 Overhead Cover: 1 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No

INSTALLED COMMUNICATIONS: Telephone (located in ETA-5 bunker)

AREA SUITABILITY Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with ETA-5. ETA-5 and ETA-5A cannot be scheduled at the same time. Users desiring to utilize both training ranges in one day must request each range separately using time separation.
2. Charges are not to exceed 15 lbs net TNT equivalency per shot.
3. Personnel are not authorized on the roof of the breaching house. Demolition charges will be deployed in a matter not to damage the roof or supporting structures.
4. Field expedient demolitions not authorized.
5. Maneuvers are authorized.
6. Night use is authorized.
7. Night vision devices are authorized.
8. Class 3B and 4 LASERs are not authorized.
9. Requires a Special Range Request to use this range.

OTHER CONSIDERATIONS:

1. Requests to conduct live fire breaching using ETA-5A with coordinated live fire (bullet traps) and demolitions must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Units must request the Engineering Training Area (ETA-5) and the breaching house (ETA-5A) to support this training.
2. ROIC/RSO must have completed the Urban Breacher’s Course and have certification cards on hand while conducting training. Using unit may have additional certified and qualified breaching personnel on hand to assist in training.
3. Using unit must have a plan and means to fill in all holes and ditches created by demolition; the repair and/or replacement of all doors, door jams, door knobs and hinges, and walls damaged during training. Unit must have all repair material on hand prior to conducting training.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the range designated parking area across from Range K-305 off K-Range Road.
4. A map overlay indicating the range fans and current road guard placements will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamer will be flown at the entrance to the range on K-Range Road.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will either be in a bunker or outside of the range surface danger zone.
9. When conducting breeching training: helmets, flak jackets and hearing protection must be worn.
10. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include damage doors, tactical wire, and scrap metal.
11. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the unit responsibility to disposed of explosive material as required by local directives.
12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-2**
DESCRIPTION:	Machinegun Field Firing and Multipurpose BZO Range
PRIMARY RANGE USE:	Squad Automatic Rifle Transition Range
ALTERNATE RANGE USES:	1. Squad Live Fire Range 2. Multipurpose BZO Range
STATUS:	Active
LOCATION:	Grid Coordinate: 907429
PRIMARY DIRECTION OF FIRE:	204 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G Medium Machinegun M203 Grenade Launcher
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (Ball, Tracer, Linked) 7.62MM (Linked) 40MM TP (DODIC B519)
TARGETS/SIMULATORS/DEVICES:	1.Locally manufactured targets—wood frame silhouette targets. 2. Using unit provides PITS or other suitable target material.
FACILITIES(Number of each):	Head Facilities: 5 Range House: 1 Range Tables: 3 POV Parking Area: 1
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Phone (Range House)

AREA SUITABILITY: Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with F-4, F-5, F-18 and FA, FE, FF, FG Training Area.
2. Maneuvers are authorized.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Range requires road guards.
7. Vehicular movement downrange is restricted to existing roads.
8. Vehicles not authorized on berm.
9. No designated firing points.
10. Firing authorized from berm.
11. Cross range firing not authorized.
12. Grenade Launchers not authorized to fire on PITs.
13. Vehicles not authorized on dirt berm.

OTHER CONSIDERATIONS:

1. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
2. The unit is required to provide a qualified PIT operator for the remote control unit and must be familiar with the target system. The unit must provide all other targetry.
3. Downrange movement restricted to 800 meters. If F-18 range is firing machinegun movement is restricted to the 42 east/west grid line.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.

5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
7. A map overlay indicating the range fan, current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.
8. ROIC/RSO will deconflict road guard placements and relief with F-4, F-5 and F-18.
9. ROIC/RSO must verify all weapons range safety cards.
10. Scarlet streamer will be flown at the entrance to the range.
11. Safety vehicle and corpsman must be present on the range prior to commencing training.
12. All non-participating or observing personnel will remain outside of the range fan.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
15. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
16. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.
18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
19. It is the responsibility of the OIC/RSO to ensure that the lights are turned off from the overhead covered area before securing from the range.

RANGE NAME:	**F-4**
DESCRIPTION:	Fire Control Range
PRIMARY RANGE USE:	Rifle Familiarization Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Range 2. Automatic Rifle Marksmanship Range 3. Shotgun Range
STATUS:	Active
LOCATION:	Grid Coordinate: 918421
PRIMARY DIRECTION OF FIRE:	1. Station 1: 220 degrees (Nearest to Range House) 2. Station 2: 236 degrees (Middle of Range) 3. Station 3: 213 degrees (Furthers from Range House)
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (Ball, Tracer, Linked) 40MM TP (DODIC B519)
TARGETS/SIMULATORS/DEVICES:	Using unit provides PITS or other suitable target material. PITS locations/stations: 10 Head Facilities: 1 Range House: 1 Range Tables: 3 POV Parking Area: None

FACILITIES(Number of each): Electricity: No
Lights: No
Water System: No

UTILITIES AVAILABLE: None

INSTALLED COMMUNICATIONS: Squad

AREA SUITABILITY

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges F-2, F-5, F-18; Training Areas FB and FC; Gun Position #2.
2. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat areas.
3. Maneuvers are restricted.
4. Authorized for night use.
5. Night vision devices are authorized.
6. Class 3B and 4 LASERs not authorized.
7. Range requires road guards.
8. Vehicular movement downrange is restricted to existing roads.
9. No designated firing points.
10. Cross firing not authorized.
11. Grenade Launchers not authorized to fire on PITs.

OTHER CONSIDERATIONS:

1. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
2. The unit is required to provide a qualified PIT operator. The unit must provide all other targetry.
3. Downrange movement restricted to 900 meters. Maneuvers not authorized if ranges F-2 and F-5 are active. If range F-18 is firing machineguns, movement is restricted to the 42 east/west grid line.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.

3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure all conflict ranges, gun positions, and training areas are secured of all personnel and equipment.
7. A map overlay indicating the range fan, current road guard placements and gate closures will be provided by Range Control when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSOC while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.
8. ROIC/RSO will deconflict road guard placements and relief with F-2, F-5 and F-18.
9. ROIC/RSO must verify all weapons range safety cards.
10. Scarlet streamer will be flown at the entrance to the range.
11. Safety vehicle and corpsman must be present on the range prior to commencing training.
12. All non-participating or observing personnel will remain outside of the range fan.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
15. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
16. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.

18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-5**
DESCRIPTION:	Squad Live Fire Maneuver Course
PRIMARY RANGE USE:	Squad Live Fire Maneuver Course
ALTERNATE RANGE USES:	1. Rifle Familiarization Range 2. Squad Battle Drill Range
STATUS:	Active
LOCATION:	Grid Coordinate: 910428
PRIMARY DIRECTION OF FIRE:	212 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G Medium Machine M203 Grenade Launcher AT-4 Trainer
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (Ball, Tracer, Linked) 7.62MM (Linked) 40MM TP (DODIC B519) 9MM for AT4 Trainer Smoke/Illumination Grenades Artillery Simulators
TARGETS/SIMULATORS/DEVICES:	43 RETS e-silhouette pop up targets 2 Moving Infantry Targets
FACILITIES(Number of each):	Head Facilities: 5 Range Tower: 1 Overhead Cover: 1 Range Tables: 3 POV Parking Area: 1

UTILITIES AVAILABLE: Electricity: Yes
Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges F-2, F-4, F-18; Training Area FA; Gun Position #2.
2. Maneuvers are restricted.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Range requires road guards.
7. Vehicular movement downrange is restricted to existing roads.
8. RETs are operated by approved scenarios that are preset electronically and operated by the Range Contractor.
9. No designated firing points.
10. Cross range firing not authorized.
11. Grenade Launchers not authorized to fire on RETs.

OTHER CONSIDERATIONS:

1. Request to modify computerized target scenarios must be submitted through the unit’s chain of command to Range Control. The request must be submitted ten (10) working days in advance from the first day of training.
2. The unit is responsible for becoming acquainted with training scenarios prior to training session.
3. Downrange movement restricted to 900 meters. If range F-18 is firing machineguns, movement is restricted to the 42 east/west grid line.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to

departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

4. POVs are not authorized on range, tank trail or adjacent training areas. All vehicles must use the designated parking area.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure all conflict ranges, gun positions, and training areas are secured of all personnel and equipment.
7. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.
8. ROIC/RSO will deconflict road guard placements and relief with F-2, F-4 and F-18.
9. ROIC/RSO must verify all weapons range safety cards.
10. Scarlet streamer will be flown at the entrance to the range.
11. Safety vehicle and corpsman must be present on the range prior to commencing training.
12. All non-participating or observing personnel will remain outside of the range fan.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
15. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
16. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.
18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
19. It is the responsibility of the OIC/RSO to ensure that the lights are turned off from the overhead covered area before securing from the range.

RANGE NAME:	**F-6**
DESCRIPTION:	Hand Grenade Range
PRIMARY RANGE USE:	Hand Grenade Qualification
ALTERNATE RANGE USES:	1. Hand Grenade Distance and Accuracy (Non-Live)
STATUS:	Active
LOCATION:	Grid Coordinate: 877383
PRIMARY DIRECTION OF FIRE:	94 degrees
WEAPONS ACCOMMODATED:	Hand Grenades
AMMUNITION AUTHORIZED:	Hand Grenade, Practice M67 Hand Grenade, HE, Fragmentation
TARGETS/SIMULATORS/DEVICES	1. Open fragmentation impact area. 2. One (1) practice throwing area with structures.
FACILITIES(Number of each):	Head Facilities: None Range Tables: 4 Range Observation Bunker: 1 Practice Throwing Range: 1 Fragmentation Throwing Bunkers: 5 POV Parking Area: None(Industrial/Brig Area
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Night use not authorized.
3. Placement of targets not authorized.
4. Range will be return to original condition upon completion of training.
5. Handling and throwing of grenades will cease-fire one (1) hour prior to sunset.
6. Throwing pits will be supervised by a qualified SNCO/NCO.
7. Left and right lateral limit markers define boundaries of impact area. A center marker defines maximum throwing distance. ROIC/RSO will ensure no grenades explode outside designated impact area.
8. No more than one (1) grenade will be thrown at a time. A detonation must occur before the next grenade is thrown.
9. High explosive fragmentation grenades not authorized on Practice Range.
10. It is mandatory that all personnel throw practice grenades on the non-live fire range prior to throwing a live grenade.
11. Range Control and Base EOD will be notified for all duds.
12. When using F-6 hand grenade range, the “COOK OFF” method is not authorized for training.
13. At no time will the using unit place any objects or material in the impact area of a grenade range.
14. At no time will live hand grenades be thrown into standing water.

OTHER CONSIDERATIONS:

1. Requires a Gunnery Sergeant or above to be a Range Safety Officer.
2. Prior to scheduling of the range, the unit must contact EOD and ensure support will be available during their requested scheduled dates and time. The unit is required to notify EOD in the case the required training support dates have changed or the range has been cancelled.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off Sneads Ferry Road (near Brig).
5. Report all maintenance problems to a range inspector.

6. ROIC/RSO ensure all personnel and equipment is clear of impact area.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating personnel will be protected by overhead cover. Observing personnel must be inside the range bunker.
10. ROIC/RSO will ensure an adequate number of safety personnel are assigned to supervise training.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. Dud/misfire occurs on range, ROIC/RSO will place the range in an immediate **"Check-Fire"** and notify Range Control. The practice non-live fire throwing range may continue to train. ROIC/RSO will contact EOD personnel for assistance. Upon arrival of EOD, the complete range will be placed in a **"Check Fire"** until lifted by Range Control personnel.
13. ROIC/RSO will notify Range Control and contact EOD when training has been completed. The ROIC/RSO will place the unit into a **"Check-Fire"** until EOD personnel arrive. The unit will notify Range Control when EOD personnel arrive. Once Range Control has been contacted by EOD that the impact area has been swept and the range is cleared, the unit be allowed to go **"Cold"**.
14. Detail police call and restoration of the impact areas will be conducted upon receiving a **"Cold Time"**.
15. The range, all facilities, dumpster area, and parking/staging areas will be policed. The unit will ensure the removal of all dunnage from the range.
16. Grenade spoons, pins, and clips will be removed from throwing pits and impact area. All holes will be filled in and area raked smooth. A pile of dirt is provided on the range. The using unit must provide its own hand tools (shovels, rakes).
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.
18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-11A**
DESCRIPTION:	Baffled Rifle BZO Range
PRIMARY RANGE USE:	Basic 30 Meter Firing Range (ZERO)
ALTERNATE RANGE USES:	1. Shotgun Familiarization 2. MCCS Recreational firing of pistols
STATUS:	Active
LOCATION:	Grid Coordinate: 870395
PRIMARY DIRECTION OF FIRE:	86 degrees
WEAPONS ACCOMMODATED:	Shotgun M16 Rifle M4 Rifle .22 Caliber Rifle M9/.45 and below pistol
AMMUNITION AUTHORIZED:	12 Gauge 5.56MM (ball only) .22 Caliber M9/.45 and below
TARGETS/SIMULATORS/DEVICES:	16 firing points
FACILITIES(Number of each):	Head Facilities: 2 Range Tables: 1 POV Parking Area: 1 Range House: 1 (No key) Bleachers: 4
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone (Range House)
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Range can be used for recreational shooting with personal .22 Cal rifles.
2. Maneuvers are not authorized.
3. Night use is authorized.
4. Class 3B-4 LASERs not authorized.
5. Hearing protection is required.

OTHER CONSIDERATIONS:

1. No contractor support for F-11A (Rifle BZO side).

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the entrance of the range.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-11B**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalification Range
ALTERNATE RANGE USES:	1. MCCS Recreational firing of pistols. 2. Pistol familiarization firing range.
STATUS:	Active
LOCATION:	Grid Coordinate: 870396
PRIMARY DIRECTION OF FIRE:	86 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition Note no armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	16 firing points
FACILITIES(Number of each):	Head Facilities: 2 Range Tables: 1 POV Parking Area: 1 Range House: 1 (No Key) Bleachers: 4
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Recreational shooting of rifles and shotguns not authorized. Handguns are authorized and will not exceed .45 caliber.
2. Firing Lines for pistols are located at 7, 15, and 25 yards.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B-4 LASERs not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator for the remote control unit and be familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the entrance of the range.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-l7**
DESCRIPTION:	Training Towers
PRIMARY RANGE USE:	Fast Roping
ALTERNATE RANGE USES:	1. Dry Net Training 2. Rappelling 3. Helicopter Exiting 4. Climbing Wall
STATUS:	Active
LOCATION:	876384
PRIMARY DIRECTION OF FIRE:	N/A
WEAPONS ACCOMMODATED:	N/A
AMMUNITION AUTHORIZED:	N/A
TARGETS/SIMULATORS/DEVICES:	N/A
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: None (Industrial/Brig Area) Range Tower: 1 Range Tables: 1
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	N/A
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are not authorized.
2. Night use is not authorized.
3. Class 3B-4 LASERs not authorized.

OTHER CONSIDERATIONS:

1. The requesting unit must provide all training support materials and required safety equipment.

SPECIAL INSTRUCTIONS:

1. ROIC/RSO must be HRST/TRST qualified. A SGT/E-5 can be an RSO if he is HRST/TRST qualified.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the entrance of the range.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Using unit is responsible for a detailed police call of the range, tower area, all facilities, dumpster area, and parking/staging areas when training is completed.
8. Range must be inspected and cleared by a range inspector prior to departing range/training area.
9. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**F-18/F-18 50 Cal**
DESCRIPTION:	Machinegun Field Fire Range
PRIMARY RANGE USE:	Machinegun Field Fire Range
ALTERNATE RANGE USES:	Infantry BZO/Zero Range Pistol Familiarization Range Shotgun Familiarization Range Non-Lethal Range
STATUS:	Active
LOCATION:	Grid Coordinate: 872392
PRIMARY DIRECTION OF FIRE:	81 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G Medium Machinegun M2 .50 Caliber Machinegun M40 7.62mm Sniper Rifle
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (Ball, Tracer, Linked) 7.62MM (Ball, Linked, Match) .50 cal (Ball, Linked) Non-Lethal Ammunition (USMC Approved Only)
TARGETS/SIMULATORS/DEVICES:	1. Hard Targets: 6 Left side: 646 meters 720 meters 912 meters Right side: 656 meters 720 meters 912 meters 2. Using unit must provide all additional suitable target material.

FACILITIES(Number of each): Head Facilities: None
Bleachers: 1
Range Tables: 2
POV Parking Area: None
(Industrial Area)

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges F-2, F-4, F-5; Training Areas FA, FB, FC; Gun Position #1 and #2.
2. Range consists of two (2) berms directly in front of one another and 2 meters apart. Forward berm is approximately 1 meter high; rear berm is approximately 2 meters high. Movement beyond 80 meters of the forward berm is prohibited unless escorted by EOD personnel.
3. Additional targetry may be placed within 80 meters of the forward berm without EOD support. All personnel, equipment and vehicles must remain clear of area during firing. Movement is restricted on the berm.
4. Maneuvers not authorized.
5. Authorized for night use.
6. Night vision devices are authorized.
7. Class 3B and 4 Lasers not authorized.
8. Range requires road guards. Range Control will provide a map once the range is signed for with the locations of the road guards.
9. Reference minimum safe distance for all weapons. The maximum range of all weapons will not exceed the limits of observation. Cross firing on range not authorized.
10. Engagement of targets closer than 300 meters with 5.56 and 7.62 ammunition not authorized.
11. Vehicles are authorized to fire on the berms. No more than two (2) vehicles are authorized at one time on the firing line. Vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters safe separation will be maintained between firing positions.
12. Vehicle movement downrange not authorized.

13. Designated firing line.
14. No cross range firing authorized.

OTHER CONSIDERATIONS:

1. The unit is responsible for becoming acquainted with road guard placements prior to training session.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed, holes are filled in and leveled.
4. POVs are not authorized on range, trails or adjacent training areas. All vehicles must use the designated parking area across from industrial area.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure all conflict ranges, gun positions, and training areas are secured of all personnel and equipment.
7. A map overlay indicating the range fan, current road guard placements and gate closures will be provided when range is checked out. Placement and/or requirement for additional road guards for .50 cal training differ from small arms weapon training. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.
8. ROIC/RSO will deconflict road guard placements and relief with F-2, F-4 and F-5. Notify F-2, F-4 and F-5 if machinegun training is being conducted on range. Ensure ROIC/RSO of F-2, F-4 and F-5 understand that the 42 east/west grid line is their limit of advancement. Notified same upon completion of training.
9. ROIC/RSO must verify all weapons range safety cards.
10. Scarlet streamers will be flown at the entrance to the range.
11. Safety vehicle and corpsman must be present on the range prior to commencing training.

12. All non-participating or observing personnel will remain outside of the range fan.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. ROIC/RSO will ensure adequate number of safety personnel is assigned to control exercises.
15. ROIC/RSO will ensure all personnel are familiar firing points, sectors of fire and limits of fire.
16. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.
18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME: **G-3/G-3 .50 Cal/G-3 TOW**

DESCRIPTION: Infantry Weapons Range

PRIMARY RANGE USE: Infantry Weapons Range

ALTERNATE RANGE USES:
1. Mortar Range (MP 7)
2. Guided Missile Range
3. Rocket Range
4. Grenade Launcher Range
5. .50 cal Machinegun Range
6. LAR Weapons Range
7. AAV Weapon System Range

STATUS: Active

LOCATION: Grid Coordinate: 898344

PRIMARY DIRECTION OF FIRE: 95 degrees magnetic

WEAPONS ACCOMMODATED:
All Pistols
M203
M16/M4
M249
M240G/M219/M240 Coax MG
MK19
AT-4
60/81mm Mortars
25MM
M2 MG
TOW
Javelin
MK 153 SMAW
M40 Sniper Rifle
SASR .50 Cal

AMMUNITION AUTHORIZED:
9mm/45 cal
5.56mm (all DODICs)
7.62mm (all DODICs)
25mm TP-T
40mm (all DODICs)
83mm (all DODICs)
84mm (all DODICs)
81mm (all DODICs)
60mm (all DODICs)
TOW II

Javelin
.50cal (all DODICs)

TARGETS/SIMULATORS/DEVICES: Hard Targets

FACILITIES(Number of each): Head Facilities: None
Range Tower: 1 (OP5)
Range Tables: 0
POV Parking Area: None (Ammo Dump Area)

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. There are no designated firing points on this range.
2. The following areas will be closed for traffic and or occupation when firing the TOW: Lyman Road, ALZ-7, ALZ-28, G-3A, G-6, G-8, G-9, G-10A, EOD-1, MOUT (CTF), MP-1, MP-2, MP-3, MP-4, MP-5, MP-7, MP-8, TLZ Pigeon, TLZ Tern, TLZ Raven, OP-2, OP-3, OP-5, Training Areas: FG, GA, GB, GC, GD, FC, and all GP’s conducting live-fire into the G-10 Impact area.
3. The following areas will be closed for traffic and or occupation when firing the .50 Cal: Highway 172 from Sneads Ferry Road (vic. Duck Creek 907306) to Triangle Outpost Gate, G-5, G-6, G-7, ETA-4, EOD-1, MP-6, GP-7, GP-8, GP-9, GP-10, GP-11, TLZ Crane, TLZ Gull, Freeman’s Creek Landing, Training Areas: GC, GD, GE, GF, GH, GI.
4. G-3 will go into a check fire for all weapons systems while fixed wing aircraft are operating in the G-10 impact area.
5. Downrange movement is prohibited unless accompanied by EOD personnel.
6. Maneuvers are not authorized.
7. Night use is authorized.
8. LASERs authorized.
9. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to

departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

OTHER CONSIDERATIONS:

1. The unit is responsible for becoming acquainted with road guards, detour signs, and gate placements prior to training session.
2. Range has a firing berm 550 feet x 45 feet.
3. G-3 will be placed in a **"Check Fire"** when air operations are being conducted in the G-10 Impact Area.
4. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

1. A scarlet streamer will be flown at the entrance to the range.
2. Helmets and flak jackets are required when firing dud-producing weapons.
3. Hearing protection required during all live-fire.
4. A map overlay indicating the range fan, target arrays, current road guard placements, detour signs and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are emplaced; gates and detour signs are posted. Firing TOW missiles require additional road guards and road sweeps. Lyman Road, Old Dump Road, intersection of Wallace Creek Road and Old Bear Creek Road and the MOUT Facility will be swept and secured prior to going "HOT" with TOW missiles. Ensure staff personnel of the MOUT are notified of road closure. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints. ROIC/RSO is responsible for ensuring all gates and detour signs are secured to the upright storage position upon completion of training.
5. When aircraft operations are being conducted in the G-10 Impact Area, G-3 must remain in check-fire.
6. Suggest placing a radio and operator on using unit's frequency with FAC. Coordinate with FAC, that when AC are not in/over the G-10, to allow live firing. Once FAC allows G-3 to go hot contact BLACKBURN for clearance to do so.
7. When firing in all circumstances, regardless of position on the firing berm, weapons must be absolutely limited to

traversing from 87.5 degrees magnetic left to 99.5 degrees magnetic right degrees magnetic.

8. When firing the M2 .50cal machinegun, the ROIC of firing unit will provide sentries/road guards at the Triangle Outpost and Sneads Ferry/HWY 172 range gates. Both gates will remain closed during live firings. Both sentries will have direct communications with the ROIC of the firing unit.
9. Vehicle-mounted systems are authorized. Only 6 AAV at one time are permitted on the berm. Units must repair all damage to the berm. The weapon must be fired using a Traversing and Elevation Mechanism.
10. The using unit will inform BLACKBURN before closing/securing Highway 172, BLACKBURN must inform PMO of road closures.
11. The using unit must provide port-a-johns, if required.
12. The gate leading into the impact area along perimeter road must be secured.
13. Road guards at Freemans Creek Gate must be positioned and the RSO must sweep Highway 172 and the surrounding areas to include LZ Crane, LZ Gull when firing the .50 cal machinegun.

RANGE NAME:	**G-3A**
DESCRIPTION:	M257 Smoke Grenade Launcher System Range
PRIMARY RANGE USE:	Vehicle Mounted Smoke Grenade Launcher Range
ALTERNATE RANGE USES:	None
STATUS:	Active
LOCATION:	Grid Coordinate: 892357
PRIMARY DIRECTION OF FIRE:	85 degrees
WEAPONS ACCOMMODATED:	M257 Smoke Grenade Launchers on the Tank/AAV/LAR
AMMUNITION AUTHORIZED:	Smoke Grenade
TARGETS/SIMULATORS/DEVICES:	Target Description: Hard Quantity: 55
FACILITIES(Number of each):	Head Facilities: None Range Tower: 1 on OP-5 Range Tables: 0 POV Parking Area: None (Ammo Dump Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	None
AREA SUITABILITY	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Weapons Restrictions/Caveats: OP-5 serves this range.
2. Maneuvers Area Restrictions: Maneuvers not authorized.
3. Night use is authorized.
4. Lasers not authorized.

5. Safety Restrictions: Personnel in vehicles equipped with the M257 SGLS will be inside of the vehicle with all hatches secured when firing. Down range movement outside of the vehicle is prohibited unless accompanied by EOD personnel.

OTHER CONSIDERATIONS:

1. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

1. A scarlet streamer will be flown at Grid coordinate 895 344 with a road guard posted. Ensure road block/gate at Grid coordinate 890 360 is closed prior to going hot. Positive communication is required between ROIC/RSO, road guard and firing vehicles. Be familiar with Chapter 7 of this manual and this Appendix.
2. Using unit is responsible for providing port-a-johns.
3. When using smoke grenades, ensure firefighting equipment is available.

RANGE NAME:	**G-5**
DESCRIPTION:	Infantry Weapons Range AAV/LAV Gunnery Range
PRIMARY RANGE USE:	Infantry Weapons Range AAV/LAV Gunnery Range
ALTERNATE RANGE USES:	Line Charge Range/APOBE Range (MICLIC)
STATUS:	Active
LOCATION:	Grid Coordinate: 942323
PRIMARY DIRECTION OF FIRE:	152 degrees
WEAPONS ACCOMMODATED:	AAV Weapons M219 /240 COAX MG M203 (TP only) M16A2 M249 M4A1 MK19 M2 MG M240G M242 Chain Gun M40 Sniper Rifle M82 SASR M-58 MICLIC M-68 MICLIC 20mm/30mm Aircraft Mounted Inert/TP only APOBE Line Charge
AMMUNITION AUTHORIZED:	5.56mm 7.62mm .50cal 25mm TP-T 20mm/30mm TP/inert only 40mm TP only M58 Line Charge M68 Line Charge (inert)
TARGETS/SIMULATORS/DEVICES:	Hard Targets - 8

FACILITIES(Number of each): Head Facilities: None
Range Tower: 1
POV Parking Area: N/A
Range Sheds: 1
Bunker:
Range Tables: 0

UTILITIES AVAILABLE: Electricity: Yes
Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: N/A

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing will impact the BT-3/N-1 impact area.
2. LAV Tables, FAM fire, 1X and X modified.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B and 4 LASER are not authorized.
6. Projectiles will not be fired to impact within 200 yards of the AIWW.
7. The AIWW must be closed during firing.
8. Onslow and Bear Tower must be manned prior to firing.
9. Aerial sweep of area required, including the AIWW prior to firing.
10. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the u nit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

OTHER CONSIDERATIONS:

1. Range has a firing berm 225 feet x 24 feet.
2. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

3. In addition to the RSOs, the ROIC will appoint position safety officers as required and four range guards equipped with radios.

4. One hour prior to commencing fire until termination, fly a scarlet streamer during daylight hours, and display red flashing light from sunset until sunrise at flagpoles and on top of the range towers at:
   a. Bear Creek Tower
   b. Onslow Beach North Tower
   c. Main Entrance to Range G-5
   d. Flag pole located at U.S. Coast Guard Life Boat Station, Bogue Inlet, Swansboro, North Carolina.
5. Range guards posted on towers will be equipped with binoculars and radios. Sectors of observation are:
   Bear Creek Tower Guard: 64 degrees M to 190 degrees M.
   Onslow Beach North Guard: 55 degrees M to 270 degrees M.
6. Range guards must have at least three miles visibility to seaward or the range will not be allowed to go hot.
7. Range guards will be instructed to call/sound siren as notification to the ROIC/RSO of firing before a vessel or aircraft penetrates the danger area as shown on the range fan overlay. Sentries will also be directed to raise and lower streamers/flashing lights at the required times.
8. The using unit will ensure that a search is made of the impact area, AIWW, marshes, dunes, and ocean areas within the surface danger area one-half hour prior to firing to ensure that the areas are safe for firing. Range Control will schedule a helicopter for the using unit.
9. Using units will post tower guards one-half hour before an aerial search.
10. Range guard will be in communication with the RSO and the Navy Safety Boats prior to the aerial search.
11. Range Control will provide Navy Safety/Guard Boats to be positioned in the AIWW near Bear Creek and Freeman Creek to control boat traffic during periods of firing.
12. Navy Safety/Guard Boats, equipped with radios and operators will stop civilian waterborne traffic and hold them in place at their guard boat positions for a period of one hour. At the end of the hour, the range will be put in check fire and boats will be allowed to proceed north/south. When all traffic has cleared the guard boats, firing may resume. The following types of vessel* will not be stopped and the range will be placed in an immediate check fire until they have completed their passage of the SDZ:
    Vessels belonging to the U.S. Coast Guard.
    Vessels belonging to the U.S. Army Corps of Engineers.
    Barges under tow.
    Civilian law enforcement vessels.
13. If at any time the Boat Crew's coxswain determines weather conditions in the AIWW are hazardous to the safety of

his/her craft, the coxswain will contact the ROIC/RSO and the RCDO (BLACKBURN) and the range will go cold. Navy Safety Boats are present to assist the range user, but work directly for the RCDO (BLACKBURN).

14. Firing will cease if streamers or flashing lights are lowered or extinguished for any reason.
15. Contact relief of tower guards. After the first range sweep for the day has been completed and tower guards have been posted, other units authorized to use Range G-5 during later periods of the same day are urged to affect contact relief of tower guards. Otherwise, subsequent range sweeps will be required prior to resumption of fire.
16. Telephone capabilities are available at the range building. Bear Creek Tower, and Onslow North Tower.
17. Internal radio communication will be established between the ROIC/RSO, safety towers, firing line, and Navy Safety/Guard Boats on frequency 38.45 FM and the RCDO (BLACKBURN) on frequency 38.60FM. A total of six radios: five for internal communication requirements and one for the RCDO (BLACKBURN) are required. If the range phone is not operational, an additional radio is required as back-up to the RCDO(BLACKBURN).
18. Be familiar with the contents of Chapter 7 of this Manual and this Appendix.

SPECIAL INSTRUCTIONS WHEN FIRING THE M58/M68 SERIES LINE CHARGE

1. The ROIC of the firing unit will provide sentries/road guards at the Triangle Outpost and Sneads Ferry/Hwy 172 range gates. Both gates will remain closed during live firings. Both sentries will have direct/continual communications with the ROIC/RSO of the firing unit on the unit' s radio frequency.
2. It is the responsibility of the ROIC/RSO to ensure that the Hwy 172 detour signs are open prior to going hot and closed immediately after going cold. In addition to the detour signs, the ROIC must ensure that the cable barriers located at Grid Coordinates 9195 3110 and 9540 3410 are placed across Hwy 172 to prohibit entry into the G-6 Surface Danger Zone.
3. The RCDO (BLACKBURN) will not allow the range to go hot or cold until the above 18 accomplished.
4. A map providing the location of the Hwy 172 detour signs and Range Control will furnish range gates when the range is checked out.
5. A map overlay providing the direction of fire, range fan and danger areas will be provided by Range Control at range

check-out. Firing personnel shall be in an armored vehicle in a button up mode with single hearing protection during firing. Spectators shall not be allowed within the surface danger zone or noise hazard contour during firing.

6. Prior to firing, the ROIC/RSO of the firing unit will contact the RCDO (BLACKBURN) for the current blast focus.
7. The line charge will be fired only during the conditions below:
   a. Time: 1000-1500 Monday-Friday.
   b. Winds: Blowing towards the ocean at greater than 8 to 9 knots.
   c. Skies: Clear to scattered cumulus clouds.
   d. Blast Focus: To be determined by the RCDO (BLACKBURN).
   e. Deviation from the above conditions can only be approved by the Range Control Officer or Deputy Range Control Officer.
8. When the M58 or M68 line charges are the only weapon to be fired, it is not necessary to man Bear and Onslow North Towers or have an aerial search/sweep conducted.
9. When the M68 line charge is the only line charge to be fired, it is not necessary to close Hwy 172.
10. Prior to firing the M58 line charge and after road guards have been posted, the using unit will conduct a sweep of Highway 172 from the Triangle Outpost road guard post position to the road guard position at the intersection of Highway 172 and Sneads Ferry Road. This sweep is to ensure that no vehicles or personnel are near or within the noise hazard zone of the line charge.

RANGE NAME:	**G-6/CBC**
DESCRIPTION:	Infantry Company Battle Course
PRIMARY RANGE USE:	Infantry Company Battle Course (Company Live Fire and Maneuver)
ALTERNATE RANGE USES:	1. Basic Techniques of Fire 2. Squad/Platoon, Live Fire and Maneuver. 3. Combined Arms Deliberate Attack Range.
STATUS:	Active
LOCATION:	Grid Coordinate: 947330
PRIMARY DIRECTION OF FIRE:	354 degrees for 1st Objective
WEAPONS ACCOMMODATED:	All Pistols .45 cal and below. M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher M40 Sniper Rifle M240G Machinegun M2 .50 cal Machinegun .50 cal Sniper Rifle (SASR) MK 19 Grenade Launcher 81/60mm Mortars (G-10 Impact Area) AT-4 M136 (9mm and HEAT) SMAW MK-153 (9mm/Live Missiles) M1 Tank Main Gun/50 cal MG M242 25mm Chain Gun/LAR AAV .50 cal/40mm Machinegun Field Artillery 155mm (G-10 Impact Area) Fixed Wing (G-10 Impact Area) Rotary Wing (G-10 Impact Area) Naval Gunfire (G-10 Impact Area)
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 MM (ball/linked/tracers) 7.62 MM (ball/linked/tracers) .50 cal (ball/linked/tracers) .50 cal (Sniper Rifle Ammunition) 40mm (all DODICs)

AT4 Rocket (9mm/Heat)
SMAW Rockets (9mm/Rockets)
120mm (Training Practice Only)
25mm (Training Practice Only)
60 mm HE/ILLUM/WP
81mm HE/ILLUM/RP
155mm HE/ILLUM/WP
5 Inch 54 cal (Naval Gunfire)

TARGETS/SIMULATORS/DEVICES

Target Description/Quantity:
Bunkers: 9
Trench Lines: 4
Armor Targets: 3
Infantry Targets: 24

FACILITIES(Number of each):

Head Facilities: None
POV Parking Area: None
Range Tower: None
Range Tables: None

UTILITIES AVAILABLE:

Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: None

AREA SUITABILITY: Company Reinforced

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

SDZ (A) 7.62mm and Below
G-3/G-3A/G-3 TOW/G-3 .50 cal/G-8/G-9/G-10 Helo/Fixed/EOD-1/All Ops/All MPs/All GPs/LZs-Penguin and Tern/TA’s: FD,GA,GB,GC,GD,GF

SDZ (B) .50 Cal and Above
G-3/G-3A/G-3 TOW/G-3 .50 cal/G-8/G-9/G-10 Helo/Fixed/EOD-1/ MOUT/MAC Ranges/All Ops/All MPs/All GPs/LZs-Penguin, Tern, Pigeon and Raven/TA’s: FC,FD,FE,FG,GA,GB,GC,GD,GF,QB/Lyman Road

1. G-6/CBC SOP is published under separate correspondence; using unit will coordinate with Range Control to obtain a copy.
2. All firing will impact within the G-6/CBC approved surface danger zone/G-10 impact area.
3. Firing of the AT-4 or SMAW 9mm spotting rounds or the SMAW Inert Practice Rocket at the bunkers is authorized. Units may fire at temporary targets approved by the Range Control Officer or the approved hard target in place (GC 938339).
4. Live Fire and Maneuver is authorized.
5. Using Units will submit a Special Range Request to Range Control at least 10 days before the scheduled event.
6. A walk through and dry fire rehearsal will be conducted for all live fire and maneuver (day and night) under like conditions.
7. Night operations are permitted, night vision devices authorized.
8. Bivouacking on the range is not authorized.
9. When conducting Live Fire in the trenches, using unit must ensure the direction of fire is maintained within the approved SDZ.
10. Using Units will schedule one additional day for detailed police/environmental survey/maintenance inspection/EOD sweep.
11. ROIC/RSO will have red smoke and pyrotechnic on this range to cease all operations in case of emergency.
12. All units requesting a terrain walk through of the CBC shall contact the Range Safety Officer, Range Control Division at 451-1240/1307 at least 5 working days in advanced.
13. All wheeled and tracked vehicle will stay on the gravel road provided, no off road movement past the 1st objective.
14. All Machineguns and Mortars should be registered before the scheduled live fire and movement event.
15. No overhead fire with Mortars and Machineguns authorized.
16. No movement past the last objectives authorized.
17. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
18. Only Practice Hand Grenades are authorized in the trenches.

SPECIAL INSTRUCTIONS:

1. A scarlet streamer will be flown at the entrance of the G-6/CBC range.

2. Be familiar with the contents of Chapter 5 of this manual.
3. It is the responsibility of the RSO to ensure all designated gates-barricades are secured and that road guards are posted. Road guards must be equipped with a radio operating on a unit frequency other then that of Blackburn’s 38.60FM. Road Guard positions are listed in CBC Handout.
4. The using unit shall ensure that a search is made of the G-6/CBC area prior to commencing live fire. Gates that are found to be unsecured must have verification that all persons are cleared prior to any live fire.
5. Communication between the ROIC/RSO and designated PSO’s must be maintained at all times.
6. All fires shall remain within the left and right lateral limit signs. Dud producing ordnance shall impact forward of the last objective.
7. Vehicle mounted weapons systems are authorized. The 50 cal. machinegun will fire from one location. Such authorization will be for static fire only. No targets will be engaged by moving vehicle. No free guns; all guns must be attached to the T&E mechanism.
8. If the using unit will be crossing Highway 172 in tactical formations, Base ISS will install a caution sign to slow down the traffic on request from the unit.
9. The using unit will be responsible for port-a-johns.
10. Range Control will provide a map with road guard positions to the using unit.

RANGE NAME:	**G-7**
DESCRIPTION:	Field Artillery Direct Fire Range Infantry Weapons Range
PRIMARY RANGE USE:	Field Artillery Direct Fire Range/Infantry Weapons Range
ALTERNATE RANGE USES:	LAV Gunnery Range
STATUS:	Active
LOCATION:	Grid Coordinate: 957345
PRIMARY DIRECTION OF FIRE:	141 degrees
WEAPONS ACCOMMODATED:	AAV Weapons M219/240 COAX MG M203 (TP only) M16 M249 M4 MK19 M2 MG M240G M242 Chain Gun M40 Sniper Rifle M82 SASR 20mm/30mm Aircraft Mounted Inert/TP only
AMMUNITION AUTHORIZED:	5.56mm 7.62MM .50 cal 25mm TP-T 20mm/30mm TP/Inert only 40mm TP only 155mm 40mm
TARGETS/SIMULATORS/DEVICES:	Hard Targets 5

FACILITIES(Number of each): Head Facilities: None
Range Tower: 1
POV Parking Area: None
Range Tables: 3

UTILITIES AVAILABLE: Electricity: Yes
Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: None

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing will impact the BT-3/N-1 impact area.
2. Artillery direct fire only. No high velocity rounds exceeding 25,000 yards fixed seaward.
3. LAV Tables.
4. Use of G-6 Range closes this range.
5. Maneuvers are not authorized.
6. Night use is authorized.
7. Lasers authorized.
8. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
9. Projectiles will not be fired to impact within 200 yards of the AIWW.
10. The AIWW must be closed during firing.
11. Onslow and Bear Tower must be manned prior to firing.
12. Aerial sweep of area required, including the AIWW prior to firing.

OTHER CONSIDERATIONS:

1. Range has a firing berm 225 feet x 24 feet.

SPECIAL INSTRUCTIONS:

1. In addition to the RSOs, the ROIC will appoint position safety officers as required and four range guards equipped with radios.

2. One hour prior to commencing fire until termination, fly a scarlet streamer during daylight hours, and display red flashing light from sunset until sunrise at flag poles and on top of the range towers at:
   a. Bear Creek Tower.
   b. Onslow Beach North Tower.
   c. Main entrance to Range G-7.
   d. Flag pole located at U.S. Coast Guard Life Boat Station, Bogue Inlet, Swansboro, North Carolina.
3. Range guards posted on towers will be equipped with binoculars and radios. Sectors of observation are:
   Bear Creek Tower Guard: 64 degrees M to 190 degrees M.
   Onslow Beach North Guard: 55 degrees M to 270 degrees M.
4. Range guards must have at least three miles visibility to seaward or the range will not be allowed to go hot.
5. Range guards will be instructed to call/sound siren as notification to the ROIC/RSO of firing before a vessel or aircraft penetrates the danger area as shown on the range fan overlay. Sentries will also be directed to raise and lower streamers/flashing lights at the required times.
6. The using unit will ensure that a search is made of the impact area, AIWW, marshes, dunes, and ocean areas within the surface danger area one-half hour prior to firing to ensure that the areas are safe for firing. Range Control will schedule a helicopter for the using unit.
7. Using units will post tower guards one-half hour before an aerial search.
8. Range guard will be in communication with the RSO and the Navy Safety Boats prior to the aerial search.
9. Range Control will provide Navy Safety/Guard Boats to be positioned in the AIWW near Bear Creek and Freeman Creek to control boat traffic during periods of firing.
10. Navy Safety/Guard Boats, equipped with radios and operators will stop civilian waterborne traffic and hold them in place at their guard boat positions for a period of one hour. At the end of the hour, the range will be put in check fire and boats will be allowed to proceed north/south. When all traffic has cleared the guard boats, firing may resume. The following types of vessel* will not be stopped and the range will be placed in an immediate check fire until they have completed their passage of the SDZ:
    a. Vessels belonging to the U.S. Coast Guard.
    b. Vessels belonging to the U.S. Army Corps of Engineers.
    c. Barges undertow.
    d. Civilian law enforcement vessels.
11. If at any time the Boat Crew's coxswain determines weather conditions in the AIWW are hazardous to the safety of

his/her craft, the coxswain will contact the ROIC/RSO and the RCDO (BLACKBURN) and the range will go cold. Navy Safety Boats are present to assist the range user, but work directly for the RCDO (BLACKBURN).

12. Firing will cease if streamers or flashing lights are lowered or extinguished for any reason.
13. Contact relief of tower guards. After the first range sweep for the day has been completed and tower guards have been posted, other units authorized to use Range G-5 during later periods of the same day are urged to affect contact relief of tower guards. Otherwise, subsequent range sweeps will be required prior to resumption of fire.
14. Explosive filler rounds will be fired at Browns Island only by direct tank and artillery fire.
15. Only Support Section personnel will operate the mechanized moveable target.
16. This range cannot be utilized when G-6(old) is firing.
17. Telephone capabilities are available at the range building. Bear Creek Tower, and Onslow North Tower.
18. Internal radio communication will be established between the ROIC/RSO, safety towers, firing line, and Navy Safety/Guard Boats on frequency 38.45 FM and the RCDO (BLACKBURN) on frequency 38.60FM. A total of six radios: five for internal communication requirements and one for the RCDO (BLACKBURN) are required. If the range phone is not operational, an additional radio is required as back-up to the RCDO(BLACKBURN).
19. Be familiar with the contents of Chapter 5/6/7/8/11 of this Manual and this Appendix.
20. A road guard will be posted at the entrance to G-7.
21. Direct fire artillery requirements.
    a. The minimum target engagement distance for 155mm direct fire, when unprotected troops are located in the firing position, is 750 meters.
    b. When constructing the direct fire surface danger diagram, distance X as defined in Chapter 11 of MCO P3570.1 will not be less than the range corresponding to an elevation of 267 mils for the charge fired.
    c. Area D will not be occupied during direct fire.
    d. Howitzers may be rough laid using the grid azimuth method, a safety circle is not required.
    e. No howitzers will be placed more than 20 meters forward the berm. When more than one howitzer is firing, they must be on a line perpendicular to the line of fire.
    f. The initial azimuth to orient the howitzer is 2520 mils. The left azimuth boundary of the left-most gun is 2422

mils and the right azimuth boundary of the right-most gun is 2618 mils.

g. Each howitzer will have a Safety “T” constructed showing the left and right limits and the minimum and maximum allowed QE. The minimum QE will be that elevation where the impact of the round will exceed a range of 750 meters for the charge fired; the maximum QE will be that elevation where the impact of the round will not exceed a range of 1000 meters for the charge fired.

RANGE NAME:	**G-8**
DESCRIPTION:	Grenade Launcher Range
PRIMARY RANGE USE:	Grenade Launcher Range
ALTERNATE RANGE USES:	N/A
STATUS:	Active
LOCATION:	Grid Coordinate: 901373
PRIMARY DIRECTION OF FIRE:	166 degrees
WEAPONS ACCOMMODATED:	M203 Grenade Launcher
AMMUNITION AUTHORIZED:	All M203 40mm DODICs Approved
TARGETS/SIMULATORS/DEVICES:	Zero Panels, Windows, Bunkers, Troops in the Open, Automatic Weapons Positions
FACILITIES(Number of each):	Head Facilities: None Range Tower: 1 Range Tables: 0 POV Parking Area: 1 (Lyman Rd)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	None
AREA SUITABILITY	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing will impact in the G-10 impact area.
2. No down range movement past the window targets (the first 80 meters).
3. Class 3B and 4 LASERs are not authorized.
4. Window targets at 100 meters/bunkers at 150 meters are only for DODIC B519 40mm M203 training practice rounds.
5. Night use is authorized.
6. Report all 40mm duds with approximate location on the range to BLACKBURN and EOD report.
7. A minimum of 6-meter separation between firing positions.
8. Augmented targets will not be authorized on this range due to the dud hazard.
9. MP-1 will be closed when this range is hot.
10. At no time will the using unit fire HE/HEDP 40mm rounds at the window targets.

OTHER CONSIDERATIONS:

1. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

1. Personnel will be instructed in the proper use of all safety precautions/immediate action procedures before firing.
2. The hazardous fragmentation radius for the HE is 130 meters from point of detonation.
3. When firing the M433 HEDP round the fragmentation radius is 165 meters and no targets within that distance will be engaged.
4. Helmet/Flak Jackets and hearing protection will be worn at all times.
5. Using unit will remove all ammunition dunnage and conduct a complete police call.
6. MK-19 40 MM machinegun is not authorized for this range.
7. The using unit will replace any damaged sandbags on the firing berm.
8. The using unit will replace yellow wooden covers to the fighting positions after the training event.
9. Port-a-johns are the using units responsibility.
10. A red flag will be posted at the range along with a road guard.

RANGE NAME:	**G-9**
DESCRIPTION:	Light Anitarmor Weapons and Shoulder-Launched Multipurpose Assault Range
PRIMARY RANGE USE:	Light Anitarmor/Antitank Weapons Range
ALTERNATE RANGE USES:	1. Light Anitarmor/Anitarmor (Sub caliber) Weapons FAM Range 2. SMAW Field Firing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 903376
PRIMARY DIRECTION OF FIRE:	170 degrees
WEAPONS ACCOMMODATED:	83mm MK-153 SMAW 84mm M136 AT-4 (HEAT)
AMMUNITION AUTHORIZED:	9mm spotter rounds for the MK-153 SMAW All 83mm SMAW (DODICs) 84mm M136 AT-4 (HEAT) (AT-4) 9mm Training Device Authorized
TARGETS/SIMULATORS/DEVICES:	(6) Armor Type
FACILITIES(Number of each):	Head Facilities: None Range Tower: 1 Range Tables: 0 POV Parking Area: 1 (Lyman Rd)
UTILITIES AVAILABLE:	Electricity: NO Lights: NO Water System: No
INSTALLED COMMUNICATIONS:	None
AREA SUITABILITY	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing will impact in the G-10 impact area.
2. No down range movement past the berm authorized.
3. Class 3B and 4 LASERs are not authorized.
4. Night use is authorized.
5. Augmented targets will not be authorized on this range due to the dud hazard.
6. Ensure all safety procedures listed in FM’s and TM’s are adhered to.

OTHER CONSIDERATIONS:

1. Range has a firing berm 290 feet x 15 feet.
2. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

1. A scarlet streamer will be flown at the entrance to the range.
2. Range guard will be posted at the entrance of the range.
3. Ensure back blast area is cleared of all personnel. Danger area A is 16 feet and Danger B is 180 Feet.
4. Flak and Kevlar will be worn on this range during all firing.
5. Port-a-johns are the using units responsibility.

RANGE NAME:	**H (H-1, H-2, H-3)**
DESCRIPTION:	Waterborne Range
PRIMARY RANGE USE:	Riverine Assault Range Waterborne Gunnery Range
ALTERNATE RANGE USES:	1. Helicopter Aerial Gunnery Range
STATUS:	Active
LOCATION:	Grid Coordinate: 953307
PRIMARY DIRECTION OF FIRE:	155 degrees magnetic
WEAPONS ACCOMMODATED:	M16/M4 M249 SAW M240G Machinegun M2 Machinegun MK 19, 40mm Machinegun Helicopter Weapons
AMMUNITION AUTHORIZED:	5.56mm 7.62mm .50 caliber 20mm (TP only) 30mm (TP only) 40mm (TP only) 2.75 inch Rockets (TP only) Note: No Dud Producing Ammunition will be authorized.
TARGETS/SIMULATORS/DEVICES:	(10) Armor type target
FACILITIES(Number of each):	Head Facilities: None Range Towers: 2 POV Parking Area: None
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	None
AREA SUITABILITY	Section

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. The Range is restricted for migrating whales (November 21 through March 31) and during sea turtle season (May 15 through October 31).
2. Firing will cease if a boat or aircraft enters the Surface Danger Zone of N-1/BT-3 impact area.
3. Maneuvers are authorized in the water. Movement inland on foot is limited/and restricted. EOD support will be required.
4. Night use is authorized after a night air-sweep: using unit must use radar and night vision goggles to ensure that the surface danger zone, and surrounding islands are clear.
5. Class 3B and 4 LASERs are not authorized.
6. Firing from stationary or moving water craft is authorized.

OTHER CONSIDERATIONS:

1. Range Control will provide safety boats and request air sweeps.
2. Using unit must schedule Range H at a minimum of one calendar month in advance. The publication of a Notice to Mariners must be published.
3. Be familiar with Chapter 5 of this manual.

SPECIAL INSTRUCTIONS:

1. Scarlet streamers are flown from flagpoles at Onslow North Tower, Bear Creek Tower, and U.S. Coast Guard Boat Station, Bougle Inlet, Swansboro, NC.
2. Observers posted at Onslow North Tower and Bear Creek Tower must be manned prior to firing. Tower guards must have binoculars, radio communications with ROIC and be in place at least one half hour prior to firing. Sectors of observation are as follows: Bear Creek Tower 58 to 223 degrees and Onslow North Tower 35 to 235 degrees. If firing is done at night, tower guards are required to have night vision goggles.
3. Navy Boat Crew will position boats at the ocean side of Bear Inlet vicinity 035335 and the ocean side of North Onslow Tower vicinity 930284.
4. Positive communication with road/tower guards, Navy Boat Crew, and Blackburn must be maintained at all times.
5. The range will be put into a check fire or secured if the sea state goes above sea state 3.

6. Ensure that there is a dedicated safety vehicle and corpsman present during all live fires and located at Freeman Creek Landing.
7. No dud producing rounds will be fired into the N1/BT-3 Impact Area. The only authorized DODIC’s for the Mk-19 40mm is B584 or B576. No Dud producing ammunition is authorized into the H-Range/N1/BT-3.
8. All small arms and Mk-19 fire will be directed toward the armor type targets (old Army M113’s) in the impact area and must be directed out to sea. Do not engage the Conex Boxes with white and yellow stripes, they are the Left and Right lateral limit signs for the H- Ranges. Total of 4 conex boxes.
9. Conduct dry runs prior to each live fire exercise to ensure all personnel are familiar with the physical boundaries (Left and Right Lateral Limits) of the range and direction of fire. EOD support will be required to enter the impact area.
10. There are three assigned runs authorized at H-Range (H-1-interacostal waterway, H-2 South side of Browns Island towards Browns Inlet and H-3 North side of Browns Island towards Browns Inlet).
11. Using unit will contact Base Explosive Ordnance Disposal (EOD) after the live fire training event and report any/all duds.
12. Only the even hours are authorized for live fire. During odd hours, the range will be in cold status to allow traffic on the intracoastal waterway.
13. Weapons will be kept in a condition 4 until the water craft is in the BT-3/N1 impact area/buffer area. All loaded and armed weapons will be pointed seaward.
14. Communication will be maintained with each and every water craft on a separate frequency. RSO/OIC will maintain normal communication with Blackburn.
15. Any man size targets added to the H ranges must be removed after the training event and must have EOD support to add and remove.
16. Ensure using unit must have a foul weather and man overboard plan.
17. Using unit will be required to submit a special range request using the standard format 10 working days before the scheduled event.
18. Using unit will contact Range Safety for the approved surface danger zones.
19. Ensure all other regulations dealing with water operations and watercraft safety procedures are strictly adhered!

20. If AIWW is closed, Navy Boat Crew must secure the waterway, and a Notice to Mariners must be published fourteen (14) days in advance.

RANGE NAME:	**I-1**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/ Requalification Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 842276
PRIMARY DIRECTION OF FIRE:	125 degrees
WEAPONS ACCOMMODATED:	All pistols(.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	16 firing points
FACILITIES(Number of each):	Head Facilities: None POV Parking Area: 1 (ETA-1) Range House: 1 Range Tables: 3 (Tower due to be removed)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines are located at 7, 15, and 25 yards.
2. Recreational shooting of rifles and shotguns not authorized. Handguns will not exceed .45caliber.
3. Maneuvers are not authorized.
4. Night use is not authorized.

5. Class 3B and 4 lasers not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. Assigned to Commanding Officer, Marine Corps Engineer School (MCES) on a priority use basis. Other units requesting use of the range must coordinate through CO, MCES prior to scheduling at Range Control.
2. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets are required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Scarlet streamers will be flown at the entrance of the range.
5. Safety vehicle and corpsman must be present on the range prior to commencing training.
6. Range guard will be posted near the firing line.
7. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
8. Range must be inspected and cleared by MCES prior to departing range/training area.
9. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-211**
DESCRIPTION:	M203 and MK-19 Grenade Launcher Range
PRIMARY RANGE USE:	Grenade Launcher Range
ALTERNATE RANGE USES:	1. M203 Fam Fire Range 2. M240G Medium Machinegun
STATUS:	Active
LOCATION:	Grid Coordinate: 784355
PRIMARY DIRECTION OF FIRE:	145 degrees
WEAPONS ACCOMMODATED:	M203 Grenade Launcher MK-19 Grenade Launcher Machine Gun
AMMUNITION AUTHORIZED:	40MM (all DODICs) 7.62mm
TARGETS/SIMULATORS/DEVICES:	Hard Targets: 16
FACILITIES(Number of each):	Head Facilities: None Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 3 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: NO Lights: NO Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are not authorized.
2. Authorized for night use.

3. Lasers authorized from 153 degrees magnetic to 157 degrees magnetic.
4. The first 80 meters is a **“No Fire Zone”.** All personnel, equipment and vehicles must remain clear of area. Down range movement is prohibited unless escorted by EOD.
5. Dud producing ordnance should remain clear of **“No Fire Zone”**. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
6. No hard targets will be engaged any closer than 310 meters when firing the MK-19 40mm machinegun.
7. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.
8. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.
9. A minimum of 6-meter safe separation will be maintained between firing positions when firing grenade launches.
10. No hard targets will be engaged any closer than 100 meters when firing the M240G machinegun.
11. Augmented targets for MK-19/M203s will not be authorized on this range at any time due to dud hazards. Additional targetry for other approved weapon systems must have prior approval from Range Control. Requesting unit will contact EOD for target placement support.
12. Firing from vehicles is authorized. No more than two (2) vehicles are authorized at one time on the berm. All vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected, Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. No movement into the Impact Area is authorized without EOD support

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.

3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. All firing must be conducted on top or directly in front of the berm unless authorized by Range Control.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area in K-400 area off V-Loop Road.
6. Report all maintenance problems to a range inspector.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the breachers, behind the berm and outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
12. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-212**
DESCRIPTION:	Infiltration and Individual Movement Range
PRIMARY RANGE USE:	Infiltration Course
ALTERNATE RANGE USES:	Individual Tactical Training Range
STATUS:	Active
LOCATION:	Grid Coordinate: 781355
PRIMARY DIRECTION OF FIRE:	265 degrees
WEAPONS ACCOMMODATED:	M16 Rifle M4 Rifle M240G M249 Squad Automatic Weapon Demolition
AMMUNITION AUTHORIZED:	Blank Ammunition 5.56mm, 7.62mm 1/4 lb TNT
TARGETS/SIMULATORS/DEVICES:	Hard Targets: 55
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 2 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-212A.
2. Class 3B and 4 Lasers not authorized.
3. Range requires Engineer support when using demolitions.
4. Demolitions for the 32 pits will not exceed ¼ pound in any one pit.
5. Not authorized for night use.
6. Night vision devices authorized.
7. Demolition must ceasefire one hour prior to sunset.

OTHER CONSIDERATIONS:

1. Request for PITs, mortar/artillery simulators, conducting maneuvers with demolition, and/or engineer support must be submitted in writing through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must in accordance with FM 5-250 Explosive and Demolitions.
2. The using unit is required to provide a qualified range operator familiar with the operations of simulators. The unit will contact the contractor if troubleshooting of simulators are required. Upon completion of training and prior to departing range, the unit is contact the contractor for retrieval of all emplaced simulators.
3. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area in K-400 area off V-Loop Road.
5. Report all maintenance problems to a range inspector.

6. Scarlet streamer will be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will remain in the breachers and outside of the range fan.
9. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
10. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
11. A final range sweep will be conducted to ensure the area is free of unexpended explosives. All demolition pits shall be verified clean/empty by the ROIC/RSO. All holes created by demolitions will be filled in. It is the responsibility of the using unit to disposed of material as required by local directives.
13. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-212A**
DESCRIPTION:	Live Fire Ambush Range (SOI)
PRIMARY RANGE USE:	Live Fire Ambush Range
ALTERNATE RANGE USES:	1. Night Vision Device Firing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 781355
PRIMARY DIRECTION OF FIRE:	248 degrees
WEAPONS ACCOMMODATED:	M16 Rifle M4 Rifle M249 Squad Automatic Weapon Demolition
AMMUNITION AUTHORIZED:	5.56 MM (ball/linked/tracers) Claymore Mine M49 Trip Flare
TARGETS/SIMULATORS/DEVICES:	Using unit must provide pits targets
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 2 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. This range requires a Special Range Request.
2. Conflicts with K-211, K-212, K-402 and K-402A.
3. Authorized for night use.
4. Night vision devices authorized.
5. Class 3B and 4 Lasers not authorized.
6. Only one claymore will be fired at a time.
7. Demolitions will ceasefire one hour prior to sunset.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station's Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Primary user of this range is Infantry Training Battalion (SOI); all other units requesting to utilize the range must submit a Special Range Request through the unit's chain of command. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. Request to conduct maneuvering exercises with live claymore mines must be submitted in writing through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must in accordance with FM 5-250 Explosive and Demolitions.
4. Request for PITS (targets) must be submitted through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
5. The unit is required to provide a qualified PIT operator or other suitable target material.
6. Using unit must have a plan and means to fill in all holes created by demolition charges.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to

departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area in K-400 area off V-Loop Road.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamer will be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will remain in the K-212 bleachers and outside of the range fan.
9. Claymore mines will not be exploded in roads or trails leading into or adjacent to the range. All demolition training must be conducted in designated demolition pits.
10. Claymore mines must be deployed and oriented so that the blast effect is towards the K-2 impact area.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
13. A final range sweep will be conducted to ensure the area is free of unexpended explosives. It is the responsibility of the using unit to disposed of explosives material as required by local directives.
14. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-301**
DESCRIPTION:	Light Antiarmor Weapon and Shoulder-Launcher Multipurpose Assault Weapon Range
PRIMARY RANGE USE:	AT-4 Light Antitank/Antiarmor Weapon Range
ALTERNATE RANGE USES:	1. MK153 SMAW Field Firing Range 2. M203 Fam-Fire Range
STATUS:	Active
LOCATION:	Grid Coordinate: 789360
PRIMARY DIRECTION OF FIRE:	155 degrees
WEAPONS ACCOMMODATED:	M203 Grenade Launcher SMAW AT-4 60MM Mortar 81MM Mortar
AMMUNITION AUTHORIZED:	40MM Trainer Practice (DODIC B519) 9MM Spotting Rifle for MK153 SMAW (DODIC AX-11) 9MM for AT-4 Training Device (DODIC A358) AT-4 M136 84mm Rocket 83mm SMAW MK153 (DODICs HX05/HX06/HX07) 60MM Mortar(Practice/Illumination) 81MM Mortar(Practice/Illumination)
TARGETS/SIMULATORS/DEVICES	7 Hard Targets
FACILITIES(Number of each):	Head Facilities: 5 Range Towers: 1 Bleachers: 2 Range Tables: 3 POV Parking Area: 1(Dumpster Area)

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat area.
2. Maneuvers are not authorized.
3. Authorized for night use.
4. Lasers not authorized.
5. Mortars are authorized to conduct sequence, pair, and volley fire missions.
6. Down range movement is prohibited unless escorted by EOD. All personnel, equipment and vehicles must remain clear of area.
7. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
8. Additional targetry on range is not authorized unless prior approval from Range Control. Unit must contact EOD for support.
9. Firing from vehicles is not authorized.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Road guards are required when firing SMAWs and AT4s. Road guards will be positioned near the range flagpole and at the range exit; both are located on Rhodes Point Road.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. All firing must be conducted in designated pits or the required above ground platforms.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area near dumpster area on K-301 range.
6. Report all maintenance problems to a range inspector.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers and outside of the range fan. ROIC/RSO must be aware of weapon system back blast requirements. All personnel not engaged in firing will remain clear of back blast area.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
12. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-302**
DESCRIPTION:	Field Firing / Battle Sight Zero and Machinegun 10/12.7 Meter Qualification Range
PRIMARY RANGE USE:	Battle Sight Zero and Machinegun 10 Meter Qualification Range, Rifle Familiarization Range
ALTERNATE RANGE USES:	1. Small Arms Familiarization Range 2. Shotgun Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 792360
PRIMARY DIRECTION OF FIRE:	165 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G 12 Gauge Shotgun
AMMUNITION AUTHORIZED:	All pistol ammunition 5.5MM 7.62MM All shotgun ammunition
TARGETS/SIMULATORS/DEVICES	50 Possible firing points / units must provide BZO/Qualification Targets/Target Holder
FACILITIES(Number of each):	Head Facilities: None Range Tables: 3 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat area.
2. Maneuvers are not authorized.
3. Authorized for night use. Night vision devices authorized.
4. Class 3B and 4 LASERs not authorized.
5. Movement beyond 100 meters is prohibited unless escorted by EOD personnel. Unit must contact EOD for support. All personnel, equipment and vehicles must remain clear of area.
6. BZO/Zero targets are only authorized within the first 100 meters of the range. All designated firing will be direct towards the impact area.
7. Units must provide appropriate target material. EOD support not required for targets placement within the designated 100 meter firing area.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. All firing must be conducted in designated pits.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-306 bivouac site.
6. Report all maintenance problems to a range inspector.
7. Scarlet streamer will be flown at the entrance to the range.

8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers and outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal is removed from the range.
12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-303**
DESCRIPTION:	Basic Techniques of Fire and Mortar Firing Range
PRIMARY RANGE USE:	Rifle Familiarization Range
ALTERNATE RANGE USES:	1. Machinegun Transition Range 2. Mortar Range 3. Grenade Launcher Range 4. Automatic Rifle Marksmanship Range
STATUS:	Active
LOCATION:	Grid Coordinate: 796360
PRIMARY DIRECTION OF FIRE:	170 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M203 Grenade Launcher M249 Squad Automatic Weapon M240G Medium Machinegun 60/81MM Mortars AT-4 M136 MK153 SMAW MK19 40MM
AMMUNITION AUTHORIZED:	All pistol ammunition 9MM AT-4 Trainer 9MM SMAW Spotting round All shotgun ammunition 5.56MM Ball, tracer, Linked 7.62MM Linked 40MM – TPT/HE/HEDP (Linked) 83MM SMAW Rocket all DODICS 84MM AT-4 60/81MM Mortars all DODICS
TARGETS/SIMULATORS/DEVICES	Armor/Target 12
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1

Bleachers: 1
Overhead Cover: 1
Range Tables: 3
POV Parking Area: 1 (K-305 Area)

UTILITIES AVAILABLE: Electricity: Yes
Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY: Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-304.
2. Using unit will deconflict with using unit of K-304 by time or weapon system.
3. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat area.
4. Maneuvers are not authorized.
5. Authorized for night use.
6. Class 3B and 4 Lasers not authorized.
7. All infantry weapons are authorized to be fired from either the berm or forward of the berm within the 40-meter designated firing area. At no time will any rounds impact within the designated 40-meter firing area. All designated firing must be directed towards the impact area.
8. All rockets are authorized to be fired from the berm or forward of the berm within the 40-meter designated firing area. Rockets fired from the berm will require two (2) road guards to be placed along Rhodes Point Road. ROIC/RSO must be aware of weapon system back blast requirements. No road guards are required when rockets are fired in front of the berm.
9. Mortars are authorized to fire either from the berm or forward of the berm within the designated 40-meter firing area. Aiming stakes will place to the rear if necessary. At no time will movement beyond the ditch be authorized. No over-head firing authorized. Mortars are authorized to conduct sequence, pair, and volley fire missions.
10. Augmented targets for MK-19/M203s will not be authorized on this range at any time due to dud hazards. Additional targetry for other approved weapon systems must have prior

approval from Range Control. Requesting unit will contact EOD for target placement support.

11. Firing from vehicles is authorized. Vehicles are not authorized to fire from the berm. All vehicles must fire from the front of the berm. No more than two (2) vehicles can be in front of the berm and on the firing line at a time. All vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.
12. MK-19 40mm machinegun and the M203 Grenade Launcher are not authorized to be fired from the berm. All 40mm TPT/HE/HEPD must be fired from the front of the berm; down range forward of the 40-meter designated firing area.
13. No hard targets will be engaged any closer than 310 meters when firing the MK-19 40mm machinegun.
14. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.
15. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.
16. A minimum of 6-meter safe separation will be maintained between firing positions when firing grenade launches.
17. No hard targets will be engaged any closer than 100 meters when firing the M240G machinegun and M249 Squad Automatic Weapon.
18. No hard targets will be engaged any closer than 300 meters when firing 60mm mortars and 400 meters when firing 81mm mortars.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. All firing must be conducted in designated area.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
6. Report all maintenance problems to a range inspector.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating vehicles, observing personnel will remain in the bleachers or outside of the designated range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
12. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-304**
DESCRIPTION:	Infantry Weapons Range
PRIMARY RANGE USE:	Infantry Weapon Firing Range
ALTERNATE RANGE USES:	N/A
STATUS:	Active
LOCATION:	Grid Coordinate: 805365
PRIMARY DIRECTION OF FIRE:	180 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher AT-4 9MM/Heat M240G 60/81MM Mortars SMAW MK153 9MM MK19 40MM
AMMUNITION AUTHORIZED:	All pistol ammunition 5.56MM Ball, tracer, Linked 7.62MM Linked 40MM All DODICS’s AT-4 Heat / 9MM 83MM All Rockets For SMAW and 9MM 60MM All DODICS's 81MM All DODICS’s All shotgun ammunition
TARGETS/SIMULATORS/DEVICES	(18) Hard Targets
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 3 POV Parking Area: 1 (K-305 Area)
UTILITIES AVAILABLE:	Electricity: Yes

Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-303 and K-305.
2. Using Unit will deconflict with using units of K303 and K305 by time or weapon system.
3. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat area.
4. Maneuvers are not authorized.
5. Authorized for night use.
6. Night vision devices authorized.
7. Class 3B and 4 Lasers not authorized.
8. All infantry weapons are authorized to be fired from either the berm or forward of the berm within the 40-meter designated firing area. At no time will any rounds impact within the designated 40-meter firing area. All designated firing must be directed towards the impact area.
9. All rockets are authorized to be fired from the berm or forward of the berm within the 40-meter designated firing area. Rockets fired from the berm will require two (2) road guards to be placed along Rhodes Point Road. ROIC/RSO must be aware of weapon system back blast requirements. No road guards are required when rockets are fired in front of the berm.
10. Mortars are authorized to fire either from the berm or forward of the berm within the designated 40-meter firing area. Aiming stakes will place to the rear if necessary. At no time will movement beyond the ditch be authorized. No over-head firing authorized. Mortars are authorized to conduct sequence, pair, and volley fire missions. Reference minimum safe distance for all weapons. No hard targets will be engaged any closer than 300 meters when firing 60mm mortars and 400 meters when firing 81mm mortars.
11. Cross range firing on range not authorized.
12. No hard targets will be engaged any closer than 310 meters when firing the MK-19 40mm machinegun.
13. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.

14. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.
15. A minimum of 6-meter safe separation will be maintained between firing positions when firing grenade launches.
16. No hard targets will be engaged any closer than 100 meters when firing the M240G machinegun and M249 Squad Automatic Weapon.
17. Vehicles are not authorized to fire on the berm. All vehicles firing will be from the front of the berm. No more than two (2) vehicles are authorized at one time in front of the berm. Vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.
18. MK-19 40mm machinegun and the M203 Grenade Launcher are not authorized to be fired from the berm. All 40mm TPT/HE/HEPD must be fired from the front of the berm; down range forward of the 40-meter designated firing area.
19. No overhead firing is authorized. Mortars authorized to conduct sequence, pair, and volley fire missions.
20. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
21. Augmented targets for MK-19/M203s will not be authorized on this range at any time due to dud hazards. Additional targetry for other approved weapon systems must have prior approval from Range Control. Requesting unit will contact EOD for target placement support.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to

departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will coordinate with units on K-303 and/or K-305 when firing mortars or MK19s.
7. ROIC/RSO must verify all weapons range safety cards or safety “T”.
8. Scarlet streamer will be flown at the entrance to the range.
9. Safety vehicle and corpsman must be present on the range prior to commencing training.
10. All non-participating or observing personnel will remain in the bleachers or outside of the range fan. ROIC/RSO must be aware of weapon system back blast requirements. All personnel not engage in firing will remain clear of back blast danger area.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. ROIC/RSO will ensure mortar’s sights have been bore sighted/aiming circle and verified.
13. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, port-a-john area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
14. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-305**
DESCRIPTION:	Infantry Weapons Range
PRIMARY RANGE USE:	Infantry Weapon Firing Range
ALTERNATE RANGE USES:	1. Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 801365
PRIMARY DIRECTION OF FIRE:	178 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher AT-4 9MM/Heat M240G Machinegun 60/81MM Mortars MK 153 Rocket MK19 40MM Grenade Launcher Machinegun
AMMUNITION AUTHORIZED:	All pistol ammunition All shotgun ammunition 5.56MM Ball, tracer, Linked 7.62MM Linked 40MM All DODICS’s AT-4 Heat / 9MM 83MM All Rockets For SMAW and 9MM 60MM All DODICS's 81MM All DODICS’s
TARGETS/SIMULATORS/DEVICES	6 M113s, and Old Tank Targets
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 3 POV Parking Area: (Across from K-305)
UTILITIES AVAILABLE:	Electricity: Yes

Lights: Yes
Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY: Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Range consists of two (2) berms directly in front of one another and 80 meters apart. Movement beyond the forward berm (closest to impact area) is prohibited unless escorted by EOD personnel. Maneuvers are authorized between berms only.
2. Conflicts with K-304. Using unit will deconflict by time or weapon system with K-304.
3. Red-cockaded woodpecker habitat near range. Training is restricted. No vehicle traffic or training will be conducted in specifically designated RCW habitat area.
4. Authorized for night use.
5. Night vision devices authorized.
6. Class 3B and 4 LASERs not authorized.
7. Augmented targets may not be placed within the 80 meters maneuvering area or on the berms.
8. Mortar fire restrictions. When K-304 is firing mortars, K-305 mortars are only authorized to fire from the rear area on or near the berm (closest to tower). In all other cases, K-305 mortars are authorized to fire on either of the berms and anywhere within the 80 meter maneuvering area. Mortars firing on the forward berm will place aiming stakes to the rear. No over-head firing authorized. Mortars are authorized to conduct sequence, pair, and volley fire missions.
9. All infantry weapons except AT-4s and SMAWs are authorized to fire from either berm or within the 80 meter maneuvering area. At no time will any rounds impact in the berms or within the 80 meter maneuvering area. All designated firing must be directed towards the impact area.
10. Infantry weapon restrictions. When K-304 is firing mortars, K-305 infantry weapons are authorized to fire from the top of the rear berm only and anywhere on the left side of the range access road.
11. All rockets will be fired from the forward berm. When K-304 is firing mortars, K-305 rockets are only authorized to fire the left side of the forward berm. The range access road divides the range. All designated firing must be directed towards the impact area.

12. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
13. Reference minimum safe distance for all weapons. Minimum range for 60mm mortars is 300 meters and 400 meters for 81mm mortars. The maximum range of all weapons will not exceed the limits of observation. Cross range firing on this range not authorized.
14. No hard targets will be engaged any closer than 310 meters when firing the MK-19 40mm machinegun.
15. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.
16. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.
17. A minimum of 6-meter safe separation will be maintained between firing positions when firing grenade launches.
18. No hard targets will be engaged any closer than 100 meters when firing the M240G machinegun and M249 Squad Automatic Weapon.
19. Vehicle firing is authorized. All vehicles must use the designated access road when entering and exiting the range. Only those designated vehicles firing will be authorized past the tower. Vehicles are not authorized to fire on the berms. All vehicles firing must be conducted between the berms and within the 80-meter maneuvering area. No more than four (4) vehicles are authorized at one time on the firing line. When K-304 is firing mortars, K-305 vehicle firing will be authorized but restricted. Only two (2) vehicles will be authorized on the firing line and firing will be conducted from the left side of the range access road. Vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station's Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. Vehicle firing from the berms not authorized.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
6. Report all maintenance problems to a range inspector.
7. ROIC/RSO will coordinate and deconflict with range K304.
8. ROIC/RSO must verify all weapons range safety cards.
9. Scarlet streamer will be flown at the entrance to the range.
10. Safety vehicle and corpsman must be present on the range prior to commencing training.
11. All non-participating vehicles, observing personnel will remain in the bleachers and outside of the designated range fan. ROIC/RSO must be aware of weapon system back blast requirements. All personnel not engage in firing will remain clear of back blast danger area.
12. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
13. ROIC/RSO will ensure rounds don't impact in or between the berms.
14. ROIC/RSO will ensure mortar's sights are verified using a gunner's quadrant.
15. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.

16. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.
18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-309**
DESCRIPTION:	Squad Automatic Weapon and Medium Machinegun Range
PRIMARY RANGE USE:	Machinegun Zeroing and Live Fire Qualification Range
ALTERNATE RANGE USES:	Machinegun Night Vision Range
STATUS:	Active
LOCATION:	Grid Coordinate: 805361
PRIMARY DIRECTION OF FIRE:	200 degrees
WEAPONS ACCOMMODATED:	M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G Machinegun 60MM Mortar M203
AMMUNITION AUTHORIZED:	5.56MM (Ball/Tracer/Linked) 7.62MM Linked (Ball/Tracer) 60MM Illumination Only 40MM Illumination Only
TARGETS/SIMULATORS/DEVICES	Steel Echo Type Targets at 100, 200, 400, 700 and 900 meters, Bunkers at 500 meters and 4 Armor Targets at 1,000 meters
FACILITIES(Number of each):	Head Facilities: 4 Range Tables: 3 Bleachers: 1 Overhead Cover: 1 Range Tower: 1 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone

AREA SUITABILITY: Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Authorized for night use.
2. Night vision devices authorized.
3. Class 3B and 4 Lasers not authorized.
4. Range consists two (2) men, chest high concrete fighting positions.
5. The 100 meters forward of the berm is a static, firing and maneuvering area. All personnel, equipment and vehicles must remain clear of area unless being utilized by designated weapon systems. Down range movement beyond 100 meters (ditch) is prohibited unless escorted by EOD.
6. BZO/Zero targets may be placed within 80 meters of the berm without EOD support.
7. No dud producing ordnance impacting within 80 meters of maneuvering area. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
8. All infantry weapons are authorized to be fired from either the berm or forward of the berm within the 100-meter designated static firing and maneuvering area. All designated firing must be directed towards the impact area.
9. Reference minimum safe distance for all weapons. The maximum range of all weapons will not exceed the limits of observation. Cross firing on range not authorized.
10. No hard targets will be engaged any closer than 100 meters when firing the M240G machinegun and M249 Squad Automatic Weapon.
11. Vehicle firing is authorized. All vehicles must use the designated access road when entering and exiting the range. Only those designated vehicles firing will be authorized past the tower. Vehicles are not authorized to fire on the berms. All vehicle firing must be conducted forward of the berm. No more than four (4) vehicles are authorized at one time on the firing line. When K-304 is firing mortars, K-305 vehicle firing will be authorized but restricted. Vehicles will be chalked, hand brake set, and weapon T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.
12. Mortars are authorized to fire either from the berm or forward of the berm within the designated 100 meter static firing and maneuvering area. Aiming stakes will place to the rear if necessary. At no time will movement beyond the ditch

be authorized. mortars are authorized to conduct sequence, pair, and volley fire missions with 60mm Illumination only.

13. All rockets are authorized to be fired from the berm or forward of the berm within the 100-meter designated static firing and maneuvering area. Rockets fired from the berm will require two (2) road guards to be placed along Rhodes Point Road. ROIC/RSO must be aware of weapon system back blast requirements. No road guards are required when rockets are required when rockets are fired in front of the berm.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan. ROIC/RSO must be aware of weapon system back blast requirements. All personnel not engage in firing will remain clear of back blast danger area.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure mortar’s sights have been bore sighted and checked.

12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, port-a-john and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
13. The ROIC/RSO will notify Range Control the approximate location and number of all duds upon completion of training.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-315**
DESCRIPTION:	Night and Combat Field Range
PRIMARY RANGE USE:	Infantry Familiarization Firing Range
ALTERNATE RANGE USES:	1. Shotgun Familiarization Range 2. Pistol Familiarization Range
STATUS:	Active
LOCATION:	Grid Coordinate: 809361
PRIMARY DIRECTION OF FIRE:	190 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifles M4 Rifles M249 Squad Automatic Weapon
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56MM (Ball, Tracer, Linked) All 12 Gauge Shotgun ammunition
TARGETS/SIMULATORS/DEVICES	Using unit must provide pits or other target
FACILITIES(Number of each):	Head Facilities: None Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Ammo Demonstration Tables: 3 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Range contains firing berm with no designated firing points. Firing is authorized on the berm or forward within the 80-meter designated firing area. All designated firing must be directed towards the impact area. Targets are not authorized on the berm. BZO/targets may be laced within the 80 meter firing area without EOD support. Down range movement beyond the 80-meter firing area is prohibited unless escorted by EOD.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Recreational shooting of rifles not authorized.
7. Firing from vehicles is not authorized.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PITS targets must be submitted through the unit’s chain of command to Range Control. The using unit will be required to have a trained PITS Target operator for the hand held control unit. The request for PITS Targets must be submitted ten (10) working days in advance from the first day of training. The contractor no longer provides this service for K-315.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.

5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, target material, and scrap metal. Unit will ensure all holes are filled.
12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-317**
DESCRIPTION:	Close Combat Range
PRIMARY RANGE USE:	Close Combat Range
ALTERNATE RANGE USES:	Shotgun
STATUS:	Active
LOCATION:	Grid Coordinate: 811360
PRIMARY DIRECTION OF FIRE:	220 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (Ball, Tracer, Linked)
TARGETS/SIMULATORS/DEVICES	Unit must provide pits or other type of targets and target holders.
FACILITIES(Number of each):	Head Facilities: None Bleachers: 1 Range Tower: 1 Range Tables: 2 POV Parking Area: 1(K-305 Area) Overhead Cover: 1
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Range contains firing berm with no designated firing points. All designated firing must be directed towards the impact area.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Recreational shooting of rifles not authorized.
7. Vehicles are not authorized on the berm.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PITS targets must be submitted through the unit’s chain of command to Range Control. The using unit will be required to have a trained PITS Target operator for the hand held control unit. The request for PITS Targets must be submitted ten (10) working days in advance from the first day of training. The contractor no longer provides this service for K-317.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.

9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-319**
DESCRIPTION:	Field Firing Range
PRIMARY RANGE USE:	Fire and Movement Range (Short Distance)
ALTERNATE RANGE USES:	1. Night Fire Range 2. Shotgun/Pistol Fam Firing Range 3. BZ0/Zero Weapon Range
STATUS:	Active
LOCATION:	Grid Coordinate: 814360
PRIMARY DIRECTION OF FIRE:	192 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) M16 Rifle M4 Rifle 12 Gauge Shotgun M240G Machinegun M249 Squad Automatic Weapon M203 Grenade Launcher
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56MM Ball, Tracers Linked 7.62MM Linked All 12 Gauge Ammunition 40MM TP (DODIC B519-Only)
TARGETS/SIMULATORS/DEVICES	E Silhouette and old hulks. Using unit must provide pits or other type targets
FACILITIES(Number of each):	Head Facilities: 5 Range Tower: 1 Range Tables: 3 Bleachers: 1 Overhead Cover: 1 POV Parking Area: 1 (K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY: Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized but restricted. Limit of advance is 100 meters downrange. Movement beyond the PIT target bunkers is prohibited unless escorted by EOD personnel.
2. Authorized for night use.
3. Night vision devices are authorized.
4. Class 3B and 4 Lasers not authorized.
5. Range consists of berm with no designated firing points and assault firing lanes with no designated firing points. Cross firing is prohibited.
6. Vehicles are not authorized on the berm. Vehicle firing not authorized.
7. BZO/Zero targets are authorized within the 100-meter maneuvering area without EOD support.
8. Grenade Launchers are not authorized to engage targets within the 100-meter maneuvering area.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to

departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
12. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, limits of fire and advancement.
13. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-321/K-321A**
DESCRIPTION:	M249 Squad Automatic Rifle Transition Range
PRIMARY RANGE USE:	Squad Automatic Weapon Transition Range
ALTERNATE RANGE USES:	Squad Fire And Movement Range
STATUS:	Active
LOCATION:	Grid Coordinate: 818360
PRIMARY DIRECTION OF FIRE:	236 degrees
WEAPONS ACCOMMODATED:	M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher
AMMUNITION AUTHORIZED:	5.56MM Ball, Tracers, Linked 40MM TP/ILLUM (DODIC B519/B535-Only)
TARGETS/SIMULATORS/DEVICES	Using unit must use PITS
FACILITIES(Number of each):	Head Facilities: 4 Range Towers: 1 Bleachers: 1 Overhead Cover: 1 Range Tables: 3 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with ranges K-322 and K-323.
2. Maneuvers are authorized but restricted to 400 meters down range. Movement beyond 400 meters requires EOD escort.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Range consists of 24 concrete Pit stations.
7. Range consists of a berm with no designated firing points and assault firing lanes with no designated firing points. Cross firing is prohibited.
8. Movement beyond the rear PIT target bunkers is prohibited unless escorted by EOD personnel. Unit must contact EOD for support.
9. BZO/Zero targets are only authorized within the first 100 meters, down range and forward of the berm.
10. Grenade Launchers are not authorized to engage PITs. Units must provide appropriate target material.
11. Vehicles not authorized on the berm. Vehicle firing not authorized.
12. K-321A will be scheduled when live fire and maneuvers and movement downrange are required. K-321A will shut down K-325, K-323, K-322 and K-319 because of surface danger zone requirements.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises.
12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-322**
DESCRIPTION:	Moving Target Realistic Target Range
PRIMARY RANGE USE:	Rifle Familiarization Range
ALTERNATE RANGE USES:	1. Pistol Familiarization Range 2. Shotgun Presentation Drills 3. Rifle Presentation Drills 4. BZO Range
STATUS:	Active
LOCATION:	Grid Coordinate: 819357
PRIMARY DIRECTION OF FIRE:	230 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) M16 Rifle M4 Rifle 12 Gauge Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56MM Ball, Tracers Linked All 12 Gauge Ammunition
TARGETS/SIMULATORS/DEVICES	
FACILITIES(Number of each):	Head Facilities: None Range Towers: None Range Tables: 1 Bleachers: None Overhead Cover: None POV Parking Area(K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges K-319 and K-323.
2. Maneuvers not authorized.
3. Range has no designated firing line and firing points. Cross firing is prohibited.
4. Authorized for night use.
5. Night vision devices are authorized.
6. Class 3B and 4 Lasers not authorized.
7. Movement beyond the moving target berm is prohibited unless escorted by EOD personnel. Unit must contact EOD for support.
8. BZO/Zero targets are only authorized within the first 60 meters of the range. All designated firing will be direct towards the impact area and impact directly into the berm.
9. Units must provide appropriate target material. EOD support not required for targets placement within the designated 60 meter firing area.
10. Vehicles are not authorized on the berm. Vehicle firing not authorized.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO must verify all weapons range safety cards.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
14. This range has an alternate use as a BZO/ZERO range for rifles, shotguns and pistols. Using units will fire into the berm.

RANGE NAME:	**K-323**
DESCRIPTION:	Grenade Launcher Range
PRIMARY RANGE USE:	Grenade Launcher Range
ALTERNATE RANGE USES:	N/A
STATUS:	Active
LOCATION:	Grid Coordinate: 821357
PRIMARY DIRECTION OF FIRE:	210 degrees
WEAPONS ACCOMMODATED:	M203 Grenade Launcher
AMMUNITION AUTHORIZED:	All 40MM Ammunition
TARGETS/SIMULATORS/DEVICES	4 Hard Targets
FACILITIES(Number of each):	Head Facilities: None Range Tower: None Range Tables: 2 POV Parking Area: 1 (K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Authorized for night use.
3. Night vision devices are authorized.
4. Class 3B and 4 Lasers not authorized.
5. Range consists of three (3) chest high wooden structures of shooting positions.
6. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.
7. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.

8. Cross firing is not authorized.
9. The first 80 meters is a **"No Fire Zone"**. All personnel, equipment and vehicles will remain clear of area. Down range movement is prohibited unless escorted by EOD.
10. No dud producing ordnance impacting within 80 meters of **"No Fire Zone"**. No attempt will be made to clear or mark the location of duds. RSO/OIC will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
11. Augmented targets will not be authorized on this range any time due to dud hazard.
12. Movement forward of the berm is not authorized.
13. Firing from vehicles not authorized. Vehicles not authorized on berm.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station's Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range RSO/OIC of the necessary and required procedures to be taken. Range Control will contact the range RSO/OIC when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on the range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamer will be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
9. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
10. RSO/OIC will ensure adequate number of safety personnel is assigned to control firing points.
11. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical

wire, wood, and scrap metal. Unit will ensure all holes are filled.

12. Range must be inspected and cleared by a range inspector prior to departing range/training area.
13. RSO/OIC will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-325**
DESCRIPTION:	Light Antiarmor Weapon and Shoulder-Launcher Multipurpose Assault Weapon Range
PRIMARY RANGE USE:	AT-4 Light Antitank/Antiarmor Weapon Range
ALTERNATE RANGE USES:	1. MK153 SMAW Field Firing Range 2. M203 Fam-Fire Range
STATUS:	Active
LOCATION:	Grid Coordinate: 823356
PRIMARY DIRECTION OF FIRE:	240 degrees
WEAPONS ACCOMMODATED:	M203 Grenade Launcher MK153 SMAW M136 AT-4
AMMUNITION AUTHORIZED:	40MM (All DODICs) 9MM Spotting Rifle for MK153 SMAW (DODIC AX-11) 9MM for AT-4 Training Device (DODIC A358) AT-4 M136 84mm Rocket Heat 83MM SMAW MK153 (All DODICs)
TARGETS/SIMULATORS/DEVICES	Hard Targets
FACILITIES(Number of each):	Head Facilities: None Range Tower: 1 Range Tables: 2 POV Parking Area: 1(K-305 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Rocket Team/Squad/Section

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Range consists of six (6) concrete firing position/structures.
6. Maximum safe firing range is 200 meters into the K-2 impact area.
7. No hard targets will be engaged any closer than 130 meters when firing M203 HE rounds.
8. No hard targets will be engaged any closer than 165 meters when firing M433 HEPD rounds.
9. Firing is authorized on the berm. Cross firing not authorized.
10. Range requires three road guards. RSO/ROIC will ensure road guards are positioned at the entrance of range K-323, on the tank trail entrance to range ETA-5 and near the splash point (behind berm) on Rhodes Point Road. The ROIC/RSO will ensure positive communication is maintained at all times with road guards.
11. The first 80 meters is a **“No Fire Zone”.** All personnel, equipment and vehicles will remain clear of area. Down range movement is prohibited unless escorted by EOD.
12. No dud producing ordnance impacting within 80 meters of **“No Fire Zone”**. No attempt will be made to clear or mark the location of duds. ROIC/RSO will place unit in a check fire if any dud is determined to be a hazard to training and contact Range Control.
13. Augmented targets will not be authorized on this range any time due to dud hazard.
14. Movement forward of the berm is not authorized.
15. Firing from vehicles not authorized. Vehicles not authorized on berm.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on the range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area adjacent to K-305 range.
5. Report all maintenance problems to a range inspector.
6. Scarlet streamer will be flown at the entrance to the range.
7. Safety vehicle and corpsman must be present on the range prior to commencing training.
8. ROIC/RSO review minimum safe range, back blast restrictions and back blast surface danger zones for all weapons.
9. All non-participating or observing personnel will remain outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure adequate number of safety personnel is assigned to control firing points.
12. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
13. Range must be inspected and cleared by a range inspector prior to departing range/training area.
14. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**K-402**
DESCRIPTION:	Fire and Movement Range
PRIMARY RANGE USE:	Individual Tactical Training Range
ALTERNATE RANGE USES:	1. Infantry BZ0 and Zeroing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 777351
PRIMARY DIRECTION OF FIRE:	72 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapon M203 Grenade Launcher M240G Medium Machinegun AT-4 Trainer
AMMUNITION AUTHORIZED:	All Pistol Ammunition All Shotgun Ammunition 9MM for AT-4 Training Device 5.56MM (ball, linked, tracer) 7.62mm (linked) 40MM (DODIC B519) TPT and (DODIC B535) Illum
TARGETS/SIMULATORS/DEVICES	1. 12 concrete PIT positions 2. Unit provides additional targets
FACILITIES(Number of each):	Head Facilities: 5 Bleachers: 1 Overhead Cover: 1 Range Tables: 3 Range Tower: 1 Target Storage Sheds: 2 (1-Range Control/1-SOI) POV Parking Area: 1(K-400 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY: Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-212A and K-402A.
2. Maneuvers are authorized.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Cross firing not authorized.
7. Movement is restricted. Limit of advance is 175 meters down range. Movement beyond the PIT target bunkers is prohibited unless escorted by EOD personnel.
8. Firing from vehicles not authorized.
9. BZO/Zero targets are only authorized within the first 175-meters of the range. All designated firing will be directed towards the impact area.
10. Grenade Launchers are not authorized to engage PITs. Units must provide appropriate target material.
11. EOD support not required for target placement within the designated 175 meter maneuvering and firing area.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PITS targets must be submitted through the unit’s chain of command to Range Control. The using unit will be required to have a trained PITS Target operator for the hand held control unit. The request for PITS Targets must be submitted ten (10) working days in advance from the first day of training. The contractor no longer provides this service for K-402.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjacent training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure K-212A and K-402A are secured of all personnel and equipment.
7. ROIC/RSO must verify all weapons range safety cards.
8. Scarlet streamer will be flown at the entrance to the range.
9. Safety vehicle and corpsman must be present on the range prior to commencing training.
10. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
13. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, limits of fire and advancement.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
17. Do not disturb or remove any sand bags or targets from the range.

RANGE NAME:	**K-402A**
DESCRIPTION:	House/Room Clearing Range
PRIMARY RANGE USE:	Military Operations in Urbanized Terrain
ALTERNATE RANGE USES:	1. Live-Fire Shooting House
STATUS:	Active
LOCATION:	Grid Coordinate: 778351
PRIMARY DIRECTION OF FIRE:	All firing will be conducted inside the house.
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifles M4 Rifles
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (ball) Hand Grenade (Practice Only)
TARGETS/SIMULATORS/DEVICES	1. One story, fiber-mesh concrete clearing house with 4 rooms, no roof or windows. 2. Unit must provide its own targets and bullet traps if used.
FACILITIES(Number of each):	Head Facilities: 5 Range Tables: 2 Range Tower: None POV Parking Area: 1(K-400 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-212A and K-402.
2. Maneuvers are restricted.
3. Authorized for night use.
4. Night vision devices authorized.
5. Class 3B and 4 LASERS not authorized.
6. M67 (HE, Frag) Hand Grenades, illumination or smoke grenades not authorized.
7. Semi-automatic fire authorized only.
8. Firing outside of structure not authorized. ROIC/RSO will ensure no rounds exit the shooting house.
9. Left and right lateral limits are painted inside the house to define firing points. All targets will be placed 130 degrees PDF on the down range side of all house walls. A horizontal red and white-stripped line, six inches wide is painted two meters above the deck to define the maximum elevation of any weapon.
10. Using unit will not have instructors or observer on top of the walls.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure down range side of house (K-212A) is clear of all personnel and equipment.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain outside of the range fan.

10. ROIC/RSO will ensure an adequate number of safety personnel are assigned to supervise training. Observation and safety personnel not authorized on top of house.
11. Dry runs and rehearsals will be conducted using blank ammunition and practice grenades.
12. ROIC/RSO will accompany each firing element and be equipped with appropriate communication and signaling devices.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
17. Using units will conduct rehearsals in the wooden mock-up across the street from K-402A before conducting live fire.

RANGE NAME:	**K-405**
DESCRIPTION:	Hand Grenade Range
PRIMARY RANGE USE:	Hand Grenade Qualification
ALTERNATE RANGE USES:	1. Hand Grenade Distance and Accuracy (Non-Live)
STATUS:	Active
LOCATION:	Grid Coordinate: 775349
PRIMARY DIRECTION OF FIRE:	260 degrees
WEAPONS ACCOMMODATED:	Hand Grenades
AMMUNITION AUTHORIZED:	Hand Grenade, Practice M67 Hand Grenade, HE, Fragmentation
TARGETS/SIMULATORS/DEVICES	1. Two (2) separate throwing areas, separated by a berm, impacting in a single open fragmentation impact area. 2. One (1) practice throwing area with four (4) structures.
FACILITIES(Number of each):	Head Facilities: 5 Range Houses: 2 Range Tables: 4 Range Observation Bunker: 1 Practice Throwing Range: 1 Fragmentation Throwing Pits: 4 Bleachers: 1 Overhead Cover: 1 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers not authorized.
2. Night use not authorized.
3. Placement of targets not authorized.
4. Range will be return to original condition upon completion of training. Holes will be racked and filled in.
5. Handling and throwing of grenades will cease-fire one (1) hour prior to sunset.
6. Throwing pits will be supervised by a qualified SNCO/NCO.
7. Left and right lateral limit markers define boundaries of impact area. A center marker defines maximum throwing distance. ROIC/RSO will ensure no grenades explode outside designated impact area.
8. No more than one (1) grenade will be thrown at a time. A detonation must occur before the next grenade is thrown.
9. High explosive fragmentation grenades not authorized on Practice Range.
10. It is mandatory that all personnel throw 2 practice grenades on the non-live fire practice range prior to throwing live grenades.
11. Range Control will be notified for all duds.
12. When using K-405 hand grenade range, the “COOK-OFF” method is not authorized for training.
13. At no time will live hand grenades be thrown into standing water.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. K405A is Infantry Training Battalion’s grenade assault course and is only scheduled for use by SOI.
3. Prior to scheduling of the range, the unit must contact EOD and ensure support will be available during their requested scheduled dates and time. The unit is required to notify EOD in the case the required training support dates have changed or the range has been cancelled.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO ensure all personnel and equipment is clear 0f impact area.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating personnel will be protected by overhead cover. Observing personnel must be inside the range bunker.
10. ROIC/RSO will ensure an adequate number of safety personnel are assigned to supervise training.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. Dud/misfire occurs on range, ROIC/RSO will place the range in an immediate "Check-Fire" and notify Range Control what has occurred and on what side. The Practice Range may continue to train. Range Control will contact EOD personnel for assistance. Range Control can authorized training to continue on whatever side the mishap has not effected. Upon arrival of EOD, the complete range will be placed in a "Check Fire" until lifted by Range Control.
13. ROIC/RSO will contact Range Control upon completion of training. Range Control will notify EOD personnel to verify the impact area is cleared. Verified by EOD, Range Control will contact unit for "Cold" status training information and acknowledge unit's "Cold Time".
14. Detail police call will be conducted upon receiving a "Cold Time"
15. The range, all facilities, dumpster area, port-a-john and parking/staging areas will be policed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
16. Grenade spoons, pins, and clips will be removed from throwing pits and impact area. All holes will be filled in and area raked smooth.
17. Range must be inspected and cleared by a range inspector prior to departing range/training area.

18. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
19. All Marines will throw 2 practice grenades before throwing a live grenade.
20. A pile of dirt will be provided on the range. The using unit must provide its own hand tools (shovels, rakes to level out the range).

RANGE NAME:	**K-406A**
DESCRIPTION:	Cover and Clear Range
PRIMARY RANGE USE:	Basic Room Clearing Range
ALTERNATE RANGE USES:	1. Small arms presentation drills range.
STATUS:	Active
LOCATION:	Grid Coordinate: 777347
PRIMARY DIRECTION OF FIRE:	120 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifles M4 Rifles M249 Squad Automatic Weapon
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (ball/linked/tracer) Blank Ammunition Noise makers (Artillery simulators) Hand Grenade (Practice Only) Smoke/Illumination Grenades
TARGETS/SIMULATORS/DEVICES	Using unit must provide PITs targets. Total of 8 required.
FACILITIES(Number of each):	Head Facilities: 3 Overhead Cover: 1 Range Tables: 2 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are restricted to 80 meters downrange past the last room of the building complex.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 LASERs not authorized.
5. Illumination and smoke grenades not authorized in shooting house.
6. Semi-automatic fire in shooting house only. M249 will only be used outside the structure.
7. Firing from berm not authorized.
8. Firing outside of structure is authorized. All targets will be placed 120 degrees PDF on the down range side. Maximum impact elevation for all weapons in the house is no higher than two meters above the deck.
9. All designated firing will be directed towards the impact area. Firing into the berms that separate the range from K-402 and K-406B is prohibited.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.

4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure down range side of house (K-407) is clear of all personnel and equipment.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain outside of the range fan.
10. ROIC/RSO will ensure an adequate number of safety personnel are assigned to supervise training. Observation and safety personnel are not authorized on top of shooting house.
11. Dry runs and rehearsals will be conducted using blank ammunition and practice grenades. The ROIC/RSO will ensure all personnel are familiar with safety requirements, firing point/lanes, release and limits of advance prior to conducting live-fire operations.
12. ROIC/RSO will accompany each firing element and be equipped with appropriate communication and signaling devices.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal. Unit will ensure all holes are filled.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
17. SLAM/ROCC Card no longer required.

RANGE NAME:	**K-406B**
DESCRIPTION:	Friend/Foe Reaction Range
PRIMARY RANGE USE:	Close Combat Range
ALTERNATE RANGE USES:	Small Arms (Quick Kill) Range
STATUS:	Active
LOCATION:	Grid Coordinate: 775346
PRIMARY DIRECTION OF FIRE:	84 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM Blank Ammunition Noise makers (Artillery simulators) Hand Grenade Practice Smoke/Illumination Grenades
TARGETS/SIMULATORS/DEVICES	1. Concrete fiber mesh shooting structure featuring window and flanking targets. 2. Unit must provide PITs.
FACILITIES(Number of each):	Head Facilities: 3 Overhead Cover: 1 Range Tower: 1 Range Tables: 2 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-406A and K-407.
2. Maneuvers are restricted to 80 meters downrange past the last room of the building complex.
3. Authorized for night use.
4. Night vision devices authorized.
5. Class 3B and 4 Lasers not authorized.
6. Standing targets not authorized.
7. Rounds impacting structure will be limited to window opening and flanking targets. Firing on structure anywhere else is prohibited.
8. All designated firing will be directed towards the impact area. Firing into the berm that separate the range from K-406A is prohibited.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The using unit will submit a letter requesting PITS targets. Target Requests must be submitted ten (10) working days in advance from the first day of training. The using unit will be responsible for having a trained PITS Target operator for the hand held control unit.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure down ranges K-406A and K-407 are clear of all personnel and equipment.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.

9. All non-participating or observing personnel will remain outside of the range fan.
10. ROIC/RSO will ensure an adequate number of safety personnel are assigned to supervise training. ROIC/RSO will accompany each firing element. All personnel will be equipped with appropriate communication and signaling devices.
11. Maneuvering is restricted to the berm area only. Movement will be parallel on the berm and to the shooting structure. Only one shooter at a time may engage target area.
12. Dry runs and rehearsals will be conducted using blank ammunition. The ROIC/RSO will ensure all personnel are familiar with safety requirements, firing point/lanes, release and limits of advance prior to conducting live-fire operations.
13. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
17. The SLAM/ROCC card no longer required for this range.

RANGE NAME:	**K-407**
DESCRIPTION:	Live Fire Ambush Range
PRIMARY RANGE USE:	Live Fire Ambush Range
ALTERNATE RANGE USES:	1. Night Vision Device Firing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 777343
PRIMARY DIRECTION OF FIRE:	104 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M249 Squad Automatic Weapons Claymore Mine
AMMUNITION AUTHORIZED:	All Pistol Ammunition 12 Gauge Ammunition 5.56 (Ball/Tracer/Linked) M18A1 Claymore Mine Smoke/Illumination Grenades M49A1 Trip Flare Artillery Simulators
TARGETS/SIMULATORS/DEVICES	1. Range is subdivided into two different ranges offering day/night time training. 2. Unit provides PITs or suitable target material. 3. Protected bunkers for targets are positioned throughout range. 4. Designated Claymore pit.
FACILITIES(Number of each):	Head Facilities: None Range Tower: None Range Tables: 2 POV Parking Area: 1(K-400 Area)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No

INSTALLED COMMUNICATIONS: Telephone

AREA SUITABILITY: Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-406B and K-408.
2. Authorized for night use.
3. Night vision devices are authorized.
4. Class 3B and 4 Lasers not authorized.
5. Claymore Mines will only be used in their designated demo pit on the Day Live Ambush Range. Only one claymore mine in a demo pit area at a time. All claymore mines will be position so blast is directed towards the impact area. ROIC/RSO will be familiar with safe blast distance and all other safety requirements associated with claymore mine operation and deployment.
6. Range configured to support day/night ambush training. Ranges separated by trees. Daytime ambush training restricted to far left range (closes to K-406B). Nighttime ambush training restricted to left range (closes to K-408).
7. Maneuvers are authorized. Movement is restricted. Limit of advance is 100 meters down range. Cross firing not authorized. Movement beyond tree line prohibited unless escorted by EOD personnel.
8. The M49 trip flare is authorized on the night ambush side. All trip flares will be position/setup so when activated, it ignites below waist level.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PITS (targets) or use of claymore mines must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training. Planning and usage must in accordance with FM5-250 Explosive and Demolitions.
3. Claymore mine demolition requires Engineer support. Demolition must cease-fire one hour prior to sunset.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure K-408, K-406B are secured of all personnel and equipment.
7. ROIC/RSO must verify all weapons range safety cards.
8. Scarlet streamer will be flown at the entrance to the range.
9. Safety vehicle and corpsman must be present on the range prior to commencing training.
10. All non-participating or observing personnel will remain outside of the range fan.
11. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
12. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. All personnel will be equipped with appropriate communication and signaling devices while down range.
13. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, limits of fire and advancement.
14. Dud/misfire occurs on range, ROIC/RSO will place the range in an immediate **“Check-Fire”** and notify Range Control. Range Control will contact EOD personnel for assistance.
15. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
16. Range must be inspected and cleared by a range inspector prior to departing range/training area.
17. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
18. Claymore Mine will only be used on the day live fire ambush side.
19. SLAM/ROCC card not required for this range.

RANGE NAME:	**K-408**
DESCRIPTION:	Urban Obstacle Course
PRIMARY RANGE USE:	Military Operations in Urbanized Terrain (MOUT)
ALTERNATE RANGE USES:	Obstacle Course Close Quarter Battle Firing
STATUS:	Active
LOCATION:	Grid Coordinate: 775341
PRIMARY DIRECTION OF FIRE:	114 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM (ball, tracer) Smoke/Illumination Grenades M49A1 Trip Flare Artillery Simulators
TARGETS/SIMULATORS/DEVICES	1. Unit provides PITs or suitable target material. 2. PITs location/stations: 18 3. MOUT assault structures: 18
FACILITIES(Number of each):	Head Facilities: 2 Range Tower: None Overhead Cover: 1 Range Tables: 2 POV Parking Area: 1 (K-400 Area)
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with K-407.
2. Maneuvers are restricted to the rear where the obstacles are located, no movement downrange past the targets systems.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 LASERs not authorized.
6. Smoke/Illumination Grenades, M49A1 Trip Flare and artillery simulators not authorized in tunnel obstacle. Using unit should insure tunnel is cleared and checked.
7. Cross firing not authorized. Movement beyond tree line prohibited unless escorted by EOD personnel.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 1500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. Request for PITs must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. Range Control has a climbing rope available for checkout. The using unit is responsible for checkout and ensuring the climbing rope arrives to the range. The climbing rope will be returned to Range Control upon completion of training and during range check-in.
5. No more than five (5) shooters authorized on the MOUT assault course at a time.
6. SLAM/ROCC card not required for this range

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range.
3. Digging is not authorized on the range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area off V-Loop Road and start of K-400 ranges.
5. ROIC/RSO will verify all obstacles are safe. Report all maintenance problems to a range inspector.
6. ROIC/RSO will ensure K-407 is secured of all personnel and equipment.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training.
9. All non-participating or observing personnel will remain in the bleachers or outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure adequate number of safety personnel is assigned to control MOUT assault exercise. ROIC/RSO will accompany each fire team down range during fire and movement. All personnel will be equipped with appropriate communication and signaling devices on range.
12. Maneuvering is authorized for what is required to get from one assault obstacle/station to another. Movement is restricted to a direct route, parallel with firing line.
13. Dry runs will be conducted with blank ammunition. ROIC/RSO will ensure all personnel are familiar Firing lanes, firing points, sectors of fire, firing limits and limits of advancement.
14. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
15. Range must be inspected and cleared by a range inspector prior to departing range/training area.
16. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
17. After exiting the dirt tunnel, ensure the muzzle of the rifle is clear of dirt and debris before firing.

RANGE NAME:	**L-5**
DESCRIPTION:	Infantry Live Fire Maneuver Range
PRIMARY RANGE USE:	Infantry Live Fire Maneuver Range
ALTERNATE RANGE USES:	1. Multi-purpose Light and Medium Machinegun Range
STATUS:	Active
LOCATION:	Grid Coordinate: 735309
PRIMARY DIRECTION OF FIRE:	22 degrees
WEAPONS ACCOMMODATED:	M16 Rifle M4 Rifle M249 Squad Automatic Weapon M240G Medium Machinegun M203 Grenade Launcher
AMMUNITION AUTHORIZED:	5.56MM (Ball, Tracer, Linked) 7.62MM (Linked) 40MM TP (DODIC B519)
TARGETS/SIMULATORS/DEVICES	Target Description: Quantity: RETS Pop-up Moving 5 Remarks: E-Silhouette RETS target face. RETS Pop-up Stationary 126 Remarks: E-Silhouette RETS target face.
FACILITIES(Number of each):	Head Facilities: 4 Range House: 1 (Requires SOI Approval) Range Tower: 1 Range Tables: 3 POV Parking Area: 1
UTILITIES AVAILABLE:	Electricity: Yes Lights: Yes Water System: Yes
INSTALLED COMMUNICATIONS:	Telephone: Yes
AREA SUITABILITY:	Platoon

RANGE USE RESTRICTIONS/COMMENTS/ CONFLICTS:

1. Conflicts with LA, LE, and LF Training Areas.
2. Maneuvers are authorized.
3. Authorized for night use.
4. Night vision devices are authorized.
5. Class 3B and 4 Lasers not authorized.
6. Range requires road guards.
7. Vehicular movement downrange is restricted to existing roads.
8. Vehicles not authorized on berm.
9. No designated firing lanes or firing points.
10. Firing authorized from berm.
11. Cross firing not authorized.
12. Grenade Launchers not authorized to fire on RETS. Using units must provide suitable targets. EOD support not required for target placement.

OTHER CONSIDERATIONS:

1. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
2. When using L-5 for fire and movement exercises, total number of personnel should be squad size (13 to 15 Marines).
3. Range Contractors operate RETs based on approved preset electronic scenarios.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range, but is authorized at bivouac area. Using unit must schedule the LE area for bivouacking.
3. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
5. Report all maintenance problems to a range inspector.

6. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.
7. ROIC/RSO must verify all weapons range safety cards.
8. Scarlet streamer will be flown at the entrance to the range.
9. Live fire and maneuver: A special range request is not required as long as the standard two (2) scenarios that are commonly used by the School of Infantry are employed. These consist of attacking straight down the middle of the range or conducting an envelopment on the left hand side of the range using the terrain to mask your movement. Supporting machine gun fire is authorized as long as all safety procedures are followed. Overhead fire on L-5 is not authorized.
10. Safety vehicle and corpsman must be present on the range prior to commencing training.
11. All non-participating or observing personnel will remain outside of the range fan.
12. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
13. ROIC/RSO will ensure adequate numbers of safety personnel are assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
14. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
15. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
16. Range must be inspected and cleared by a range inspector prior to departing range/training area.
17. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**MOUT Assault Course 1 (MAC-1)**
DESCRIPTION:	Urban Quick Kill, Fire Team/Squad Size Units.
PRIMARY RANGE USE:	1. Urban Quick Kill Range 2. Basic Room Entry and Clearing Range.
ALTERNATE RANGE USES:	1. Urban Battle Drill Range
STATUS:	Active
LOCATION:	Grid Coordinate: 934377
PRIMARY DIRECTION OF FIRE:	148 degrees
WEAPONS ACCOMMODATED:	All pistols(.45 Cal or less) M16 Rifle M4 Rifle Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 mm (Ball Only) All Shotgun Ammunition All Blank Ammunition Hand Grenade, Practice Artillery Simulators.
TARGETS/SIMULATORS/DEVICES:	5
FACILITIES(Number of each):	Head Facilities: Located at MOUT Range Tower: 1 Range Tables: 1 POV Parking Area: Located at MOUT
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Conflict with TLZ Raven, TLZ Pigeon, Training areas FC, FE and FF.
6. Range requires road guards.
7. Illumination and smoke grenades are authorized only on the outside of MOUT structures.
8. Live hand grenades are not authorized on the range. Practice grenades are authorized inside/outside MOUT structures.

OTHER CONSIDERATIONS:

1. The using unit is required to provide a qualified range operator familiar with target operations and the hand held control unit. The contractor no longer provides targets for this range. The using unit will be required to submit a letter ten (10) days in advance requesting PITS targets.
2. Ensure the power source is on, located in the MOUT administration building.
3. Maximum number of personnel authorized to conduct live fire training at one time is 13 personnel (1 squad) for MAC-1.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range. Bivouac authorized at the MOUT bivouac site located in FC training area.
3. Digging is not authorized on the range.
4. Units will not create additional mouse holes in the buildings.
5. No open warming fires authorized on the range.
6. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
7. Report all maintenance problems to a range inspector.
8. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
9. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size

of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.

10. ROIC/RSO will deconflict road guard placements and relief with F-4, F-5 and F-18.
11. ROIC/RSO must verify all weapons range safety cards.
12. Scarlet streamer will be flown at the entrance to the range.
13. Safety vehicle and corpsman must be present on the range prior to commencing training.
14. All non-participating or observing personnel will remain outside of the range fan and across the tank trail.
15. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
16. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
17. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
18. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
19. Range must be inspected and cleared by a range inspector prior to departing range/training area.
20. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
21. Ensure the proper station status placard is displayed.
    a. **GREEN:** Station is inactive and all weapons are clear and safe.
    b. **BLUE:** Instruction/practice, non-live fire rehearsal is in progress.
    c. **RED:** Live Fire is in progress.
    d. **YELLOW**: Cease Fire/Unload, Show/clear all weapons.
    e. **WHITE BACKGROUND WITH RED CROSS**: There is a medical emergency in progress.

RANGE NAME:	**MOUT Assault Course 2 (MAC-2)**
DESCRIPTION:	Search and Kill, Fire Team/ Squad Size Units
PRIMARY RANGE USE:	Search and Kill Range, Basic Room Entry and Clearing Range.
ALTERNATE RANGE USES:	1. Urban Battle Drill Range
STATUS:	Active
LOCATION:	Grid Coordinate: 935377
PRIMARY DIRECTION OF FIRE:	148 degrees
WEAPONS ACCOMMODATED:	All pistols(.45 Caliber or less) M16 Rifle M4 Rifle Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 mm (Ball Only) All Shotgun Ammunition All Blank Ammunition Hand Grenade, Practice Artillery Simulators.
TARGETS/SIMULATORS/DEVICES:	6
FACILITIES(Number of each):	Head Facilities: Located at MOUT Range Tower: 1 Range Tables: 0 POV Parking Area: Located at MOUT)
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Conflict with TLZ Raven, TLZ Pigeon, Training areas FC, FE and FF
6. Range requires road guards.
7. Illumination and smoke grenades are authorized only on the outside of MOUT structures.
8. Live hand grenades are not authorized on the range. Practice grenades are authorized inside/outside MOUT structures.

OTHER CONSIDERATIONS:

1. Ensure the power source is on, located in the MOUT administration building.
2. Maximum number of personnel authorized to conduct live fire training at one time is 13 personnel (1 squad) for MAC-2.
3. The contractor no longer provides PITS targets for this range. The using unit will be required to submit a letter ten (10) days in advance to Range Control requesting PITS targets. The using unit will be responsible to have a trained operator for the hand held control unit and the PITS targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range. Bivouac authorized at the MOUT bivouac site located in FC training area.
3. Digging is not authorized on the range.
4. Units will not create additional mouse holes in the buildings.
5. No open warming fires authorized on the range.
6. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
7. Report all maintenance problems to a range inspector.
8. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
9. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with

the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.

10. Personnel will not maneuver down range past the end of the berms.
11. Scarlet streamer will be placed on the pole provided at the entrance to MAC Ranges.
12. The RSO needs to ensure that the complete surface danger zone is clear prior to conducting live fire and will monitor it during live fire.
13. All using unit will conduct a dry run before going HOT with live ammunition.
14. No tracers will be used in the MAC.
15. Ensure earplugs, flak jacket and helmets are worn and securely fastened.
16. ROIC/RSO will brief the using unit on all safety requirements before conducting live fire.
17. Weapons will only be fired at pop-up targets. Suppressive fire oriented at no specific target is prohibited.
18. Weapons will only be loaded on the west side of the MAC Road.
19. Using unit is responsible for a detailed police call of the MAC Ranges, all facilities, parking area and surrounding area once training is completed.
20. At no time will dud-producing ordnance be used on the MAC.
21. Additional targetry is authorized, but must be removed once training is competed.
22. Ensure the proper station status placard is displayed:
    a. **GREEN:** Station is inactive and all weapons are clear and safe.
    b. **BLUE:** Instruction/practice, non-live fire rehearsal is in progress.
    c. **RED:** Live Fire is in progress.
    d. **YELLOW:** Cease Fire/Unload, Show/clear all weapons.
    e. **WHITE BACKGROUND WITH RED CROSS:** There is a medical emergency in progress

RANGE NAME:	**MOUT Assault Course 3 (MAC-3)**
DESCRIPTION:	MOUT Obstacle Course, 2 Man Team
PRIMARY RANGE USE:	MOUT Obstacle Course, Clearing MOUT Type Obstacles.
ALTERNATE RANGE USES:	1. Urban Battle Drill Range
STATUS:	Active
LOCATION:	Grid Coordinate: 935378
PRIMARY DIRECTION OF FIRE:	148 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) M16 Rifle M4 Rifle Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 mm (Ball Only) All Shotgun Ammunition All Blank Ammunition Hand Grenade, Practice Artillery Simulators.
TARGETS/SIMULATORS/DEVICES:	6 targets in 3 building
FACILITIES(Number of each):	Head Facilities: Located at MOUT Range Tower: 1 Range Tables: 2 POV Parking Area: Located at MOUT
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Fire Team

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Conflict with TLZ Raven, TLZ Pigeon, Training areas FC, FE and FF
6. Range requires road guards.
7. Illumination and smoke grenades are authorized only on the outside of MOUT structures.
8. Live hand grenades are not authorized on the range. Practice grenades are authorized inside/outside MOUT structures.

OTHER CONSIDERATIONS:

1. Ensure the power source is on, located in the MOUT administration building.
2. Maximum number of personnel authorized to conduct live fire training at one time is 2 personnel for MAC-3.
3. The contractor no longer provides targets for this range. The using unit will submit a letter ten (10) days in advance requesting PITS targets. The using unit will be responsible for having a trained operator for the hand held control and the target system. The using unit will also be responsible for the proper protection of the PITS targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on the range. Bivouac authorized at the MOUT bivouac site located in FC training area.
3. Digging is not authorized on the range.
4. No open warming fires authorized on the range.
5. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
6. Report all maintenance problems to a range inspector.
7. ROIC/RSO will ensure all conflict ranges, gun positions, and training areas are secured of all personnel and equipment.
8. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
9. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road

guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.

10. ROIC/RSO will deconflict road guard placements and relief with F-4, F-5 and F-18.
11. ROIC/RSO must verify all weapons range safety cards.
12. Scarlet streamer will be flown at the entrance to the range.
13. Safety vehicle and corpsman must be present on the range prior to commencing training.
14. All non-participating or observing personnel will remain outside of the range fan.
15. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
16. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
17. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
18. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
19. Range must be inspected and cleared by a range inspector prior to departing range/training area.
20. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
21. Ensure the proper station status placard is displayed.
    a. **GREEN**: Station is inactive and all weapons are clear and safe.
    b. **BLUE**: Instruction/practice, non-live fire rehearsal is in progress.
    c. **RED**: Live Fire is in progress.
    d. **YELLOW**: Cease Fire/Unload, Show/clear all weapons.
    e. **WHITE BACKGROUND WITH RED CROSS**: There is a medical emergency in progress.

RANGE NAME:	**MOUT Assault Course 4 (MAC-4)**
DESCRIPTION:	Cover and Clear
PRIMARY RANGE USE:	Fire team MOUT
ALTERNATE RANGE USES:	1. Urban Battle Drill Range
STATUS:	Active
LOCATION:	Grid Coordinate: 936378
PRIMARY DIRECTION OF FIRE:	148 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Caliber or less) M16 Rifle M4 Rifle Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 mm (Ball Only) All Shotgun Ammunition All Blank Ammunition Hand Grenade, Practice Artillery Simulators.
TARGETS/SIMULATORS/DEVICES:	6
FACILITIES(Number of each):	Head Facilities: Located at MOUT Range Tower: 1 Range Tables: 0 POV Parking Area: Located at MOUT
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Fire Team

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Conflict with TLZ Raven, TLZ Pigeon, Training areas FC, FE and FF
6. Range requires road guards.
7. Illumination and smoke grenades are authorized only on the outside of MOUT structures.
8. Live hand grenades are not authorized on the range. Practice grenades are authorized inside/outside MOUT structures.

OTHER CONSIDERATIONS:

1. A range contractor will set up the targets for the range. The using unit is required to provide a qualified range operator familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.
2. Ensure the power source is on, located in the MOUT administration building.
3. Maximum number of personnel authorized to conduct live fire training at one time is 13 personnel (1 squad) for MAC-4.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range. Bivouac authorized at the MOUT bivouac site located in FC training area.
3. Digging not authorized on the range.
4. Units will not create additional mouse holes in the buildings.
5. No open warming fires authorized on the range.
6. Report all maintenance problems to a range inspector.
7. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
8. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live

firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.

9. ROIC/RSO will deconflict road guard placements and relief with F-4, F-5 and F-18.
10. ROIC/RSO must verify all weapons range safety cards.
11. Scarlet streamer will be flown at the entrance to the range.
12. Safety vehicle and corpsman must be present on the range prior to commencing training.
13. All non-participating or observing personnel will remain outside of the range fan and across the tank trail.
14. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
15. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
16. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
17. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
18. Range must be inspected and cleared by a range inspector prior to departing range/training area.
19. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
20. Ensure the proper station status placard is displayed.
    a. **GREEN:** Station is inactive and all weapons are clear and safe.
    b. **BLUE:** Instruction/practice, non-live fire rehearsal is in progress.
    c. **RED:** Live Fire is in progress.
    d. **YELLOW:** Cease Fire/Unload, Show/clear all weapons.
    e. **WHITE BACKGROUND WITH RED CROSS:** There is a medical emergency in progress.

RANGE NAME:	**MOUT Assault Course 5 (MAC-5)**
DESCRIPTION:	Dodge City
PRIMARY RANGE USE:	Basic Squad MOUT range.
ALTERNATE RANGE USES:	1. Urban Battle Drill Range 2. Stairwell Clearing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 936379
PRIMARY DIRECTION OF FIRE:	148 degrees
WEAPONS ACCOMMODATED:	All pistols (.45 Cal or less) M16 Rifle M4 Rifle Shotgun
AMMUNITION AUTHORIZED:	All Pistol Ammunition 5.56 mm (Ball Only) All Shotgun Ammunition All Blank Ammunition Hand Grenade, Practice Artillery Simulators.
TARGETS/SIMULATORS/DEVICES:	8
FACILITIES(Number of each):	Head Facilities: Located at MOUT Range Tower: 1 Range Tables: 2 POV Parking Area: Located at MOUT
UTILITIES AVAILABLE:	Electricity: No Lights: No Water System: No
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Squad

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Maneuvers are authorized.
2. Authorized for night use.
3. Night vision devices authorized.
4. Class 3B and 4 Lasers not authorized.
5. Conflict with TLZ Raven, TLZ Pigeon, Training areas FC, FE and FF.
6. Range requires road guards.
7. Illumination and smoke grenades are authorized only on the outside of MOUT structures.
8. Live hand grenades are not authorized on the range. Practice grenades are authorized inside/outside MOUT structures.

OTHER CONSIDERATIONS:

1. Ensure the power source is on, located in the MOUT administration building.
2. Maximum number of personnel authorized to conduct live fire training at one time is 13 personnel (1 squad) for MAC-5.
3. The contractor will no longer provide targets for this range. The using unit will submit a letter ten (10) days in advance to Range Control requesting PITS targets. The using unit will be responsible for providing a trained operator for the hand held controller in the PITS targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range. Bivouac authorized at the MOUT bivouac site located in the FC training area.
3. Digging is not authorized on the range.
4. POVs are not authorized on range, tank trail or adjunct training areas. All vehicles must use the designated parking area.
5. Units will not create additional mouse holes in the buildings.
6. No open warming fires authorized on the range.
7. Report all maintenance problems to a range inspector.
8. ROIC/RSO will ensure F-5 and FA training area are secured of all personnel and equipment.
9. A map overlay indicating the range fan; current road guard placements and gate closures will be provided when range is checked out. It is the responsibility of the ROIC/RSO to ensure that all road guards are placed properly. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size

of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints.

10. ROIC/RSO will deconflict road guard placements and relief with F-4, F-5 and F-18.
11. ROIC/RSO must verify all weapons range safety cards.
12. Scarlet streamer will be flown at the entrance to the range.
13. Safety vehicle and corpsman must be present on the range prior to commencing training.
14. All non-participating or observing personnel will remain outside of the range fan and across the tank trail.
15. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
16. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
17. Dry runs will be conducted. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement.
18. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
19. Range must be inspected and cleared by a range inspector prior to departing range/training area.
20. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
21. Ensure the proper station status placard is displayed.
    a. **GREEN:** Station is inactive and all weapons are clear and safe.
    b. **BLUE:** Instruction/practice, non-live fire rehearsal is in progress.
    c. **RED:** Live Fire is in progress.
    d. **YELLOW:** Cease Fire/Unload, Show/clear all weapons.
    e. **WHITE BACKGROUND WITH RED CROSS:** There is a medical emergency in progress.

RANGE NAME:	**SR-6 SOUTH**
DESCRIPTION:	Infantry Platoon Battle Course
PRIMARY RANGE USE:	Infantry Platoon Battle Course(Fire and Maneuver)
ALTERNATE RANGE USES:	1. Basic Techniques of Fire 2. Fire and Movement Range 3. Platoon Battle Drill Range 4. Basic Techniques of Fire for Helicopters
STATUS:	Active
LOCATION:	Grid Coordinate: 719329
PRIMARY DIRECTION OF FIRE:	320 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M40 Sniper Rifle M249 Squad Automatic Weapon M203 Grenade Launcher M240G Machinegun M2 .50 Cal AT-4 SMAW MK 153
HELICOPTER GUNNERY:	GAU-17 (7.62mm) GAU-19 (.50 cal) M3 (.50cal) 20mm Cannon 2.75 Rocket
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM: Ball, Tracer, Link, Blank 7.62MM: Ball, Linked 40MM M203: M781 Practice Round; M576 Multiple Projectile Round only/DODICs B519 and B534 AT-4 9MM Spot Rd: 9MM TP-T M939/A358 SMAW 9MM Spot: 9MM SR-TR M212-0/AXII)

83MM INERT PRACTICE ROUND: HX04

AMMUNITION FOR HELICOPTER GUNNERY:

7.62mm (GAU-17) Ball, Linked
.50 cal (GAU-19) ALL DODICS
.50 cal (M3) ALL DODICS
20mm Cannon (TP-T Only)
2.75 Rocket (Inert Only)
TOW (Inert Only)

TARGETS/SIMULATORS/DEVICES

Stationary Infantry Targets (SITS): 13
Infantry Moving Targets (IMT): 4
Mortar Simulator Devices (MSD): 2
Machinegun Bunkers (MGB): 3

FACILITIES(Number of each):

Range Tower: 1
Range Ammunition/Weapons Storage Building: 1
Range Classrooms: 2 (Inside/Outside)
Range Classroom Bleachers: 3
Head Facilities: 2 (Male/Female)
Contractor Storage Building: 1
POV Parking Area: None

UTILITIES AVAILABLE:

Electricity: Yes
Lights: Yes
Water System: Yes

INSTALLED COMMUNICATIONS:

Telephone

AREA SUITABILITY:

Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges SR-7; SA, SB, SC, SD, SE, SF, SG, SJ and SI Training Areas.
2. This range is affected by the activation of New River Air Station’s Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
3. Must be scheduled in RFMSS one calendar month prior to the first date of usage.
4. Final range coordination brief will be conducted with GSRA Range Control, Building SR-46 prior to occupying the range. Units occupying on weekends and holidays will ensure final range coordination brief is received prior to Friday and/or

no later than the last regular working day prior to the holiday.

5. Range has RETs that are operated by approved scenarios that are preset electronically and operated by Range Contractor. PITs are authorized by request.
6. Maneuvers are authorized by request.
7. Night use authorized by request.
8. Night vision devices are authorized.
9. Lasers are authorized by request. Class 3B and 4 Lasers not authorized.
10. Pyrotechnics (PYRO) not authorized. Only red smoke grenades are authorized for emergency/safety purposes. Only to be used on the road/ammunition can or in an area that will not start a fire.
11. Bivouacking not authorized on range. Bivouac Site #1 located at coordinates 709318 off Moores Ridge Road and SM Training Area will be utilized.
12. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
13. No designated firing points.
14. Cross firing not authorized.
15. Range requires road guards and gate closures.
16. Firing from vehicle-mounted weapons approved by request. No targets will be engaged by moving vehicle.
17. Base of fire 5.56/7.62 requires 50 meters clearance; .50 caliber and above requires 100 meter clearance. Targets will not be engaged closer than 25 meters.
18. Firing of the AT-4 or SMAW 9mm spotting rounds or the SMAW Inert Practice Rocket at the Machinegun Bunkers and/or Assault-Defend House is not authorized. Additional targetry is authorized by Special Range Request. EOD support not required for target placement.
19. Firing from vehicles not authorized. Normal vehicle movement is restricted to existing roads. Speed limit on the range is 10 mph.

OTHER CONSIDERATIONS:

1. Request to conduct day/night live fire and maneuver exercise must be submitted through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
2. Request to use Lasers must be submitted through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. Request to modify computerized target scenarios must be submitted through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
4. Request for PIT (targets) must be submitted through the unit's chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
5. Unit will provide written scheme of maneuver/scenario, safety plan, and operations risk assessment with each request.
6. The unit is responsible for becoming acquainted with training scenarios prior to training session.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. A GSRA Range Appendix; a map overlay indicating the range fan; a current road guard placements and gate closures map will be provided during the final coordination brief.
3. POVs are not authorized on range, tank trail or adjunct training areas. No designated parking area on range for POV parking.
4. Report all maintenance problems to a range inspector. ROIC/RSO will conduct a range sweep to ensure all conflict ranges, and training areas are secured of all personnel and equipment. Ensure ROIC/RSO for SR-7 range understands no personnel are permitted beyond the 3rd and 4th defilade battle positions due to SR-6 (South) is activated for live fire. All firing will impact within the SR-6 South Surface Danger Zone/Impact Area.
5. The ROIC/RSO is responsible for ensuring all gates are secured and road guards are posted prior to going "HOT". All road guards will have and maintain internal communication with the ROIC/RSO while training is being

conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints. Periodic gate checks are required to ensure security and safety of the range.

6. ROIC/RSO will verify all weapons range safety cards and ensure all personnel are qualified with that weapon/weapon system prior commencing exercise.
7. Scarlet streamer will be flown at the entrance to the range.
8. Safety vehicle and corpsman must be present on the range prior to commencing training. Corpsmen must accompany each maneuvering element downrange. Emergency vehicles will be staged at the tower. ALZ for MEDEVAC is located at grid 708334. Extreme care must be taken when using pyro for emergency/safety purposes. Red signaling smoke must be placed in clear area or metal can and red star clusters must be fired over the center of the range area.
9. All non-participating or observing personnel will remain outside of the range fan.
10. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
11. ROIC/RSO will ensure adequate number of safety personnel is assigned to control maneuver exercises. ROIC/RSO will accompany each fire team down range during fire and movement. ROIC/RSO will be equipped with appropriate communication and signaling devices while down range.
12. Dry run maneuvers are not authorized off the range. Training will remain clear of all roadways. Training is restricted to the range only. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement. Unit using a base of fire or support by fire must have clear, positive, and redundant signals for shift and cease-fire. All firing will impact within the SR-6 South surface danger zone/impact area.
13. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
14. Range must be inspected and cleared by a range inspector prior to departing range/training area.
15. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

RANGE NAME:	**SR-7**
DESCRIPTION:	Multi-Purpose Training Range
PRIMARY RANGE USE:	LAR Crew Qualification Firing Range
ALTERNATE RANGE USES:	1 LAR/AAV Multi-Purpose Mechanized Assault Range 2. Basic Techniques of Gunnery 3. Moving Realistic Target Range 4. Mechanized BZO Range 5. Helicopter Firing Range
STATUS:	Active
LOCATION:	Grid Coordinate: 722368
PRIMARY DIRECTION OF FIRE:	268 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M40 Sniper Rifle M2 .50 Caliber Machinegun M203 Grenade Launcher MK19 Grenade Launcher Machinegun M242 Chain Gun 25MM M249 Squad Automatic Weapon M240G 7.62 MM Machinegun M203 Grenade Launcher TOW AT-4 SMAW
WEAPONS ACCOMMODATED FOR HELICOPTER GUNNERY:	GAU-17 (7.62mm) GAU-19 (.50cal) M3 (.50cal) 20mm Cannon 2.75 Rocket TOW
AMMUNITION AUTHORIZED:	All Pistol Ammunition All 12 Gauge Ammunition 5.56MM: Ball, Tracer, Link, Blank 7.62MM: Ball, Tracer, Link

25MM: M793 Practice Round/DODIC A976; M791 APDS-T/DODIC A974
.50 CAL Linked
40MM MK19: M385 Practice Round only DODICs B584
40MM M203: M781 Practice Round; M576 Multiple Projectile Round only/DODICs B519
Inert TOW (Only)
AT-4 9MM Spot Rd: 9MM TP-T M939/A358
SMAW 9MM Spot Rd: 9MM SP-TP M212-0/ AXII

AMMUNITION AUTHORIZED FOR HELICOPTER WEAPONS:

7.62mm (GAU-17) Ball, Linked
.50cal (GAU-17) All DODICS
.50cal (M3) All DODICS
20mm Cannon (TP-T Only)
2.75 Rocket (Inert Only)
TOW (Inert Only)

TARGETS/SIMULATORS/DEVICES

Firing Lanes: 2
Defilade firing positions: 4
Stationary Infantry Targets (SITS): 50
Stationary Armor Targets (SATS): 20
Moving Rail Targets (Automatic): 4

FACILITIES(Number of each):

Range Towers: 1
Observation Tower: 1
Ammunition Storage Area: 1
Range Tables: 4
Range Classrooms: 2 (Inside/Outside)
Head Facilities: 2(Male/Female)
Range Classroom Bleachers: 3
Bivouacking Area: 6 (Concrete Slabs)
Shower Area: 1 (Gravel Area)
Contractor Storage Building: 1
Trash Recovery Units: 4 (Dumpsters)
POV Parking Area: None

UTILITIES AVAILABLE:

Electricity: Yes
Lights: Yes
Water System: Yes

INSTALLED COMMUNICATIONS:

Telephone

AREA SUITABILITY:

Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges SR-6 South; SA, SB, SC, SD, SE, SF, SG, and SJ training areas.
2. This range is affected by the activation of New River Air Station's Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
3. Must be scheduled in RFMSS one calendar month prior to the first date of usage.
4. Final range coordination brief will be conducted with GSRA Range Control, Building SR-46 prior to occupying the range. Units occupying on weekends and holidays will ensure final range coordination brief is received prior to Friday and/or no later than the last regular working day prior to the holiday.
5. Range has RETs that are operated by approved scenarios that are preset electronically and operated by Range Contractor. PITs are authorized by request.
6. Maneuvers are authorized by request. Weapon restrictions.
7. Night use authorized by request.
8. Night vision devices are authorized.
9. Lasers are authorized by request. Class 3B and 4 Lasers not authorized.
10. Pyrotechnics (PYRO) not authorized. Only red star clusters and red smoke grenades are authorized for emergency/safety purposes.
11. Bivouacking authorized on range in designated area.
12 Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
13 SR-7 has four (4) defilade firing positions to support the two (2) live fire firing lanes for wheeled and track vehicles.
14 Cross firing not authorized.
15 Firing from vehicle-mounted weapons (static/moving platform) authorized by request.
16 Vehicular movement downrange is restricted to existing roads. Track vehicles will use designated turn pads.
17 Firing of the AT-4 or SMAW 9mm spotting rounds or the SMAW Inert Practice Rocket at the stationary and moving armor targets is authorized. Additional targetry are authorized

by Special Range Request. EOD support not required for target placement.

18 Vehicles are not authorized on the berm. Vehicles conducting static fire may fire from either the rear (concrete pad) or forward (gravel) areas of the berm. No more than three (3) vehicles are authorized at one time to fire from these areas. All vehicles will be chalked, hand brake set, and weapons T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.

19 Speed limit on the range is 10 mph for all wheeled and track vehicles.

OTHER CONSIDERATIONS:

1. Request to conduct day/night live fire and maneuver exercise must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
2. All classes of lasers are authorized on SR-7. The using unit must have a laser safety officer assigned before lasers can be used.
3. Request to modify computerized target scenarios must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
4. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
5. Unit will provide written scheme of maneuver/scenario, safety plan, and operations risk assessment with each request.
6. The unit is responsible for becoming acquainted with training scenarios prior to training session.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. A GSRA Range Appendix; a map overlay indicating the range fan; a current road guard placements and gate closures map will be provided during the final coordination brief.
3. POVs are not authorized on range, tank trail or adjunct training areas. No designated parking area on range for POV parking.
4. Report all maintenance problems to a range inspector.

5. ROIC/RSO will conduct a range sweep to ensure all conflict ranges, and training areas are secured of all personnel and equipment. All firing will impact within the SR-7 surface danger zone/impact area.
6. The ROIC/RSO is responsible for ensuring all gates are secured and road guards are posted prior to going “HOT”. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints. Periodic gate checks are required to ensure security and safety of the range.
7. ROIC/RSO will verify all weapons range safety cards and ensure all personnel are qualified with that weapon/weapon system prior commencing exercise.
8. Base of fire for 5.56/7.62MM requires 50 meters clearance; .50 caliber and above requires 100 meter clearance. High velocity rounds exceeding 7300 meter not authorized for the total Surface Danger Zone (Distance X) for SR-7. Targets will not be engaged closer than 25 meters.
9. Scarlet streamer will be flown at the entrance to the range.
10. Safety vehicle and corpsman must be present on the range prior to commencing training. Corpsmen must accompany each maneuvering element downrange. Emergency vehicles will be staged at the tower. ALZ for MEDEVAC/CASEVAC is located at grid 718-379 (Snipe). Extreme care must be taken when using pyro for emergency/safety purposes. Red signaling smoke must be placed in clear area or metal can and red star clusters must be fired over the center of the range area.
11. All non-participating or observing personnel will remain outside of the range fan.
12. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
13. ROIC/RSO will ensure adequate number of safety personnel is assigned to control exercises. All safety personnel will be equipped with appropriate communication and signaling devices while down range.
14. Dry run maneuvers are not authorized off the range. Training will remain clear of all roadways. Training is restricted to the range only. Track vehicles are not authorized to conduct maneuvers except on SR-7. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement. Unit using a base of fire or support by fire must have clear, positive, and redundant signals for shift and cease-fire. All firing will impact within the SR-7 surface danger zone/impact area.

15. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
16. Range must be inspected and cleared by a range inspector prior to departing range/training area.
17. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.

ROTARY WING AERIAL GUNNERY (SR-7 AIR):

1. SR-7 AIR is a multi-use ranges originally designed primarily for flat trajectory surface delivered fires. By virtue of its location, size and variety of targets, SR-7 AIR is particularly well suited for aerial weapons delivery training; however, care must be taken to ensure delivery profiles are adjusted to contain the effects of fires within the impact area boundaries (LLL and RLL) and avoid damage to target motion equipment. In general, all lines of fire must be directed along the long axis of the range and at angles such that the target's protective berm is between the firing platform and the permanent target components. In other words, the shooter should only be able to see the sacrificial plywood or plastic portion of the target above the berm at weapons release. The intent of the procedures stipulated below is to provide flexibility to aircraft commanders in conducting training while maintaining a clear surface danger zone and limiting costly damage to range apparatus.

AIRSPACE COORDINATION:
1. All weapons delivery shall be conducted from within the battle position defined below. The aircraft firing and target fired upon shall be within the same firing lane. **ABSOLUTELY NO CROSSING LANE FIRING IS AUTHORIZED.**

BATTLE POSITION:

1. BP Habu (SR-7 AIR) 18STD71643668, 18STD70193642, 18STD70173664, 18STD71723704, surface to 500 ft AGL.

FIRING LANES:

1. For aerial delivery, SR-7 AIR is divided into east and west firing lanes defined by an imaginary line running through the range tower on a 273^0 Mag heading.

DELIVERY PROFILES:

1. When firing, aircraft shall comply with the following maximum altitude vs. range to target matrix:

Range to Target	Max Altitude
<300m	Not authorized
300-500m	100 ft AGL
500-1000m	200 ft AGL
>1000m	500 ft AG

RUNNING FIRE:

1. Maximum pitch delivery angle for rockets is 0^0. Door guns may engage targets only within 10^0 of aircraft heading on run in and shall cease fire on pull off before the aircraft completes 90^0 of turn or exits the BP/firing lane. The following restrictive final headings shall be observed.

2. Restrictive final heading: $268\text{-}278^0$ Mag

FLEX GUNS:

1. Door guns or attack helicopter turret guns may be fired from a hover or takeoff/landing profile within the BPs with the following restrictions:

2. All fires or effects of fires will be contained within the left and right lateral limit signs.

3. Aircraft shall not pass directly over any targets on approach/departure nor hover within 100m of any target to avoid downwash damage to range equipment.

4. Targets within 300m of the aircraft shall not be engaged and minimum firing altitudes listed above shall be observed. No greater than a 45 degree angle of fire is authorized.

5. All fire shall be directed along the long axis of the impact area away from the tower.

6. Targets may only be engaged if their protective berm is between the shooter and the target.

7. Off axis turret gun (20/30mm) fire is not authorized.

RANGE SAFETY OFFICER:

1. For all live fire operations a qualified Range Safety Officer (RSO) shall be present on the range with a Base RSO card for the duration of the operation. The RSO shall position himself in the tower, shall request to “go-hot” as per Chapter 3, and will maintain telephonic communications with BLACKBURN at all times. The tower is equipped with a VHF/UHF capable radio for the purpose of communication between the RSO and the aircraft. The frequency for that radio is at the discretion of the using unit. **THE AIRCRAFT SHALL MAINTAIN COMMUNICATIONS WITH BLACKBURN ON 325.0 OR 38.60.**

2. The RSO responsibilities are listed in Chapter 2. Range specific responsibilities are:
   a. Schedule the range via RFMSS and per Chapter 3. The range requested is SR-7 AIR.
   b. Conduct a face-to-face brief with Range Control Scheduling, BLACKBURN, and Range Inspector no later than 24 hours preceding the live-fire.
   c. Coordination with the Range Inspector shall include at a minimum scheduled hot times, anticipated cold time, and time RSO is expected to arrive on the range. This will allow Range Inspectors to close required gates and set-up appropriate road barriers prior to the scheduled live-fire time. Range Inspectors will meet with the RSO at the range to confirm gates have been closed and barriers have been established.
   d Contact and coordinate the use of the range with the range operator no later than 24 hours preceding the live-fire. (Range Contractor: 449-0226)
   e. Ensure all range requirements to include gate closures are completed prior to requesting to go hot with BLACKBURN.
   f. Confirm the aircraft have completed a gate check and have conducted a “first pass cold” prior to allowing an aircraft to fire on the range.

AIRCRAFT PROCEDURES:

1. Aircraft scheduled to utilize SR-7 AIR **shall maintain communications with BLACKBURN on 325.0 or 38.60.**

2. Aircraft shall contact BLACKBURN at Point U and request SR-7 Air. BLACKBURN shall direct the aircraft to conduct a gate-check to insure all gates are secured and no personnel or vehicles are within the SR-7 AIR SDZ.

3. Upon completion of the gate check, the aircraft conducting the live-fire will contact the RSO and request a “first-pass cold”.

4. After the “first-past cold”, the aircraft shall coordinate with the RSO to insure the range is prepared to commence live-fire.

5. When conducting door gunnery, Aircraft Commanders shall insure weapons are in Condition 4 prior to pull off or exiting the range.

6. Upon completion of training, the aircraft will check off the range with the RSO and contact BLACKBURN on 325.0 or 38.60 requesting Point U.

GATE CHECK REQUIREMENTS:

1. Prior to firing, using aircraft shall ensure that a range sweep is conducted and the gates listed below have been visually checked closed.

GATES TO BE SECURED FOR SR-7 AIR GUNNERY

GATE	GRID	EXTERIOR GATE LOCATIONS/REFERENCE POINTS
#4	18S TD 727359	GREY POINT ROAD & US17 (NORTHERN PERIMETER ROAD)
#5	18S TD 731375	HIGH HILL ROAD (US17) & EAST PERIMETER ROAD
#6	18S TD 723383	HIGH HILL ROAD & SHELL TRAIL
#6A	18S TD 691410	HIGH HILL ROAD & DAWSON CABIN ROAD (County Trash Collection Pt)
#7	18S TD 688410	DAWSON CABIN ROAD & NORTH TOM'S ROAD
#8	18S TD 641405	HAWS RUN ROAD & NORTH RAWLS ROAD
#8A	18S TD 631392	PADGETT ROAD & NORTHWEST EXIT NORTHERN PERIMETER RD
#8B	18S TD 629388	PADGETT ROAD & NORTHWEST PERIMETER ROAD
#9	18S TD 614361	PADGETT ROAD & NORTHWEST PERIMETER ROAD
#10	18S TD 614347	NC SR50 & HLZ FLAMINGO ROAD
#11	18S TD 622340	NC SR50 & SOUTH RAWLS ROAD
#12	18S TD 626336	NC SR50 & HWY 50 & CEDAR HURST ROAD (CC ROAD)
#12A	18S TD 628331	NC SR50 & WEST PERIMETER ROAD
#13	18S TD 635314	NC SR50 & DAVIS TRAM ROAD
D	18S TD 723355	SR-7 SOUTHERN ENTRANCE & IVES ROAD (YELLOW GATE)
E-1	18S TD 726368	VERONA RESET ROAD & IVES ROAD (YELLOW GATE)
E-2	18S TD 726363	VERONA RESET ROAD & SR-7 RANGE ENTRANCE ROAD
F	18S TD 696375	SR-7 DOWN RANGE BEHIND AMTC-2 / TOM'S ROAD & SHELL ROAD
G	18S TD 718355	SR-7 DOWN RANGE / ENTRANCE TO SR-6 NORTH & SOUTH TOM'S RD
H	18S TD 637314	HWY 50 & M ROAD
L	18S TD 668308	OFF CEDAR HURST ROAD & PRINCE TRAIL (SOUTH POCOSIN ROAD)
O	18S TD 708319	MOORE'S RIDGE ROAD (CC ROAD) & NORTH BAY ROAD
P	18S TD 715326	MOORE'S RIDGE ROAD (CC ROAD-EAST) & SR-6 RANGE
Q	18S TD 703325	MOORE'S RIDGE ROAD (CC ROAD) & SR-6 CONNECTOR ROAD

RANGE NAME:	**SR-10**
DESCRIPTION:	Multi-Purpose Training Range
PRIMARY RANGE USE:	Tank Crew Qualification Firing Range (Individual/Platoon through Gunnery Table 12)
ALTERNATE RANGE USES:	1. LAV/AAV Multi-Purpose Mechanized Assault Range 2. Basic Techniques of Gunnery 4. Moving Realistic Target Range 5. Mechanized BZO Range 6. Basic Techniques of Fire for Helicopters 7. Mechanized Infantry
STATUS:	Active
LOCATION:	Grid Coordinate: 656267
PRIMARY DIRECTION OF FIRE:	5 degrees
WEAPONS ACCOMMODATED:	All Pistols (.45 Caliber or less) 12 Gauge Shotgun M16 Rifle M4 Rifle M40 Sniper Rifle M240G Machinegun M249 Squad Automatic Weapon M203 Grenade Launcher MK19 Grenade Launcher Machinegun M242 Chain Gun (25mm) M2.50 Caliber Machinegun M82 (50cal) Sniper Rifle 120mm Main Gun M1A1 TOW AT-4 (9mm Trainer only) SMAW (9mm Spotter only)
WEAPONS ACCOMMODATED FOR HELICOPTER GUNNERY:	GAU-19 (.50cal) GAU-17 (7.62mm) M3 (.50cal) 20mm Cannon 2.75 Rocket TOW
AMMUNITION AUTHORIZED:	All Pistol Ammunition

All 12 Gauge Ammunition
5.56MM: Ball, Tracer, Link, Blank
7.62: Ball, Tracer, Link, Blank
7.62 M40 Sniper: 7.62 Spl Ball LR A136
120MM Training Practice Rounds (Only)
25MM: M793 Practice Round/DODIC A976; M791 APDS-T/DODIC 924)
.50 Caliber Linked 50cal
40MM MK19: M385 Practice Round only DODICs B584
40MM M203: M781 Practice Round; M576 Multiple Projectile Round only/DODICs B519
Inert TOW: (Only)
AT-4 9MM Spot Rd: 9MM TP-T M939/A358
SMAW 9MM Spot Rd: 9MM SP-TP

AMMUNITION AUTHORIZED FOR HELICOPTER WEAPONS:

7.62mm (GAU-17) Ball, Tracer, Linked
.50cal (GAU-17) All DODICS
.50cal (M3) All DODICS
20mm Cannon (TP-T Only
2.75 Rocket (Inert Only)
TOW (Inert Only)

TARGETS/SIMULATORS/DEVICES:

Firing Lanes: 4
Defilade Battle Firing Position: 16
Stationary Infantry Target (SITS) 132
Stationary Armor Targets (SATS) 40
Moving Armor Targets (MA) 8
Infantry Moving Targets (IA) 30

FACILITIES(Number of each):

Range Tower: 1
Ammunition/Weapons Storage Building: 1
Range Tables: 6
Range Tables: 6
Range Classrooms:3(2:Inside/1:Outside)
Range Classroom Bleachers: 3
Head Facilities: 2 (Male/Female)
Contractor Maint/Storage Buildings: 2
Armored Target Shelters: 8
Contractor Parking Area: 1
POV Parking Area: None

UTILITIES AVAILABLE:

Electricity: Yes
Lights: Yes
Water System: Yes

INSTALLED COMMUNICATIONS:

Telephone

AREA SUITABILITY: Platoon/Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Conflicts with Ranges SR-6 and SR-7; SF, SG, SH, SI, SJ, SK, SL, SN, SO, SQ, and SR training areas.
2. This range is affected by the activation of New River Air Station's Runway #1. Any weapon systems firing above the 500-foot ceiling will be affected. Range Control will notify the range ROIC/RSO of the necessary and required procedures to be taken. Range Control will contact the range ROIC/RSO when normal training can resume.
3. Must be scheduled in RFMSS one calendar month prior to the first date of usage.
4. Final range coordination brief will be conducted with GSRA Range Control, Building SR-46 prior to occupying the range. Units occupying on weekends and holidays will ensure final range coordination brief is received prior to Friday and/or no later than the last regular working day prior to the holiday.
5. Range has RETs that are operated by approved scenarios that are preset electronically and operated by Range Contractor. PITs are authorized by request.
6. Maneuvers are authorized by request. Weapon restrictions.
7. Night use authorized by request.
8. Night vision devices are authorized.
9. Lasers are authorized by request. Class 3B and 4 lasers not authorized.
10. Pyrotechnics (PYRO) not authorized. Only red star clusters and red smoke grenades are authorized for emergency/safety purposes.
11. Bivouacking authorized on range in designated area.
12. Digging on the range is not authorized except that required for the sole purpose of proper deployment and safety of designated weapon systems. Sandbags must be provided and filled by the unit prior to occupying the range. Prior to departing the range, the unit will ensure all sandbags are removed; holes are filled in and leveled.
13. SR-10 has sixteen (16) defilade firing positions, four (4) per firing lane to support live fire from a stationary position for track and wheeled vehicles.
14. Cross firing not authorized.
15. Firing from vehicle-mounted weapons (static/moving platform) authorized by request.
16. Vehicular movement downrange is restricted to existing roads. Speed limit on the range is 10 mph. Track vehicles will use designated turn pads.

17. Firing of the AT-4 or SMAW 9mm spotting rounds or the SMAW Inert Practice Rocket at the stationary and moving armor targets is authorized. Additional targetry are authorized by Special Range Request. EOD support not required for target placement.
18. Vehicles are not authorized on the berm. Vehicles conducting static fire may fire from either the rear (concrete pad) or forward (gravel) areas of the berm. No more than three (3) vehicles are authorized at one time to fire from these areas. All vehicles will be chalked, hand brake set, and weapons T&E mounted. A minimum of 6 meters separation will be maintained between vehicles during firing.
19. Vehicles/track vehicles must stay on the road network, no off road movement authorized.
20. Vehicle speed will be no more than 10 mph.

OTHER CONSIDERATIONS:

1. Request to conduct day/night live fire and maneuver exercise must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
2. Request to use lasers must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
3. Request to modify computerized target scenarios must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
4. Request for PIT (targets) must be submitted through the unit’s chain of command to Range Control. The Special Range Request must be submitted ten (10) working days in advance from the first day of training.
5. Unit will provide written scheme of maneuver/scenario, safety plan, and operations risk assessment with each request.
6. The unit is responsible for becoming acquainted with training scenarios prior to training session.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. A GSRA Range Appendix; a map overlay indicating the range fan; a current road guard placements and gate closures map will be provided during the final coordination brief.
3. POVs are not authorized on range, tank trail or adjunct training areas. No designated parking area on range for POV parking.
4. Report all maintenance problems to a range inspector.
5. ROIC/RSO will conduct a range sweep to ensure all training areas are secured of all personnel and equipment. All firing will impact within the SR-10 surface danger zone/impact area.
6. The ROIC/RSO is responsible for ensuring all gates are secured and road guards are posted prior to going “HOT”. All road guards will have and maintain internal communication with the ROIC/RSO while training is being conducted. Due to size of the areas where encroachment could occur during live firing; road guards must be particularly vigilant for intruders circumventing their respective checkpoints. Periodic gate checks are required to ensure security and safety of the range.
7. ROIC/RSO will verify all weapons range safety cards and ensure all personnel are qualified with that weapon/weapon system prior commencing exercise.
8. Base of fire for 5.56/7.62MM requires 50 meters clearance; .50 caliber and above requires 100 meter clearance. High velocity rounds exceeding 7300 meters not authorized for the total Surface Danger Zone (Distance X) for SR-10. Targets will not be engaged closer than 25 meters.
9. Scarlet streamer will be flown at the entrance to the range.
10. Safety vehicle and corpsman must be present on the range prior to commencing training. Emergency vehicles will be staged at the tower. Extreme care must be taken when using pyro for emergency/safety purposes. Red signaling smoke must be placed in clear area or metal can and red star clusters must be fired over the center of the range area.
11. All non-participating or observing personnel will remain outside of the range fan.
12. All personnel must wear helmets, flak jackets and hearing protection while training is being conducted.
13. ROIC/RSO will ensure adequate number of safety personnel is assigned to control exercises. All safety personnel and will be equipped with appropriate communication and signaling devices while downrange.

14. Dry run maneuvers are not authorized off the range. Training will remain clear of all roadways. Training is restricted to the range only. Track vehicles are not authorized to conduct tank maneuvers except on SR-10 range. ROIC/RSO will ensure all personnel are familiar firing lanes, firing points, sectors of fire, limits of fire and advancement. Unit using a base of fire or support by fire must have clear, positive, and redundant signals for shift and cease-fire. All firing will impact within the SR-7/SR-6 surface danger zone/impact area.
15. Using unit is responsible for a detailed police call of the range, all facilities, dumpster area, and parking/staging areas when training is completed. The unit will ensure the removal of all dunnage from the range to include tactical wire, wood, and scrap metal.
16. Range must be inspected and cleared by a range inspector prior to departing range/training area.
17. ROIC/RSO will complete and submit a range report upon completion of training and turn-in of range.
18. All classes of lasers are authorized for this range. The using unit must have a laser safety officer to use lasers on this range. The laser safety officer must be certified by his command.

ROTARY WING AERIAL GUNNERY (SR-10 AIR):

1. SR-10 AIR is a multi-use ranges originally designed primarily for flat trajectory surface delivered fires. By virtue of its location, size and variety of targets, SR-10 AIR is particularly well suited for aerial weapons delivery training; however, care must be taken to ensure delivery profiles are adjusted to contain the effects of fires within the impact area boundaries (LLL and RLL) and avoid damage to target motion equipment. In general, all lines of fire must be directed along the long axis of the range and at angles such that the target’s protective berm is between the firing platform and the permanent target components. In other words, the shooter should only be able to see the sacrificial plywood or plastic portion of the target above the berm at weapons release. The intent of the procedures stipulated below is to provide flexibility to aircraft commanders in conducting training while maintaining a clear surface danger zone and limiting costly damage to range apparatus.

AIRSPACE COORDINATION:

1. All weapons delivery shall be conducted from within the battle position defined below. The aircraft firing and target fired upon shall be within the same firing lane. **ABSOLUTELY NO CROSSING LANE FIRING IS AUTHORIZED.**

BATTLE POSITION:

1. BP Hog (SR-10 AIR) 18STD65442703, 18STD65682954, 18STD66112936, 18STD65932699, surface to 500 ft AGL.

FIRING LANES:

1. For aerial delivery, SR-10 AIR is divided into east and west firing lanes defined by an imaginary line running through the range tower on a 008^0 Mag heading.

DELIVERY PROFILES:

1. When firing, aircraft shall comply with the following maximum altitude vs. range to target matrix:

Range to Target	Max Altitude
< 300 m	Not authorized
300-500m	100 ft AGL
500-1000m	200 ft AGL
>1000m	500 ft AGL

RUNNING FIRE:

1. Maximum pitch delivery angle for rockets is 0^0. Door guns may engage targets only within 10^0 of aircraft heading on run in and shall cease fire on pull off before the aircraft completes 90^0 of turn or exits the BP/firing lane. The following restrictive final headings shall be observed.

2. Restrictive final heading: $358\text{-}018^0$ Mag

FLEX GUNS:

1. Door guns or attack helicopter turret guns may be fired from a hover or takeoff/landing profile within the BPs with the following restrictions:

2. All fires or effects of fires will be contained within the left and right lateral limit signs.

3. Aircraft shall not pass directly over any targets on approach/departure nor hover within 100m of any target to avoid downwash damage to range equipment.

4. Targets within 300m of the aircraft shall not be engaged and minimum firing altitudes listed above shall be observed. No greater than 45 degree angle fire is authorized.

5. All fire shall be directed along the long axis of the impact area away from the tower.

6. Targets may only be engaged if their protective berm is between the shooter and the target.

7. Off axis turret gun (20/30mm) fire is not authorized.

RANGE SAFETY OFFICER:

1. For all live fire operations a qualified Range Safety Officer (RSO) shall be present on the range with a Base RSO card for the duration of the operation. The RSO shall position himself in the tower, shall request to “go-hot” as per Chapter 3, and will maintain telephonic communications with BLACKBURN at all times. The tower is equipped with a VHF/UHF capable radio for the purpose of communication between the RSO and the aircraft. The frequency for that radio is at the discretion of the using unit. **THE AIRCRAFT SHALL MAINTAIN COMMUNICATIONS WITH BLACKBURN ON 325.0 OR 38.60.**

2. The RSO responsibilities are listed in Chapter 2. Range specific responsibilities are:
   a. Schedule the range via RFMSS and per Chapter 3. The range requested is SR-10 AIR.
   b. Conduct a face-to-face brief with Range Control Scheduling, BLACKBURN, and Range Inspector no later than 24 hours preceding the live-fire.
   c. Coordination with the Range Inspector shall include at a minimum scheduled hot times, anticipated cold time, and time RSO is expected to arrive on the range. This will allow Range Inspectors to close required gates and set-up appropriate road barriers prior to the scheduled live-fire time. Range Inspectors will meet with the RSO at the range to confirm gates have been closed and barriers have been established.

d. Contact and coordinate the use of the range with the range operator no later than 24 hours preceding the live-fire. (Range Contractor: 449-0226)
e. Ensure all range requirements to include gate closures are completed prior to requesting to go hot with BLACKBURN.
f. Confirm the aircraft have completed a gate check and have conducted a “first pass cold” prior to allowing an aircraft to fire on the range.

AIRCRAFT PROCEDURES:

1. Aircraft scheduled to utilize SR-10 AIR **shall maintain communications with BLACKBURN on 325.0 or 38.60.**

2. Aircraft shall contact BLACKBURN at Point U and request SR10 (Air). BLACKBURN shall direct the aircraft to conduct a gate-check to insure all gates are secured and no personnel or vehicles are within the SR-10 AIR SDZ.

3. Upon completion of the gate check, the aircraft conducting the live-fire will contact the RSO and request a “first-pass cold”.

4. After the “first-past cold”, the aircraft shall coordinate with the RSO to insure the range is prepared to commence live-fire.

5. When conducting door gunnery, Aircraft Commanders shall insure weapons are in Condition 4 prior to pull off or exiting the range.

6. Upon completion of training, the aircraft will check off the range with the RSO and contact BLACKBURN on 325.0 or 38.60 requesting Point U.

GATE CHECK REQUIREMENTS:

1. Prior to firing, using aircraft shall ensure that a range sweep is conducted and the gates listed below have been visually checked closed.

GATES TO BE SECURED FOR SR-10 AIR GUNNERY

GATE#	GRID#	EXTERIOR GATE LOCATIONS / REFERENCE POINTS
#3	18S TD 726355	GREY POINT ROAD&US17(SR-7 Entrance/Secure if SR-7 is "COLD")
#4	18S TD 727359	GREY POINT ROAD & US17 (NORTHERN PERIMETER ROAD)
#5	18S TD 731375	HIGH HILL ROAD (US17) & EAST PERIMETER ROAD
#6	18S TD 723383	HIGH HILL ROAD & SHELL ROAD
#6A	18S TD 691410	HIGH HILL ROAD & DAWSON CABIN ROAD (COUNTY TRASH PT)
#7	18S TD 688410	DAWSON CABIN ROAD & NORTH TOM'S ROAD
#8	18S TD 641405	HAWS RUN ROAD & NORTH RAWLS ROAD
#8A	18S TD 631392	PADGETT ROAD & NORTHWEST EXIT NORTHERN PERIMETER RD
#8B	18S TD 629388	PADGETT ROAD & NORTHWEST PERIMETER ROAD
#9	18S TD 614361	PADGETT ROAD & NORTHWEST PERIMETER ROAD
#10	18S TD 614347	NC SR50 & HLZ FLAMINGO ROAD
#11	18S TD 622340	NC SR50 & SOUTH RAWLS ROAD
#12	18S TD 626336	NC SR50 & HWY 50 & CEDAR HURST ROAD (CC ROAD)
#12A	18S TD 628331	NC SR50 & WEST PERIMETER ROAD
#13	18S TD 635314	NC SR50 & DAVIS TRAM ROAD
#14	18S TD 626293	NC SR50 & DON'S TRAIL
#14A	18S TD 626287	NC SR50 & WEST PERIMETER ROAD
#15	18S TD 626287	NC SR50 & DEAD DOE TRAIL
#16	18S TD 630276	NC SR50 & PRINCE TRAIL
#16A	18S TD 631272	NC SR50 & WEST PERIMETER ROAD
#16B	18S TD 631271	NC SR50
#17	18S TD 631272	NC SR50 & SOUTHWEST PERIMETER ROAD
#18	18S TD 631256	NC SR50 & EDEN'S ROAD (WELL'S ROAD)
#19	18S TD 639223	NC SR50 & SHEPARD ROAD (TLZ PHOENIX)
#20	18S TD 650205	NC SR50 HWY 50 & CAMP DAVIS SOUTH ROAD

#21	18S TD 653205	CAMP DAVIS STREET & JONES STREET (OFF HOLLY RIDGE)
#24	18S TD 688223	US17 & SOUTHEAST PERIMETER ROAD (YELLOW GATE)
#25	18S TD 696231	US17 & SOUTHEAST PERIMETER ROAD (TRANSFER SUBSTATION)
#26	18S TD 709264	US17 & JOE'S TRAIL (ACROSS FROM PLEASURE PALACE)
#26A	18S TD 716280	US17 & SOUTHEAST PERIMETER ROAD (SR-10/SR-11 ENTRANCE)
#29A	18S TD 724305	US17 & NORTH BAY ROAD (OLD WILM ROAD & VERONA LOOP)
H	18S TD 637314	HWY 50 & M ROAD
I	18S TD 640308	HWY 50 & DAVIS TRAM ROAD (YELLOW GATE)
J	18S TD 640305	HWY 50 & OFF DAVIS TRAM ROAD (YELLOW GATE)
K	18S TD 643294	HWY 50 & DON'S TRAIL (OFF PHILLIPS TRAIL)
L	18S TD 668308	OFF CEDAR HURST ROAD & PRINCE TRAIL (SOUTH POCOSIN RD)
M-3	18S TD 666274	ROAD INTERSECTION-PRINCE TRAIL & SOUTH BAY ROAD
M-2	18S TD 657268	ROAD INTERSECTION-PRINCE TRAIL & JOE'S TRAIL (SQ AREA)
M-1	18S TD 657266	ROAD INTERSECTION-PRINCE TRAIL & JOE'S TRAIL (SQ AREA)
N	18S TD 697273	SOUTH BAY ROAD & WATERSHED ROAD
P	18S TD 715326	MOORE'S RIDGE ROAD (CC ROAD-EAST) & SR-6 RANGE

RANGE NAME:	**SR-11**
DESCRIPTION:	Baffled Pistol Range
PRIMARY RANGE USE:	Pistol Qualification/Requalification Range
ALTERNATE RANGE USES:	1. Pistol familiarization firing range
STATUS:	Active
LOCATION:	Grid Coordinate: 655265
PRIMARY DIRECTION OF FIRE:	258 degrees
WEAPONS ACCOMMODATED:	All pistols(.45 Caliber or less)
AMMUNITION AUTHORIZED:	All pistol ammunition *Note: No armor piercing type ammunition
TARGETS/SIMULATORS/DEVICES:	Pistol targets (PITs): 14
FACILITIES(Number of each):	Head Facilities: 2 (Male/Female: 2 Range Tables: 3 Parking Lot: 1 Contractor Target Storage Building: 1 Trash Recovery Units: 4 (Dumpsters) POV Parking Area: None
UTILITIES AVAILABLE:	Electricity: Yes Lights: No Water System: Yes
INSTALLED COMMUNICATIONS:	Telephone
AREA SUITABILITY	Platoon

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Firing Lines are located at 7, 15, and 25 yards.
2. Recreational Shooting of rifles and shotguns not authorized. Handguns will not exceed .45 caliber.
3. Maneuvers are not authorized.
4. Night use is authorized.
5. Class 3B and 4 LASERs not authorized.
6. Hearing protection is required.

OTHER CONSIDERATIONS:

1. A range contractor will set up the PITS for the range. The using unit is required to provide a qualified range operator for the remote control unit and must be familiar with target operations. The unit will contact the contractor if troubleshooting of targets is required. Upon completion of training and prior to departing range, the unit is required to contact the contractor for retrieval of all emplaced targets.

SPECIAL INSTRUCTIONS:

1. Be familiar with Chapter 5 of this manual.
2. Bivouacking not authorized on range, tank trails or adjunct training areas. No designated area on range for POV parking.
3. POVs are not authorized on range. All vehicles must use the range designated parking area.
4. Report all maintenance problems to a range inspector.
5. Scarlet streamers will be flown at the entrance of the range.
6. Safety vehicle and corpsman must be present on the range prior to commencing training.
7. Range guard will be posted near the firing line.
8. Using unit is responsible for a detailed police call of the range, bullet trap area, all facilities, dumpster area, and parking/staging areas when training is completed.
9. Range must be inspected and cleared by a range inspector prior to departing range/training area.
10. ROIC/RSO will complete and submit a range report upon completion or training and turn-in of range.

APPENDIX B

IMPACT AREAS

A. GENERAL.

1. There are three main impact areas aboard Camp Lejeune (BT-3/N-1, G-10, and K-2). These impact areas are the only (G-10/K-2) designated places where dud-producing ordnance can be fired. BT-3/N-1 is restricted to non-dud producing ordnance. No personnel will enter a designated impact area aboard Camp Lejeune without approval from the RCO and an EOD support team. For the purpose of constructing a SDZ, all buffer, and ricochet areas, will be contained within the impact area. Impact area and range boundaries are marked with red warning signs stating (Danger–impact area keep out). BLACKBURN controls all firing from ranges into all designated impact areas.

B. UNSERVICEABLE AMMUNITION AND EXPLOSIVES DISPOSAL TRAINING AREAS.

1. The G-1OA and K-2A unserviceable ammunition and explosives disposal training areas, within the G-10 and K-2 Impact Areas, are authorized for use to support established training in the disposal of unserviceable ammunition and explosives. Chapter 3 of this Manual provides scheduling procedures.

IMPACT AREAS

IMPACT AREAS	LOCATION:	**PRIMARY USE OR DESCRIPTION**	**PAGE**
BT-3/N-1	South-East Corner of Camp Lejeune, MCB	Live Fire Riverine Familiarization	B-2
G-10	Center of Camp Lejeune MCB East of New River	Familiarization Range	B-7
K-2	Center of Camp Lejeune MCB West of New River	Familiarization Range	B-19

IMPACT AREA:	**BT-3/N-1**
DESCRIPTION:	Bomb and Target Range (AKA Brown's Island)
PRIMARY RANGE USE:	Live Fire Riverine Familiarization Range
ALTERNATE RANGE USES:	1. Air to Ground Weapon 2. Field Artillery Direct Fire Range 3. Helicopter Gunnery Range 4. Machinegun Familiarization Range
STATUS:	Active
LOCATION:	South-East Corner of Camp Lejeune MCB
PRIMARY DIRECTION OF FIRE:	168 degrees
WEAPONS ACCOMODATED:	All Pistol All Shotguns All Rifles All Machineguns LAR Chain Gun Helicopter Weapons Aircraft Bombs
AMMUNITION AUTHORIZED:	All Pistol All Shotguns All Rifles All Machineguns 20MM (T) 25MM (TP-T and APDS-T) 30MM (TP-T) 40MM (TP) 2.75 in. Rocket (TP) MK76 Practice Bomb MK80 Series Bombs (Inert) M781 Practice Round or M576
TARGETS/SIMULATORS/DEVICES:	Hard Targets
FACILITIES(Number of each):	None

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: None

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS/CONFLICTS:

1. Projectiles will not be fired to impact within 200 meters of the AIWW.

2. HE bombs are not authorized.

3. Observation Posts, Bear Tower and Onslow North Tower serve BT-3/N-1.

4. No class 3B and 4 LASERs are authorized.

5. Safety Restrictions: AIWW must be closed during firing.

6. Bear and Onslow North Tower must be manned prior to firing.

7. An aerial sweep of this area must include a sweep for people and marine mammals in the AIWW. It must be conducted before live firing.

8. Maneuver Area Restrictions: No maneuvers authorized in this impact area due to the fact this is an old duded range. Units that require target emplacement to conduct training/live-fire on this range, must request EOD support.

9. Night use is authorized

OTHER CONSIDERATIONS: None

SPECIAL INSTRUCTIONS:

1. Firing into the BT-3/N-1 Impact Area must be scheduled through BRCO 21 days in advance of the first day of firing to allow for publication of a Notice to Mariners. Requests received after 21 days will not be approved.

2. Be familiar with the contents of Chapter 5 of this Manual and this Appendix.

3. Display warning signals from the Onslow North and Bear range tower flagpoles before firing until the range is cleared cold. Scarlet streamers will be flown during daylight and flashing red lights will be used from sunset to sunrise.

4. Position range guards with radio and binoculars at least one half hour prior to the aerial search to serve as air/water sentries in Bear Creek and Onslow Beach North Tower. Guards are to promptly notify the ROIC or FAC before a vessel or aircraft not engaged in the exercise penetrates the surface danger zone. Sectors of observation are: Bear Creek Tower 58 degrees to 223 degrees and Onslow Beach North Tower 35 degrees to 235 degrees.

5. Firing will cease if streamers or flashing light are lowered or extinguished for any reason.

6. Projectiles will not be fired to impact within 200 yards of the AIWW.

7. The using unit will ensure that a visual search has been made of the target complex, AIWW, marshes, dunes and that the guard boats are in position half an hour prior to firing to ensure that the area is safe. The FAC may use aircraft as appropriate in conducting the aerial search immediately prior to aircraft firing exercises.

8. The RSO is required to have communications with tower guards, the ROIC, guard boats and the RCDO (BLACKBURN).

9. Air Operations.

a. Fixed wing aircraft must use IPBP’s and run in headings as contained in Chapter 8 of this Manual. Authorized ammunition is MK76 and MK80 series inert bombs and 2.75-inch rockets, 20MM, 25MM, 30MM delivered at 20 degrees or greater dive angle.

b. Rotary wing aircraft headings are 170 to 190 degrees magnetic. Unless specifically authorized by the ROIC, the ordnance release point will be south of the AIWW. Authorized ammunition is 2.75 rockets, 7.62MM, .50 caliber aerial gunnery, 20MM, 25MM, and 30MM.

c. A line 800 yards from the seaward shore of the AIWW is designated as a permanent bomb line, beyond which aircraft ordnance may not be impacted.

d. Close air support operations will be under the positive control of a FAC or the ASRT. The FAC/ASRT must inform aircraft performing missions of gun positions, ranges, and training areas adjacent to BT-3 that are occupied.

e. During night close air support operations, when weather conditions are less than 2000 feet ceiling and five miles visibility, or when range guards visually observe waterborne traffic in the AIWW or seaward for 1000 yards, aircraft firing or bombing exercises will not be permitted without continuous lighting by flares or other measures, approved by the BRCO to ensure no vessels enter the surface danger zone.

10. Forward Air Controller (FAC).

a. Any air operation involving aircraft live firing or bombing close air support or combined air/ground exercises requires positive control of aircraft by a FAC. The term FAC is used synonymously with the ROIC of firing regarding these safety regulations.

b. FAC’s are required to report to the RCDO (BLACKBURN) for the range check-out briefing.

c. The FAC will notify the RCDO (BLACKBURN) immediately after the last aircraft has cleared the area so the temporary fire suspension may be lifted for ground units, if in effect.

d. The FAC (ground), if employed, will be positioned in Bear tower.

11. Artillery. An RSO and Forward Observer (FO) will be in Bear tower during live-fire. Unexploded rounds (duds) landing in the AIWW will immediately be reported to the RCDO (BLACKBURN) to include grid coordinates. A CEASE FIRE will be called until resolution of the danger to boating caused by the dud.

12. The BT-3/N-1 Impact Area accommodates firing from G-5 and G-7 ranges as well as the Browns Island target area. The grid coordinates delineated below are only for the land mass danger areas. The range extends approximately 11,000 meters seaward from Browns Island target area as depicted on the Combat Training Chart - Approaches to New River.

SDA: Secondary Danger Area (Buffer Zone); defined on CLNC Special as the yellow/green area. Manual artillery safety computations are performed from this area.

PIA: Primary Impact Area; defined on CLNC Special as the red area, no targets outside this area will be engaged with any weapon system. No access to this area is authorized without EOD escort.

155 PDA: Primary Danger Area; not currently defined on the CLNC Special. Targets outside this area will not be engaged by 155mm howitzers. Artillery safety computations with the ARSS will be computed from this area.

SDA	**PIA**	**155 PDA**
18S TD 93402959	18S TD 93382886	18S TD 94552919
18S TD 94113031	18S TD 94352961	18S TD 94943093
18S TD 94323126	18S TD 94503100	18S TD 96093211
18S TD 95333231	18S TD 95753211	18S TD 97023364
18S TD 95443421	18S TD 95733445	18S TD 98703168
18S TD 95793452	18S TD 95793452	
18S TD 96253466	18S TD 96003457	
18S TD 97393436	18S TD 97343399	
18S TD 97693466	18S TD 97773399	
18S TD 99003251	18S TD 99003251	
18S UD 02003150	18S UD 02003150	
18S UD 06502400	18S UD 06502400	
18S TD 93001800	18S TD 93001800	

IMPACT AREA: **G-10**

DESCRIPTION: Bomb and Target Range

PRIMARY RANGE USE: Familiarization Range

ALTERNATE RANGE USES:

1. Air to Ground Weapons
2. Helicopter Gunnery Range
3. Mortar Range
4. Field Artillery Indirect Fire Range
5. Infantry Weapons Range
6. Guided Missile Range
7. Naval Gunfire Range

STATUS: Active

LOCATION: Center of Camp Lejeune MCB East of New River

PRIMARY DIRECTION OF FIRE:

WEAPONS ACCOMODATED:

All pistols
All Shotguns
All Rifles
All Machineguns
M242 Chain Gun
60/81MM Mortar
155MM Field Artillery
Aircraft Weapons
Javelin M98A1
SMAW
AT-4
TOW
Helicopter Weapon Systems
Naval Gunfire

AMMUNITION AUTHORIZED:

All Pistol DODICS
All Shotguns DODICS
All Rifles DODICS
All Machineguns DODICS
60/81 MM Mortars (All DODICS)
20MM (T)
25MM (TP-T and APDS-T)
30MM (TP-T)
40MM (TP-T)

2.75 in. Rocket
155MM
MK76 Practice Bomb
BDU 33
BDU 45
MK80 Series Bombs (Inert)
M781 Practice Round or M576
5.54 Cal. HE/ILLUM

TARGETS/SIMULATORS/DEVICES: Hard Targets: 55

FACILITIES(Number of each): None

UTILITIES AVAILABLE: Electricity: No
Lights: No
Water System: No

INSTALLED COMMUNICATIONS: None

AREA SUITABILITY Battalion

RANGE USE RESTRICTIONS/COMMENTS:

1. HE filled bombs are not authorized.

2. OP’s 2,3,4,5 serve G-10.

3. Maneuvers are not authorized.

4. Night Use is authorized.

5. LASERs are authorized in accordance with Chapter 9 of this Manual and the LASER range Certification (provided by Range Control upon checkout of LASER ranges)

6. Red-Cockaded Woodpecker Habitat; no vehicle traffic or training in specifically designated areas.

OTHER CONSIDERATIONS:

As organic tools for EOD Operations, the following ammunition is authorized: Special .50 caliber electric impulse cartridges (M174) or shotgun shell. EOD is also authorized to use the following tools: Rocket Wrench, .50 caliber dearmers, JROD, Robot Disrupters.

SPECIAL INSTRUCTIONS:

1. Fixed Wing Aircraft.

a. Fixed Wing Aircraft must use IPs and run-in headings as contained in Chapter 8 of ref (a).

b. Authorized ammunition is MK76, BDU33, BDU45 and MK80 series inert bombs, and 2.75 inch rockets, 20mm, 25mm, 30mm delivered at 20 degrees or greater dive angle.

c. The minimum altitude from the initial point (IP) to the Pop-up-point (PUP) is 1000 feet AGL outside the base boundary and 700 feet AGL within the boundary.

2. Rotary Wing Operations Battle Positions (BP).

a. General.

(1) Authorized ammunition: 20mm, 7.62mm, 2.75-inch rockets and BGM-71 missiles.

(2) When firing 7.62mm or 20mm ammunition from Newt, the “GD” and “GF” training areas must be closed. Road guard positions are 18S TD 902323,18S TD 909318,18S TD 18S921317, 18S TD 938329.

(3) BGM-71 TOW missile shall be fired from BP Wolf only. When firing the missile from BP Wolf, Lyman road shall be closed.

(4) Ammunition may be delivered from within the BP’s using Hover Holds, Running Fire, or Diving Fire.

(5) All fires shall be delivered from inside the BP’s.

(6) Aircraft/launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery.

(7) Arming procedures. The master arm shall not be “armed” until sights are on the target and “cleared hot” is given by the Terminal Controller. At no time shall the aircraft be armed if aircraft/ launcher attitude (delivery angle) is greater than 0 degrees pitch relative to the horizon. The master arm shall be secured at the cease-fire line prior to the pull-off. When firing from Ox, the aircraft/launcher attitude

(delivery angle) shall be at least negative (-) 20 degrees pitch relative to the horizon.

(8) When fix wing aircraft are operating within the restricted Airspace BP’s altitude is to 500 ft AGL.

b. BP Wolf. ACA dimensions: 0.5km width, 1 km length, surface to 500 ft AGL when fix wing aircraft are on station. WGS-84 18s TD 894347,18S TD 907352,18S TD 909347, 18S TD 896342.

(1) Final Attack Cone (inert ordnance): 080-090 degrees magnetic from OP-5.

(2) Final Attack Heading (high explosive ordnance): 085 degrees magnetic from OP-5.

(3) Authorized ammunition: 20mm, 7.62mm, 2.75-inch rockets and BGM-71 missiles. Ammunition may be delivered from within the using hover holds, running fire or diving fire. All fires shall be delivered from inside the.

(4) Hover Hold. Maximum hover altitude is 300 feet AGL. Aircraft must be forward of the G-3 berm. The cease-fire line for all ordnance is defined by the Eastern Boundary (18S TD 907352 to 18S TD 909347). Aircraft/ launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired from 080-090 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Fixed Forward or Helmet Sight System (HSS) 20mm guns from hover hold are not authorized.

(5) Running/Diving Fire. The start Fire line is the G-3 berm. The cease-fire line for all ordnance is defined by the Eastern boundary (18S TD 907352 to 18S TD 909347). Aircraft/launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. TOW running/diving fire is not authorized. 7.62mm and 20mm guns may be fired fixed forward or from 080-090 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Helmet Sight System (HSS) 20mm guns are not authorized.

(6) Coordinating Instructions. Clearance to depart the ACA is required from the terminal controller/FAC. Units may not occupy MP-7, G-3 or MP-5/GP-6 when Wolf is active. Aircraft may not occupy BP’s Eel or Sidewinder when Wolf is active. LZ Jaybird shall be closed to rotary wing traffic when Wolf/HA

Wendy are active. Maximum altitude shall be 500 feet AGL when fixed wing aircraft are on station.

c. BP Newt. ACA dimensions: 0.5km width, 1.7km length, surface to 500 ft AGL when fix wing aircraft are on station; WGS-84 18s TD 901374,18S TD 902375,18S TD 904376, 18S TD 906375,18S TD 913364,18S TD 907364:

(1) Final Attack Cone (inert ordnance): 150-165 degrees magnetic from G-8/G-9.

(2) Final Attack Heading (high explosive ordnance) 160 degrees magnetic from G-8/G-9.

(3) Authorized ammunitions 20mm, 7.62mm, and 2.75-inch rockets.

(4) The “GD” and “GF” training areas shall be closed in order to fire 7.62mm or 20mm ammunition from Newt.

(5) To fire 20mm or 7.62 from Newt, road guards shall be placed at 18S TD 902323,18S TD 909318,18S TD 921317,18S TD 938329. Ammunition may be delivered from within the using hover holds, running fire or diving fire.

(6) Hover hold. Maximum hover altitude is 300 feet AGL. Aircraft must be forward of the G-8/9 berms. The cease-fire line for 2.75-inch rockets, 7.62mm and 20mm guns is defined by the East/West dirt road (18S TD 907364 to 18S TD 913364). Aircraft/Launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired from 150-165 degrees magnetic using gunner-controlled off-axis Guns or crew served weapons. Fixed forward or Helmet Sight System (HSS) 20mm guns from hover hold are not authorized.

(7) Running/Diving Fire. The start fire line is the G8/G9 berm. The cease-fire line for 2.75-inch rockets, 7.62mm and 20mm guns is defined by the east/west dirt road (TD907364 to TD913364). Aircraft/launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired fixed forward or from 150-165 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Helmet Sight System (HSS) 20mm guns are not authorized.

(8) Coordinating Instructions. Clearance to depart the ACA is required from the terminal controller/FAC. Units may not occupy G-8 or G-9 when Newt is active. MP-1 shall not fire when Newt/HA Nancy are active. LZ Penguin shall be closed to rotary wing traffic when Newt/HA Nancy are active. Maximum altitude shall be 500 feet AGL when fixed wing aircraft are on station. The “GD” and “GF” training areas must be closed in order to fire 7.62mm or 20mm ammunition from Newt.

d. BP Eel. ACA dimensions: 0.5km width, 1.3km length, surface to 500 ft AGL when fix wing aircraft are on station. 18S TD 951370, 18S TD 951366,18S TD 940362,18S TD 937366,18S TD 947370.

(1) Final Attack Cone (inert ordnance): 245-260 degrees magnetic from MP-5.

(2) Final Attack Heading (high explosive ordnance): 250 degrees magnetic from MP-5.

(3) Authorized ammunition is 20mm, 7.62mm, and 2.75-inch rockets.

(4) Ammunition may be delivered from within the using Hover Holds, Running Fire or Diving Fire.

(5) Hover Hold. Maximum hover altitude is 300 feet AGL. Aircraft must be forward of MP-5. The cease fire Line for 2.75 inch rockets, 7.62mm and 20mm gun is defined by the Pond at 18S TD 940362 then NW to 18S TD 937366. Aircraft/launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired from 245-260 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Fixed forward or Helmet Sight System (HSS) 20mm guns from hover hold are not authorized.

(6) Running/Diving Fire. The start fire line is defined by MP-5 and the cease fire line for 2.75 inch Rockets, 7.62mm and 20mm gun is defined by the pond at TD940362 then NW to TD937366. Aircraft/launcher attitude shall not exceed 0 Degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired fixed forward or from 245-260 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Helmet Sight System (HSS) 20mm guns is not authorized.

(7) Coordinating Instructions. Clearance to depart the ACA is required from the terminal controller/FAC. Units may not occupy MP-5/GP-6 or G-3 when Eel is active. GP-7 shall not fire when Eel/HA Emily are active. Aircraft may not occupy Wolf when Eel is active. LZ Crane shall be closed to rotary wing traffic when Eel/HA Emily are active. Maximum altitude shall be 500 feet AGL when fixed wing aircraft are on station.

e. BP Sidewinder. ACA dimensions: 0.5km width, 1 km length, surface to 500 ft AGL when fix wing aircraft are on station. Wgs-84 18s TD 940353,18S TD 950353,18S TD 950347,18S TD 940347

(1) Final Attack Cone (inert ordnance): 265-285 degrees magnetic.

(2) Final Attack Cone (high explosive ordnance): 275-280 degrees magnetic.

(3) Authorized ammunition is 20mm, 7.62mm, and 2.75-inch rockets. Ammunition may be delivered from within the using hover holds, running fire or diving fire.

(4) Hover Hold. Maximum hover Altitude is 300 feet AGL. The cease-fire line for 2.75-inch Rockets, 7.62mm and 20mm gun is defined by the dirt road (Mossy Pond Rd.) 18S TD 940353 to 18S TD 940347. Aircraft/launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired from 265-285 degrees magnetic using gunner-controlled off-axis guns or Crew served weapons. Fixed Forward or Helmet Sight System (HSS) 20mm guns from hover hold are not authorized.

(5) Running/Diving Fire. The 95-grid line (500m west of Hwy 172) defines the start fire line. Mossy Pond Rd, TD940353 to TD940347, defines the cease-fire line for 2.75-inch rockets, 7.62mm and 20mm gun. Aircraft/ launcher attitude shall not exceed 0 degrees pitch relative to the horizon for 2.75-inch rocket delivery. 7.62mm and 20mm guns may be fired Fixed Forward or from 265-285 degrees magnetic using gunner-controlled off-axis guns or crew served weapons. Helmet Sight System (HSS) 20mm guns are not authorized.

(6) Coordinating Instructions. Clearance to depart the ACA is required from the terminal controller/FAC. Units may not occupy MP-7 or G-3 when Sidewinder is active. MP-6/GP-8, GP-7, and GP-9 shall not fire when Sidewinder/HA Sandy are active.

Aircraft may not occupy Wolf when Sidewinder is active. LZ Gull shall be closed to rotary wing traffic when Sidewinder/HA Sandy are active. Maximum altitude shall be 500 feet AGL when fixed wing aircraft are on station.

f. BP Ox. Circular overhead pattern, ACA: 500 ft AGL to 2000 ft MSL; 4km diameter.

(1) Final Attack Cones (inert and high explosive): 040-120 and 180-300 degrees magnetic. Authorized ammunition is 20mm, 7.62mm, 2.75-inch rockets. Ammunition shall be delivered within the G-10 impact area from an overhead pattern using diving fire only. Aircraft shall not over fly the field ammo storage area (18s TD 885355).

(2) Diving Fire. 2.75-inch rocket, 7.62mm and 20mm delivery shall be in a negative (-) 20 degree (or greater) dive relative to the horizon. 7.62mm and 20mm guns may be fired Fixed Forward only.

(3) Arming Procedures. Master arm shall not be “armed” until sights are on the target and a “cleared hot” is given by the terminal controller. At no time shall the aircraft be armed until aircraft/launcher attitude (delivery angle) is at least negative (-) 20 degrees pitch relative to the horizon. Master arm shall be secured at the cease-fire line prior to the pull-off.

(4) Coordinating Instructions. Clearance to depart the ACA is required from the terminal controller/FAC. Concurrent fixed wing operations into G-10 are prohibited while Ox is active.

2. Rotary Wing Holding Areas (HA).

a. HA Wendy. 2km x 2 km, WGS-84 18s TD 860350; surface to 500 ft AGL when fix wing aircraft are on station.

(1) Holding Area for Wolf. French creek shall be the attack route connecting Holding Area Wendy to Wolf (OP-5). Marines’ Road, Weil Point Road shall be the egress route connecting Wolf to holding area Wendy.

(2) Ingress altitude along the attack route shall be surface to 300 feet AGL (low altitude tactics). Egress altitude shall be 500 feet AGL. When fix wing aircraft are not on

station, high altitude tactics on ingress are authorized 700 feet AGL and above.

(3) Aircraft shall not over fly the field ammo storage area (18S TD 885355).

(4) LZ Jaybird shall be closed to rotary wing traffic.

b. HA Nancy. Holding area: WGS-84 18s TD900370, 18S TD 882370,18S TD880374,18S TD880390,18S TD883390,18S TD900384; surface to 500 feet AGL when fix wing aircraft are on station.

(1) Holding area for Newt.

(2) LZ Penguin shall serve as the attack/egress route connecting holding area Nancy to Newt (G-8/G-9).

(3) Ingress altitude along the attack route shall be surface to 300 feet AGL (low altitude tactics). Egress altitude shall be 500 feet AGL. When fix wing aircraft are not on station high altitude tactics on ingress are authorized 700 feet AGL and above.

(4) LZ Penguin shall be closed to (RW) rotary wing traffic.

c. HA Emily. “GE” training area including LZ Crane; surface to 500 feet AGL when fix wing aircraft are on station.

(1) Holding area for Eel.

(2) The attack/egress route connecting Holding Area Emily to Eel shall run from the Lyman Road/Hwy 172 intersection (18S TD 956369) Direct to MP-5.

(3) Ingress altitude along the attack route shall be surface to 300 feet AGL (low altitude tactics). Egress altitude shall be 500 Feet AGL. When fix wing aircraft are not on station high altitude tactics on ingress are authorized 700 feet AGL and above.

(4) LZ Crane shall be closed to rotary wing traffic.

d. HA Sandy. “GI” training area including LZ Gull; surface to 500 feet AGL when fix wing aircraft are on station.

(1) Holding area for Sidewinder.

(2) The attack/egress route connecting holding Area Sandy to Sidewinder shall run from the northwest corner of the “GI” Training Area (18S TD 954350) along the 35 gridline to Sidewinder.

(3) Ingress altitude along the attack route shall be surface to 500 feet AGL (low altitude tactics). Egress altitude shall be 500 Feet AGL. When fix wing aircraft are not on station, high altitude tactics on ingress are authorized 700 feet AGL and above.

(4) LZ Gull shall be closed to rotary wing traffic.

3. Rotary Wing Routing/Deconfliction. The G-10 impact area is surrounded by Sneads Ferry Road to the west, Lyman Road to the North, and Hwy 172 to the east and south. Whenever transiting between the G-10 holding areas and battle positions, rotary wing aircraft operating at G-10 shall over fly this road network (ACA surface to 500 feet AGL). Clockwise traffic shall be at 300 feet AGL. Counter-clockwise traffic shall be 500 feet AGL.

a. Aircraft shall not over fly the field ammo storage area (18S TD 885355) when transiting along Sneads Ferry road.

b. Aircraft shall coordinate their transit along the G-10 road Network with the FAC to ensure deconfliction with other aircraft Operating at G-10.

4. Forward Air Controller (FAC)

a. Any air operation involving aircraft live firing, Close Air Support or Combined Arms Exercises requires positive control of aircraft by a terminal controller/FAC. The term FAC is used synonymously with the ROIC of firing regarding these safety regulations.

b. The FAC must be familiar with all fixed wing and rotary wing control measures, ACA’s, BP’s, attack/egress routes and routing procedures serving the G-10 impact area. The FAC is responsible for the deconfliction of all rotary wing and fixed wing traffic operating under his control.

c. The FAC must inform aircraft performing missions of the location of each gun position firing into the G-10 impact area and which of the adjacent ranges and training areas around G-10

are occupied. FO'S for artillery/mortar units must co-locate with the FAC when aircraft are using G-10.

d. FACs is required to report to the RCDO (BLACKBURN) for the Range Face-to-Face brief.

e. The FAC will notify the RCDO(BLACKBURN)immediately after the last aircraft clears the area so the temporary fire suspension may be lifted for ground units, if in effect.

SDA: Secondary Danger Area (Buffer Zone); defined on CLNC Special as the yellow/green area. Manual artillery safety computations are performed from this area.

PIA: Primary Impact Area; defined on CLNC Special as the red area, no targets outside this area will be engaged with any weapon system. No access to this area is authorized without EOD escort.

155PDA: Primary Danger Area; not currently defined on the CLNC Special. Targets outside this are will not be engaged by 155mm howitzers. Artillery safety computations with the ARSS will be computed from this area.

SDA	**PIA**	**155 PDA**
18S TD 89083689	18S TD 89703670	18S TD 89923654
18S TD 89453726	18S TD 90093742	18S TD 92013633
18S TD 89993727	18S TD 90453756	18S TD 94393633
18S TD 90093742	18S TD 90813747	18S TD 94353462
18S TD 90453756	18S TD 91153700	18S TD 93533448
18S TD 90813747	18S TD 91883650	18S TD 90803360
18S TD 91103711	18S TD 94543648	18S TD 90403527
18S TD 92093701	18S TD 94503450	
18S TD 95083701	18S TD 93443432	
18S TD 95033406	18S TD 90723344	
18S TD 93703384	18S TD 90553411	
18S TD 90463277	18S TD 89893439	

18S TD 90233301	18S TD 89813488	
18S TD 89773501	18S TD 90153548	

IMPACT AREA:	**K-2**
DESCRIPTION:	Bomb and Target Range
PRIMARY RANGE USE:	Familiarization Range
ALTERNATE RANGE USES:	1. Infantry Weapons Range 2. Mortar Range
STATUS:	Active
LOCATION:	Center of Camp Lejeune MCB West of New River
PRIMARY DIRECTION OF FIRE:	
WEAPONS ACCOMODATED:	All pistols All Shotguns All Rifles M249 SAW All Machineguns (except .50 cal) 60/81MM Mortar Aircraft Weapons SMAW AT-4
AMMUNITION AUTHORIZED:	All Pistol DODICS All Shotguns DODICS All Rifles DODICS All Machineguns DODICS (except .50 cal DODICS) 60/81 MM Mortars (All DODICS) 20MM (T) 25MM (TP-T and APDS-T) 40MM (TP-T) 2.75 in. Rocket MK76 Practice Bomb MK80 Series Bombs (Inert) M781 Practice Round or M576
TARGETS/SIMULATORS/DEVICES:	Hard Targets: 45
FACILITIES(Number of each):	None
UTILITIES AVAILABLE:	Electricity: No Lights: No

Water System: No

INSTALLED COMMUNICATIONS: Telephones located at ranges

AREA SUITABILITY Company

RANGE USE RESTRICTIONS/COMMENTS:

1. OP-7 serves the K-2.

2. Maneuvers are not authorized.

3. Night Use is authorized.

4. LASERs are authorized in accordance with Chapter 9 of this Manual and the LASER range Certification (provided by Range Control upon checkout of LASER ranges).

5. Red-cockaded woodpecker habitat; no vehicle traffic or training in specifically designated areas. This range closes portions of New River when firing artillery.

6. Field artillery is authorized for the K-2 on a case-by-case basis. Arrangements must be made with Range Control ten (10) working days prior to the live fire event.

7. As organic tools for EOD Operations, the following ammunition is authorized: Special .50 caliber electric impulse cartridges (M174) or shotgun shell. EOD is also authorized to use the following tools: Rocket Wrench, .50 caliber dearmers, JROD, Robot Disrupters.

SPECIAL INSTRUCTIONS:

1. General. Be familiar with the contents of Chapter 5 of this Manual and this Appendix.

2. Air Operations.

a. Fixed wing aircraft must use IPBP’s and run-in headings as contained in Chapter 8 of this Manual. Authorized ammunition is MK76 and MK80 series inert bombs.

b. Authorized ammunition for rotary wing aircraft is 7.62MM.

3. Forward Air Controller (FAC).

a. Any air operation involving aircraft live firing or bombing close air support or combined air/ground exercises requires positive control of aircraft by a FAC. The term FAC is used synonymously with the ROIC of firing regarding these safety regulations.

b. FAC’s are required to report to the RCDO(BLACKBURN) for the range check-out briefing.

c. The FAC will notify the RCDO (BLACKBURN) immediately after the last aircraft has cleared the area so the temporary fire suspension may be lifted for ground units, if in effect.

d. The FAC must inform aircraft performing missions of the location of each gun position firing into the K-2 Impact Area and which of the adjacent ranges and training areas around K-2 are occupied. FOBP’s for artillery/mortar units must co-locate with the FAC when aircraft are using the range.

4. The Secondary Danger Area (SDA), for the K-2 is from 18S TD 77403354 to 18S TD 78193520 to 18S TD 78963585 to 18S TD 81743587 to 18S TD 82773513 to 18S TD 82453330 to 18S TD 80183175 and back to 18S TD 77403354.

5. The Impact Area (Primary Danger Zone) for 155MM artillery is defined as that area into which no one is authorized without EOD escort. The PDA is delineated as follows:

From: 18S TD 78133374 to 18S TD 78443438 to 18S TD 77983529 follow the road to 18S TD 80183603 to 18S TD 80758033 to 18S TD 81453533 to 18S TD 82043571 to 18S TD 82283546 to 18S TD 81993498 to 18S TD 82173485 to 18S TD 81963360 to 18S TD 80293240 and back to 18S TD 78133374.

SDA: Secondary Danger Area (Buffer Zone); defined on CLNC Special as the yellow/green area. Manual artillery safety computations are performed from this area.

PIA: Primary Impact Area; defined on CLNC Special as the red area, no targets outside this area will be engaged with any weapon system. No access to this area is authorized without EOD escort.

155 PDA: Primary Danger Area; not currently defined on the CLNC Special. Targets outside this area will not be engaged by 155mm howitzers. Artillery safety computations with the ARSS will be computed from this area.

SDA	PIA	155 PDA
18S TD 77613557	18S TD 78093561	18S TD 78313488
18S TD 77923562	18S TD 78423560	18S TD 78903513
18S TD 78423560	18S TD 78603573	18S TD 79213548
18S TD 78603573	18S TD 78683599	18S TD 81213548
18S TD 78683599	18S TD 78663629	18S TD 82063493
18S TD 78663629	18S TD 79013629	18S TD 81883394
18S TD 79013629	18S TD 79443617	18S TD 80253285
18S TD 79443617	18S TD 80333629	18S TD 78183420
18S TD 80383629	18S TD 80803559	
18S TD 81923579	18S TD 81483618	
18S TD 81833582	18S TD 81543557	
18S TD 82003575	18S TD 82003575	
18S TD 82363571	18S TD 82363571	
18S TD 82573558	18S TD 82433567	
18S TD 87823530	18S TD 82063523	
18S TD 82503353	18S TD 82413512	
18S TD 80273204	18S TD 82043388	
18S TD 77443390	18S TD 80243270	
18S TD 77703539	18S TD 78223406	
	18S TD 78503471	

APPENDIX C

TRAINING/MANEUVER AREAS

A. GENERAL.

1. Scheduling of training/maneuver areas will be done in accordance with Chapter 3 of this Manual.

2. Be familiar with the contents of Chapters 1/2/3/4/6/7/8 of this Manual.

3. Training/Maneuver areas by name and primary use:

TRAINING AREA NAME	PRIMARY USE
A Areas	Tactical Maneuver Training
AA	Tactical Maneuver Training
AB	Tactical Maneuver Training
AC	Tactical Maneuver Training
AD	Tactical Maneuver Training
B Areas	Tactical Maneuver Training
BC	Tactical Maneuver Training
BD	Tactical Maneuver Training
C Areas	Boy Scout Training Area
CA	Boy Scout Training Area
CB	Not Used By Military Units
D Areas	Command Post Exercise Training
DA	Command Post Exercise Training
DB	Command Post Exercise Training
DC	Command Post Exercise Training
DD	Command Post Exercise Training
DE	Small Units Training
DF	Small Units Training
E Areas	Amphibious Operations Training
F Areas	Tactical Maneuver Training
FA	Tactical Maneuver Training
FB	Tactical Maneuver Training
FC	Tactical Maneuver Training
FD	Tactical Maneuver Training
FE	Tactical Maneuver Training
FF	Tactical Maneuver Training
FG	Tactical Maneuver Training
G Areas	Tactical Maneuver Training
GA	Tactical Maneuver Training

GB	Tactical Maneuver Training
GC	Tactical Maneuver Training
GD	Tactical Maneuver Training
GE	Tactical Maneuver Training
GF	Tactical Maneuver Training
GG	Tactical Maneuver Training
GH	Tactical Maneuver Training
GI	Tactical Maneuver Training
H Areas	Tactical Maneuver Training
HA	Tactical Maneuver Training
HB	Tactical Maneuver Training
HC	Tactical Maneuver Training
HD	Tactical Maneuver Training
HE	Tactical Maneuver Training
HF	Tactical Maneuver Training
HG	Tactical Maneuver Training
HH	Tactical Maneuver Training
I Areas	Tactical Maneuver Training
IA	Tactical Maneuver Training
IB	Tactical Maneuver Training
IC	Tactical Maneuver Training
ID	Tactical Maneuver Training
IE	Tactical Maneuver Training
IF	Tactical Maneuver Training
J Areas	Amphibious Support Exercises
JA	Tactical Maneuver Training
JB	Tactical Maneuver Training
JC	Amphibious Support Exercises
JD	Tactical Maneuver Training
K Areas	Tactical Maneuver Training
KA	Tactical Maneuver Training
KB	Tactical Maneuver Training
KC	Tactical Maneuver Training
KD	Tactical Maneuver Training
L Areas	Tactical Maneuver Training
LA	Tactical Maneuver Training
LB	Tactical Maneuver Training
LC	Tactical Maneuver Training
LD	Tactical Maneuver Training
LE	Tactical Maneuver Training
LF	Tactical Maneuver Training
LG	Tactical Maneuver Training
M Areas	Tactical Maneuver Training

MA	Tactical Maneuver Training
MB	Tactical Maneuver Training
MC	Tactical Maneuver Training
MD	Tactical Maneuver Training
ME	Tactical Maneuver Training
MF	Tactical Maneuver Training
Q Areas	Tactical Maneuver Training
QA	Tactical Maneuver Training
QB	Tactical Maneuver Training
R Areas	Tactical Maneuver Training
RA	Tactical Maneuver Training
RB	Tactical Maneuver Training
GSRA Areas	Tactical Maneuver Training
SA	Tactical Maneuver Training
SB	Tactical Maneuver Training
SC	Tactical Maneuver Training
SD	Tactical Maneuver Training
SE	Tactical Maneuver Training
SF	Tactical Maneuver Training
SG	Tactical Maneuver Training
SH	Tactical Maneuver Training
SI	Tactical Maneuver Training
SJ	Tactical Maneuver Training
SK	Tactical Maneuver Training
SL	Tactical Maneuver Training
SM	Tactical Maneuver Training
SN	Tactical Maneuver Training
SO	Tactical Maneuver Training
SP	Tactical Maneuver Training
SQ	Tactical Maneuver Training
SR	Tactical Maneuver Training
ST	Tactical Maneuver Training
SU	Tactical Maneuver Training
SV	Tactical Maneuver Training
SW	Tactical Maneuver Training

4. Greater Sandy Run Training Area (GSRA). The following provides instructions for the assignment, control, and safe use of the GSRA. All personnel involved in training in this area will be thoroughly familiar with these instructions.

a. GSRA Description. The GSRA encompasses nearly 41,000 acres of flat, low-lying timberland, which contains large areas of wetlands and pocosin swamp. It is bounded on the east by

U.S. Highway 17 from Holly Ridge, NC to High Hill Road (SR1119) and on the west by North Carolina State Route 50 from Holly Ridge to Padgett Road (SR1104). The northern area is generally bounded by Padgett Road (SR1104), Haws Run Road (SR1105), Dawson Cabin Road (SR1107), and High Hill Road (SR1119).

b. Scheduling. Range Control is the scheduling agency for this major training area. Scheduling training areas, ranges will be accomplished in accordance with Chapter 3 of this Manual and the following special instructions.

c. Camp Davis. MAG-26 and MAG-29 have priority of use of the TLZ Pheasant and TLZ Duck (GSRA South Runway) in the Greater Sandy Run Area with the exception of Joint/Combined Exercises. All other units desiring to use TLZ Pheasant and TLZ Duck (GSRA South Runway) must submit a TAR, either electronically or manually, 14 days prior to the requested date to Commanding General, MCB, Camp Lejeune (RCO). RCO will coordinate with the MCAS, New River to determine if the TLZ's are available and approve/disapprove TAR's accordingly. TAR's must indicate type of training requested.

(1) Scheduling of the Sandy Run Victor (SV) training/ maneuver area does not constitute approval for the use of the TLZ Pheasant and TLZ Duck (GSRA South Runway). Scheduling of the TLZ Pheasant and TLZ Duck (GSRA South Runway) does not constitute approval of use of the SV. Both areas must be scheduled separately.

(2) At no time are vehicles allowed on TLZ Pheasant and TLZ Duck (GSRA South Runway) without approval of the RCO or DRCO. All non-approved vehicular traffic will remain, at a minimum, 500 feet from the runways or the taxiways.

(3) A Memorandum of Agreement (MOA) between MCB, Camp Lejeune and the State of North Carolina exists regarding fire fighting assistance. MCB, Camp Lejeune has agreed to make TLZ Duck (GSRA South Runway) at Camp Davis available for air tanker use during periods of high fire occurrence or fire suppression action.

(4) During hours of darkness, blackout driving procedures will be in effect for all vehicles operating within 500 feet of the TLZ Pheasant and TLZ Duck (GSRA South Runway) so as not to interfere with Night Vision Goggle (NVG) training being conducted by air crews.

(5) Units planning to use blank fire must indicate same on the TAR.

5. Restricted Areas.

a. Residential Sites/Areas. Restricted areas include residential housing areas, cemeteries, archaeological sites and endangered species sites. Access to these area/sites is prohibited. Quiet enjoyment of property remains the right of those individuals who reside in the area. No training will be conducted within a 300 meter buffer zone of any residential structure not a part of the GSRA, outlying building or pasture/planted fields.

b. Cemeteries. Approximate map locations for existing cemeteries are: Maple Hill Map Sheet, Ed. 7-DMA, Series V742, Sheet 5453 II, GC 628334, 654324, 639316, 648233, 635386, and 631264. Some, if not all, individual gravesites have been marked with two-inch marker flags or a head stone. All personnel will be advised that all cemeteries are off-limits and that movement into or through them is prohibited.

c. Vehicle Movement. Vehicle movement off graded/maintained roads in a training area in the GSRA is not authorized unless previously approved by BRCO.

d. Endangered Species Sites. Approximate map locations for known rough-leaved loosestrife sites are: Maple Hill Map Sheet, ED. 7-DMA; Series V742, Sheet 5453 II; GC 633373, 698245, 706263; Camp Lejeune Military Installation Map: GC 707267 through 707268, 713283, 715282, 718288, and 718310.

6. Regulations.

a. Weapons and Ammunition Allowed

(1) Live fire is prohibited unless on the live fire ranges SR-6S and SR-6N, SR-7, SR-10 and SR-11. At no time will dud-producing ordnance be used in the GSRA complex.

(2) Blank fire/MILES signaling devices are authorized. Request to conduct blank firing must be included on TAR.

(3) Blank fire/MILES signaling devices will not be fired within a 300 meter buffer zone of any residential structure not a part of GSRA, or outlying building.

(4) Use of riot control agent (CS), any pyrotechnics, smoke grenades, booby trap simulators, and flash bangs is prohibited because of extreme fire danger. Additionally, use of warming fires is prohibited.

b. Tactical Training.

(1) Digging of fighting holes, mortar pits, machinegun pits is authorized. Engineer training that involves digging, plowing or grading and digging in of vehicles requires EMDs approval. All fighting holes must be filled back and leveled out within 72 hours.

(2) Tactical vehicle movement is allowed, however, much of the area is wetland and is not suitable for off-road vehicle movement. Existing, well-traveled roads such as Moores Ridge Road (SR1103) are suitable for all types of vehicles during periods of dry weather. However, other smaller roads and trails (logging access roads) have been created in the wetland areas by pushing up soil, thus creating 5 to 6 foot ditches on both sides of the road bed. The width of these roads is suitable for light vehicles (four-wheel drive) only and may become impassable to all vehicle traffic during periods of wet weather. Unit representatives should conduct a survey prior to training, and organize training events accordingly. Track vehicles must stay on the authorized track vehicle routes. A hand out will be provided with the authorized routes.

(3) There are several bridges in the area. Units should perform a bridge survey of training areas in which they have scheduled training. The bridge in vicinity GC 630335 is posted with the following weight limits: Single vehicle weight limit-10 tons; semi-tractor, trailer weight limit-18 tons.

(4) Personnel training at Camp Davis will be informed that the sewer system under portions of the old airstrips and old cantonment area are subject to cave-in.

c. Police of Training Areas.

(1) Police of training areas is the responsibility of the using unit. All trash, fiber containers, MRE packaging and tactical wire will be picked up by the using unit before departing the training area and returned to dumpsters/landfills mainside.

(2) For training area SV: A Foreign Object Debris (FOD) walkdown is required on and adjacent to the TLZ Pheasant and TLZ Duck at the completion of training. Do not leave any objects/brass/links/trash on the runways or taxiways in this area. The 2D Marine Aircraft Wing uses this area for helicopter training.

(3) The last using unit will be held accountable for the state of police. If, upon arriving at a training area, the area is unsatisfactory, immediately notify Range Control or the RCDO (BLACKBURN) so that corrective action may be promptly initiated. Units failing to report are presumed to accept responsibility for corrective action.

(4) Human waste will be disposed of by the use of field head facilities. Individual "cat-holes" are permissible. For periods of longer than three days, the use of portable heads are required. Chapter 6 of this Manual is applicable.

d. Privately Owned Vehicles (POV's). Hunters may use registered off-road recreational vehicles to travel to the authorized hunting areas designated by the Base Game Warden IAW BO 11017.1 (Off Road Recreational Vehicles). POV traffic on dirt/sand/gravel, State Routes within the area is discouraged due to poor trafficability. Designated POV parking areas will be cleared and maintained at the east entry/exit point at Camp Davis vic GC 722328. By special arrangement with Range Control, temporary permits for other designated parking areas can be obtained.

7. MEDEVAC/CASEVAC Assistance Procedures. MEDEVAC/CASEVAC assistance procedures are as written in Chapter 4 of this Manual. It is recommended that the use of vehicle MEDEVAC/CASEVAC to Bldg AS302 at New River Air Station be considered as the primary location for MEDEVAC/CASEVAC. The secondary MEDEVAC/CASEVAC location is the Camp Geiger Dispensary (Bldg G770). The Camp Geiger Dispensary has a medical officer aboard during normal working hours only; 0730-1630 weekdays. Units conducting training are required to monitor the Range Control Safety net. Units are encouraged to utilize an OE-254 antenna for FM communication with the RCDO (BLACKBURN) to assist with MEDEVAC/CASEVAC.

8. Environmental Precautions.

a. General Instructions. Environmental precautions concerning wastewater disposal, sanitary waste, spill

prevention, containment and cleanup, field vehicle servicing and equipment maintenance, and protection of wetlands are discussed in Chapter 7 of this Manual and are applicable.

b. Environmental Surveys. Environmental surveys are periodically conducted aboard MCB. Units are reminded that their training activities cannot disturb the existing wildlife/flora/fauna, natural terrain, or destroy potential sites of historical/archaeological significance.

c. Fire

(1) Because of the volume of forest fuel loading, (a term which means dry, and decayed flammable matter on the ground), and the inaccessibility to much of the area by fire fighting and emergency rescue vehicles; the fire condition for the area is Condition IV.

(2) Until the fire hazard is significantly decreased, use of any pyrotechnics, smoke grenades, booby trap simulators, flash bangs, and riot control agent (CS) is prohibited. Use of heat tabs are limited to fireproof areas, and when supervised by an NCO. Warming fires are prohibited.

9. Highway 17 Crossings. Highway 17 can be crossed using the underpasses at the below Grid Coordinates:

(1)18S TD 726354
(2)18S TD 722331
(3)18S TD 725301

10. Communications

a. All units training in the GSRA will monitor the RCDO frequency call sign "BLACKBURN" on 38.60 MHZ FM retrans is 49.90. This is a repeated frequency. The receiver is located on the water tower at the Stone Bay Range Complex (Weapons Training Battalion).

b. The responsibility for proper communications with the RCDO (BLACKBURN) rests with the ROIC. Erection of OE-254 field antenna is recommended.

11. Geographical Data

a. Detailed geographical data is available from the Geographic Information System Web Page at HTTP://GIS.Lejeune.USMC.MIL/IGIR. For printed products such as maps, aerial photos etc. contact Mr. Mike Becker at the GIS office, phone number 451-9016, or the Range Safety Specialist, Mr. Duane Richardson at 451-1240.

B. TRAINING/MANEUVER AREAS

Range Name: A

Status: Active

Size: Approximately 1,695 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  TLZ Mallard & Kiwi, A-1 Baffled Pistol Range, Knox Trailer Park

- Environmental Restrictions
  244.5 Total Acres of Wetlands

- Maneuver Area Restrictions

- Other Considerations
  A is subdivided into three areas: AA, AB, AC, AD
  Future Restrictions because of the new Highway Bypass

FACILITIES: Camp Johnson, Beirut Memorial, TLZ Mallard
Kiwi, ALZ 1, Range A-1

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: A

Range Name: AA

Status: Active

Size: Approximately 263.5 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  TLZ Mallard & Kiwi, A-1 Baffled Pistol Range
  Borders on Jacksonville, New River and the AC area

- Environmental Restrictions
  65.5 Total Acres of Wetlands

- Maneuver Area Restrictions

- Other Considerations
  Future Restrictions because of the new Highway Bypass, on smoke/CS and other training devices.

FACILITIES: Camp Johnson, Beirut Memorial, TLZ Mallard
Kiwi and ALZ 1, Veterans Cemetery
6 Buildings

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: A

Range Name: AB

Status: Active

Size: Approximately 538.2 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Borders on Highway 24, Camp Johnson and AA Area

- Environmental Restrictions
  58.5 Total Acres of Wetlands

- Maneuver Area Restrictions

- Other Considerations
  Future Restrictions because of the new Highway Bypass, on smoke/CS and other training devices.

FACILITIES: Camp Johnson, Beirut Memorial
11 Buildings

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: A

Range Name: AC

Status: Active

Size: Approximately 611.6 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training
Formal School Training (MCCSSS)

RESTRICTIONS/COMMENTS:

- Conflicts
  A-1 Baffled Pistol Range
  Borders on AA/AB/New River/Camp Johnson

- Environmental Restrictions
  47 Total Acres of Wetlands

- Maneuver Area Restrictions

- Other Considerations (N/A)

FACILITIES: Camp Johnson, TLZ Mallard, Kiwi, ALZ 1
66 Buildings, A-1 Pistol Range

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: A

Range Name: AD

Status: Active

Size: Approximately 311.5 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Borders on Highway 24, AB area

- Environmental Restrictions
  55 Total Acres of Wetlands

- Maneuver Area Restrictions
  Borders on the Tarawa Terrace Housing Area, Knox Trailer Park

- Other Considerations

FACILITIES: 26 Buildings, new Highway 24/17 Bypass

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: A

Range Name: B

Status: Active

Size: Approximately 1,672.8 acres

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains Ranges B-12 and B-14 (inactive).
  B area is subdivided into two areas, BC and BD

- Environmental Restrictions
  734 acres of wetlands

- Maneuver Area Restrictions

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

- Other Considerations (N/A)
  B is subdivided into two areas: BC and BD.

FACILITIES: New River Air Station, Camp Geiger, Southwest Creek

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: B

Range Name: BC

Status: Active

Size: Approximately 1,269.55 total acres
Approximately 283.26 acres live fire

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Uses: Infantry Tactics Maneuver Area
Small Unit Training
Formal School Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Range B-14, B-12 Baffled Pistol Range

- Environmental Restrictions
  Wetlands and RCW

- Maneuver Area Restrictions

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

FACILITIES: New River Air Station, Camp Geiger, Roads/Trails and Back Gate to New River Air Station

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: B

Range Name: BD

Status: Active

Size: Approximately 403.31 total acres.
Approximately 60 acres of live fire (15%)

Training Area Uses:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Range B-14 (inactive).
  Borders MA, BC, Highway 17

- Environmental Restrictions
  153.2 Acres of Wetlands

- Maneuver Area Restrictions

- FAA Restrictions
  Communication with MCAS, New River control tower required for all air support operations in the training area.

FACILITIES: Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: B

Range Name: C

Status: Active

Size: Approximately 1,685.5 total acres

Training Area Uses:

Primary Use: Boy Scout Training Area
Alternate Use: None

RESTRICTIONS/COMMENTS:

- Conflicts
  C area is subdivided into two other sub areas, CA and CB Housing Areas, Naval Hospital, Camp Lejeune Schools, Boy Scout area

- Environmental Restrictions
  330 Acres of Wetlands

- Maneuver Area Restrictions
  Normally not used by Military Units for training

- FAA Restrictions
  Communication with MCAS, New River control tower required for all air support operations in the training area.

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: C

Range Name: CA

Status: Active

Size: Approximately 868 total acres

Training Area Uses:

Primary Use: Boy Scout Training Area
Alternate Use: None

RESTRICTIONS/COMMENTS:

- Conflicts
  Housing Areas, Naval Hospital, Camp Lejeune Schools
  Borders on Northeast Creek, RA, CB

- Environmental Restrictions
  146.6 Acres of Wetlands

- Maneuver Area Restrictions
  Normally not used by Military Units for training

- FAA Restrictions
  Communication with MCAS, New River control tower required for all air support operations in the training area.

FACILITIES: Camp Lejeune Main Gate and Naval Hospital
ALZ 24/13

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: C

Range Name: CB

Status: Active

Size: Approximately 817.42 total acres

Training Area Uses:

Primary Use: None
Alternate Use: None

RESTRICTIONS/COMMENTS:

- Conflicts
  Paradise Point Housing Area, Golf Course, Berkeley Manor
  Watkins Village

- Environmental Restrictions
  183.8 Acres of Wetlands

- Maneuver Area Restrictions
  Not used by Military Units for Training

- FAA Restrictions
  Communication with MCAS, New River control tower
  required for all air support operations in the training
  area.

FACILITIES: Camp Lejeune High School, Brewster Middle School
Berkeley Manor, Stone Street Elementary School

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: None

Night Use Auth: No Maneuvers Auth: No

LOCATION: Located in TA: C

Range Name: D

Status: Active

Size: Approximately 2,280 acres with approximately 1,500 available for training.

Training Area Use:

Primary Use:	Command Post Exercise Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  508 acres of Wetlands

- Maneuver Area Restrictions
  Areas DA, DB, DC, DD, DE and DF are restricted in types of use for military unit training.

- Other Considerations
  D is subdivided into six areas

FACILITIES: Camp Lejeune, Mainside/French Creek, and one live fire range, D/9.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DA

Status: Active

Size: Approximately 4,83.8 acres

Training Area Use:

Primary Use:	Command Post Exercise Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  107 acres of Wetlands

- Maneuver Area Restrictions
Wallace Creek

- Other Considerations
  Borders on Watkins Village, Wallace Creek and Holcomb Blvd.

FACILITIES: Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DB

Status: Active

Size: Approximately 389.47 total acres. Approximately 42.48 acres of live firing

Training Area Use:

Primary Use: Command Post Exercise Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.

- Maneuver Area Restrictions
  Borders surface danger zone of D9
  Borders on Holcomb Blvd, Wallace Creek and DF training area.

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DC

Status: Active

Size: Approximately 361.3 total acres.

Training Area Use:

Primary Use: Command Post Exercise Training
Alternate Use: Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.
  7.9 Acres of Wetlands

- Maneuver Area Restrictions
  Borders on French Creek, Sneads Ferry Road, Cowhead Creek, French Creek and Base ASP.

FACILITIES: ALZ 21, Dirt Pit, French Creek Wastewater Treatment Facility, Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DD

Status: Active

Size: Approximately 267 total acres.

Training Area Use:

Primary Use: Command Post Exercise Training
Alternate Use: Small Unit Training
Tactical Maneuvering Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.
  40 Acres of Wetlands

- Maneuver Area Restrictions
  Borders on Sneads Ferry Road, French Creek Complex and Base Brig

FACILITIES: Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DE

Status: Active

Size: Approximately 313 total acres.

Training Area Use:

Primary Use: Small Unit Training
Alternate Use: Tactical Maneuvering Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.
  104 Acres of Wetlands, Wallace Creek

- Maneuver Area Restrictions
  Borders on Wallace Creek, Mainside, DF

FACILITIES: Greenway Nature Trail, Trails and other Foot Paths

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: DF

Status: Active

Size: Approximately 475.7 total acres.
105 acres of live fire area (D-9)

Training Area Use:

Primary Use: Small Unit Training
Alternate Use: Tactical Maneuvering Training
Helicopter Operations

RESTRICTIONS/COMMENTS:

- Conflicts
  D/9/LZ Sparrow

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.
  58.5 Acres of Wetlands

- Maneuver Area Restrictions
  Borders on Mainside, Bear Head Creek, Holcomb Blvd and the DE Training Area

FACILITIES: D-9 Skeet Range, Base Game Warden Office, PMO Impound Lot, Animal Control Shelter, Archery Range, and LZ Sparrow

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: D

Range Name: E

Status: Active

Size: Approximately 938.92 acres

Training Area Use:

Primary Use: Amphibious Operations Training Area

Alternate Use: Swim Site/Vehicular Water Crossing Exercise Area
Small Boat Exercise Area
Remotely Piloted Vehicle (RPV) and Drone Maneuver Area
Amphibious Support Exercises/Splash Point
Anti-Air Missile Range
Tactical Training Area

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains E-1, BT3/N1 Impact Area, H-1,2,3 Live Fire Ranges

- Environmental Restrictions
  During the months of May through October, certain areas along the beach will be limited for training due to the nesting activities of sea turtles. Disturbance of these areas is prohibited. Sea oats are protected. February through April is the period which the right whale migrates north. E training area users must be extremely vigilant for whales during this period.

- Maneuver Area Restrictions
  The northern 4,000 meters, north of Riseley Pier to Onslow North Tower is closed due to recreational facilities.

- Area contains GP-20 (GP Capex)

- 2 Administrative Landing Zones (ALZ22 ALZ25)
  1 - Riseley Pier
  1 - Onslow Beach
  2 – Towers (OP South/North Towers)

FACILITIES: Description of other structures: 3 recreation areas with parking, beach houses, and recreational vehicle parking areas.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Onslow Beach

Range Name: F

Status: Active

Size: Approximately 9,164 acres, 4,228 acres of live fire

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Command Post Exercise Training Infantry tactics Maneuver Area Multipurpose Exercise Training Area Mechanized Assault Training Mechanized Combined Arms Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains Ranges ETA-3, F-2, F-4, F-5, F-6, F-11, F-17, F-18, MOUT CTF, MAC Ranges and Gas Chamber CAS Holding Area Nancy, TLZs, Coot, Swan, Lark, Raven Woodpecker, Pigeon, Robin and ALZ28

- Environmental Restrictions
  Areas contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains GP-1, 2, 3

- Other Considerations
  F is subdivided into seven areas: FA, FB, FC, FD, FE, FF, and FG

FACILITIES: Numerous buildings, towers and roads throughout the F training areas

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FA

Status: Active

Size: Approximately 1,093.47 acres.
Approximately 360.28 acres of live fire.
Approximately 10.29 acres of RCW

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Command Post Exercise Training Mechanized Assault Training Mechanized Combined Arms Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Ranges F-2, F-5, F-18, F-18 50cal, GP-1

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated area. Vehicular traffic is limited to trails/roads.
  10.3 acres of RCW. 160.8 Acres of Wetlands

- Maneuver Area Restrictions

- Area contains GP-1, TLZ Coot, F-2, F-5
  Borders on Highway 24 Training Area RB, FF, FE and FB

FACILITIES: Small Range Shed on F-2 and Facilities on F-5

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FB

Status: Active

Size: Approximately 934.42 acres.
Approximately 70.39 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry tactics Maneuver Area Mechanized Assault Training Mechanized Combined Arms Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Range F-4, F-18 50cal

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated area
  467 Acres of Wetlands, 20.93 Acres of RCW.

- Maneuver Area Restrictions
  Borders on Highway 24, QA, FE and FA and contains the F-4 range

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FC

Status: Active

Size: Approximately 1989.23 total acres.
Approximately 1108.43 acres of live fire.
MOUT Facility 2.10 acres

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Multipurpose Exercise Training Area
Infantry tactics Maneuver Area
Command Post Exercise Training
Small Dismounted Unit Training
Small Unit Training
Mechanized Assault Training
Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Ranges F-4, MAC, MOUT, TLZ Pigeon, TLZ Raven, G-3 TOW, F-18 50cal

- Environmental Restrictions
  328.11 Total Acres of Wetlands

- Maneuver Area Restrictions
  Borders on Highway 172, QB, FE, FF, FG and Lyman Road

FACILITIES: 2 Tactical Landing Zones: 1-ALZ, MAC Ranges, MOUT Facility

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FD

Status: Active

Size: Approximately 1065.84 total acres.
Approximately 46.40 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Small Unit Training
	Small Dismounted Unit Training
	Infantry Tactics Maneuver Area
	Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Ranges F-6, Gas Chamber, NBC Trail, F-17

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas

- Maneuver Area Restrictions
  Area contains TLZ Penguin, Two Tank Crossing Pads.
  HA Nancy
  Borders on Lyman Road, GB, GA and Sneads Ferry Road

FACILITIES: Old Landfilled

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FE

Status: Active

Size: Approximately 95 total acres.
Approximately 253 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Small Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Ranges F-2,F-4,F-5, GP-2, MAC Ranges, TLZ Swan
  And F-18 50cal

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no
  vehicular traffic or bivouacking in designated areas.
  17.5 acres of RCW, 253 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains TLZ Swan, GP-2
  Borders on FB, QA, QB, FC, FG and FA

FACILITIES: Numerous roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FF

Status: Active

Size: Approximately 1,010 total acres.
Approximately 626.5 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Closes Ranges F-2, F-4, F-5, F-18, F-18 50cal, MAC ranges

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas
  .95 Acres of RCW and 221 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains Wallace Creek, Numerous Roads and Old Bear Creek Road
  Borders on RA, RB, FA, FE, FC and FG

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: FG

Status: Active

Size: Approximately 2,167.5 total acres.
Approximately 1,464.6 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Small Unit Training
	Small Dismounted Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts
  F-18/F-18 50cal, F-2, F-4, F-5, F-11, ETA-3

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas. 26.57 Acres of RCW and 897.5 Acres of Wetlands.

- Maneuver Area Restrictions
  Area contains 2nd FSSG, BST Complex, 2nd CEB, ETA-3 Borders on Sneads Ferry, Piney Green Road, Lyman Road, FC, FF

FACILITIES: New Landfill, Piney Green Road, Numerous Buildings, Roads/Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: F

Range Name: G

Status: Active

Size: Approximately 10,875 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Large Unit Training
	Tactical Maneuver Training
	Amphibious Support Exercises
	Fire Support Coordinator Training
	Command Post Exercise Training
	Mechanized Combined Arms Maneuver Area
	Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains Ranges EOD-1, ETA-4, G-3, G-3 TOW, G-3(50cal), G-3A, G-6 CBC, G-7, G-8, G-9, MP-2, MP-3, MP-4, MP-5, MP-6, MP-7, MP-8, OP-2, OP-3, OP-4, OP-5, ALZ 7, TLZ Penguin, Tern, Crane, Gull, Goose, Falcon, GP-4, GP-5, GP-6, GP-7, GP-9, GP-10, GP-11, GP-12, GP-13

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  GP-4, GP-5, GP-6, GP-8, GP-11 are no longer used by 155mm, GP-11 is mortar position 8

- Other Considerations
  G Range is divided into nine areas: GA, GB, GC, GD, GE, GF, GG, GH AND GI. Of these areas only GF, GG and portions of GA, GB and GI, approximately 7,875 acres are suitable for tactical unit training. The rest are primarily surface danger zones and impact areas.
  The G training areas surround the G-10 Impact Areas.

FACILITIES:

Towers: 4, Fire Tower

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes. Ground and aviation lasers authorized from designated positions. Only approved laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GA

Status: Active

Size: Approximately 762.26 acres.
Approximately 233.53 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Fire Support Coordinator Training
	Command Post Exercise Training
	Forward Observer Training
	Multipurpose Exercise Training Area
	Tactical Air Control Party

RESTRICTIONS/COMMENTS:

- Conflicts G-3/G-3 50cal/G-3 TOW/G-3A/OP-5/MP-7, ETA-4
  Area contains Ranges G-3A, ETA-4, MP-6

- Maneuver Area Restrictions
  Area contains buffer zone for G-10 Impact Area.
  BP Wolf closes G-3, MP-6, MP-7, MP-5
  Borders Sneads Ferry Road, FD, the G-10 Impact Area, GF
  G-3 TOW shuts down Lyman Road, OP-2, OP-3, MAC Ranges.
  MOUT, MP-2, MP-3, MP-4, ALZ 7, TLZ Raven, Pigeon, Tern

- Environmental Restrictions
  309.4 Acres of Wetlands, 20.18 Acres of RCW

FACILITIES: 2 Tank Cross Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved Eye-Safe laser devices.

Night Use Auth: Yes Maneuvers Auth:Yes

LOCATION: Located in TA: G

Range Name: GB

Status: Active

Size: Approximately 546.79 acres.
Approximately 364.21 acres of live fire.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Fire Support Coordinator Training
	Command Post Exercise Training
	Forward Observer Training
	Multipurpose Exercise Training Area
	Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains GP-4, G-8, G-9, MP-1, MP-2, and MP-3, MP-4
  OP-2, OP-3, ALZ 7, TLZ Penguin, BP Newt
  Borders on Lyman Road, FD, GC and G-10 Impact Area

- Maneuver Area Restrictions
  Area contains buffer zone for G-10 Impact Area.

- Environmental Restrictions
  130 Acres of Wetlands, 61.3 Acres of RCW

FACILITIES: Numerous Towers and Tank Trails, Two Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved Eye-Safe laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GC

Status: Active

Size: Approximately 613.7 acres.
Approximately 198.7 acres of live fire

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Fire Support Coordinator Training
	Command Post Exercise Training
	Forward Observer Training
	Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts BP Eel closes MP-5 and G-3, Units may not fire from MP-7 while BOP Eel is active. A/C will not occupy BP Wolf while BP Eel is active.
  Area contains GP-5, GP-6, GP-8, MP-4, MP-5, MP-6
  TLZ Tern, BP Eel, BP Sidewinder, OP-4
  Borders Lyman Road, Highway 172 and G-10 Impact Area

- Maneuver Area Restrictions
  Area contains buffer zone for G-10 Impact Area.

- Environmental Restrictions
  91.62 Acres of Wetlands, 38.2 Acres of RCW

FACILITIES: Numerous Towers and Tank Trails, Two Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GD

Status: Active

Size: Approximately 1,091 acres.
Approximately 368.7 acres of live fire

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Fire Support Coordinator Training
Command Post Exercise Training
Multipurpose Exercise Training Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  A small portion of G-3 TOW extends into the GD area
  Area contains EOD-1, G-6(CBC), MP-8, GP-11
  Borders Highway 172, GF, GA, GC and G-10 Impact Area

- Maneuver Area Restrictions
  Area contains buffer zone for G-10 Impact Area, contains the CBC range and EOD-1.

- Environmental Restrictions
  577.5 Acres of Wetlands, 43.7 Acres of RCW
  Browns Swamp is in this area

FACILITIES: Numerous Towers and Tank Trails, Four Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved Eye-Safe laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GE

Status: Active

Size: Approximately 501.7 acres.
Approximately 312 acres of live fire

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Fire Support Coordinator Training
	Command Post Exercise Training
	Forward Observer Training
	Multipurpose Exercise Training Area
	Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts When G-3 50cal/G-3 TOW shuts down, the GE area along with GP-7 and TLZ Crane
  Area contains TLZ Crane, GP-7, HA Emily
  Borders on Highway 172, Mills Creek, Bear Creek and GI

- Maneuver Area Restrictions
  Noise Restrictions due to the close proximity of Willis Landing

- Environmental Restrictions
  62 Acres of Wetlands, 43 Acres of RCW

FACILITIES: Tank Trails, Four Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved Eye-Safe laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GF

Status: Active

Size: Approximately 641.7 acres.
Approximately 82.8 acres of live fire

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Fire Support Coordinator Training
	Command Post Exercise Training
	Forward Observer Training
	Multipurpose Exercise Training Area
	Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains
  Borders on Highway 172, Sneads Ferry Road, GA and GD

- Maneuver Area Restrictions

- Environmental Restrictions
  273.3 Acres of Wetlands, 4 Acres of RCW

FACILITIES: Numerous Tank Trails, One Tank Pad Crossing Area

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes Ground lasers from designated ranges, OP's only. Only approved Eye-Safe laser devices.

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GG

Status: Active

Size: Approximately 1,789.86 acres.
Approximately 113.94 acres of live fire

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Amphibious Support Exercises
	Mechanized Combined Arms Maneuver Area
	Multipurpose Exercise Training Area
	Tactical Maneuver Training
	Mechanized Assault Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  630 Acres of Wetlands, 11.83 Acres of RCW

- Maneuver Area Restrictions
  Area contain TLZ Falcon, TLZ Goose, GP-10, GP-12, GP-13
  Borders Onslow Beach Road, Freemans Creek, Highway 172
  and the AIWW.

FACILITIES: Numerous Tank Trails, 2 Amphibious Splash Points
Onslow Beach North Tower

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GH

Status: Active

Size: Approximately 934.4 acres.
Approximately 653 acres of live fire

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Amphibious Support Exercises
Mechanized Combined Arms Maneuver Area
Multipurpose Exercise Training Area
Tactical Maneuver Training
Mechanized Assault Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  178.7 Acres of Wetlands, 11.1 Acres of RCW

- Maneuver Area Restrictions N1/BT-3 Impact Area
  Area contain Freemans Creek Landing, G-5, AIWW
  Note: H-1, H-2 and H-3 Ranges are located in the N1/BT-3 area
  Borders Highway 172, GG, AIWW and GI.

FACILITIES: Numerous Range Towers, Small Building, Tank Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: GI

Status: Active

Size: Approximately 613.08 total acres.
Approximately 81.98 acres of live fire

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Mechanized Assault Training
Mechanized Combined Arms Maneuver Area
Small Unit Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts
  Area contains Old G-6 range (inactive)and G-7, GP-9, TLZ Gull, Bear Tower.
  Borders on Highway 172, GH, AIWW, GE area

- Environmental Restrictions
  0.62 acres of RCW, 95.62 Acres of Wetlands

- Maneuver Area Restrictions
  When G-7 is hot, a large portion of this area is closed, G-3 50 cal shuts down a portion of the GI area.

FACILITIES: Numerous Tank Trails, Range Towers and Small Buildings

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: G

Range Name: H

Status: Active

Size: Approximately 7,377 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Military Operations in Urbanized Terrain Collective Training Facility (MOUT CTF) Infantry Tactics Maneuver Area Mechanized Combined Arms Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  435 Acres of RCW, 3,005 Acres of Wetlands
  Contains areas designated as a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains Combat Town, TLZ's Hawk, Heron, Jaybird, Dove, Dodo, Sandpiper, Egret, TLZ/DZ Plover. GP-14, GP-16, GP-21, GP-23, GP-24, GP-25, GP-28, GP-29

- Other Considerations
  H is subdivided into seven areas; HA, HB, HC, HD, HE, HF, HG, HH

FACILITIES: Numerous Tank Trails, Tank Pad Crossings

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes. Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HA

Status: Active

Size: Approximately 909.09 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Command Post Exercise Training Small Unit Training Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  136 Acres of Wetlands, 115 Acres of RCW
  Area contains TLZ Plover, GP-28, GP-29
  Borders on HG, HC, HH, Duck Creek and New River

- Maneuver Area Restrictions
  Area contains TLZ/DZ Plover.

FACILITIES: 5 Splash Points, Numerous Tank Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HB

Status: Active

Size: Approximately 1541.61 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  192.40 Acres of RCW, 242 Acres of Wetlands.
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains TLZ/DZ Dodo, Heron, Dove, GP-16, GP-21, GP-24, GP-25, Combat Town
  Borders on HE, HF, IA, IE, HC and HA

FACILITIES: Numerous Tank Trails, Tank Crossing Pads, Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HC

Status: Active

Size: Approximately 859.32 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  173 Acres of Wetlands, 72 Acres of RCW

- Maneuver Area Restrictions
  GP-29, TLZ Plover
  Borders on Marines Road, HH, HA, HG

FACILITIES: Numerous Tank Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HD

Status: Active

Size: Approximately 938.24 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  10.12 Acres of RCW, 214 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains TLZ Jaybird
  Borders on French Creek, HH, HE and Marines Road

FACILITIES: Three Splash Points, Numerous Tank Trails, Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HE

Status: Active

Size: Approximately 633.47 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training
	Small Dismounted Unit Training
	Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  84.37 Acres of RCW, 127 Acres of Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains TLZ Hawk
  Borders on Sneads Ferry Road, HF, HB, HH, HD

FACILITIES: Two Tank Crossing Pads, Numerous Tank Trails, Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HF

Status: Active

Size: Approximately 1067.72 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  119 Acres of RCW, 422 Acres of Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.
  Gilets Creek

- Maneuver Area Restrictions
  This area contains Combat Town; no bivouacking authorized in the Combat Town.
  Borders on Sneads Ferry Road, Highway 172, IA, HB and HE

FACILITIES: Numerous Tank Trails, Roads, 1 Tank Trail Crossing Pad

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HG

Status: Active

Size: Approximately 564.6 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  146.3 Acres of Wetlands, No RCW

- Maneuver Area Restrictions
  This area contains TLZ Sandpiper, GP-31
  Borders on Highway 172, JA, HC, HA and New River

FACILITIES: Numerous Tank Trails, Roads, 1 Tank Trail Crossing Pad, 1 Splash Point

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: HH

Status: Active

Size: Approximately 743.5 total acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  5.12 Acres of RCW, 193.5 Acres of Wetlands
  Area contains GP-23 and Duck Creek

- Maneuver Area Restrictions
  This area contains Combat Town; no bivouacking authorized in the Combat Town.
  Borders on HD, Marines Road, HC and HA

FACILITIES: Numerous Tank Trails, Roads, 1 Tank Trail Crossing Pad and 2 Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: H

Range Name: I

Status: Active

Size: Approximately 7,625 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Large Unit Training Mechanized Combined Arms Maneuver Area Command Post Exercise Training Aviation Staging Area/FARP Amphibious Assault Maneuver Area Assault Aircraft Landing Strip Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  I Areas: IA, IB, IC, ID, IE, IF, IG
  This area contains TLZ/DZ Albatross, TLZ/DZ Bluebird, TLZ/DZ Canary, TLZ Quail, TLZ Osprey, TLZ Egret, Ranges ETA-1, ETA-2, ETA-6, I-1, ALZ-8
  Borders on Highway 172, Onslow Beach Road, Intracoastal AIWW and New River

FACILITIES: Courthouse Bay, Traps Bay, Mile Hammock Bay

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IA

Status: Active

Size: Approximately 1066.34 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Command Post Exercise Training
	Engineer Maneuver/Training Area
	Infantry Tactics Maneuver Area
	Mechanized Assault Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  49.88 Acres of RCW, 660 Acres of Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.
  Dry conditions and tree harvesting creates high probability for forest fires.

- Maneuver Area Restrictions
  This area contains GP-17, TLZ/DZ Osprey
  When the MICLIC line charge inert is fired, a portion of the IA is shut down.
  Borders on Highway 172, HF, HB, IE

FACILITIES: Numerous tank trails and roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IB

Status: Active

Size: Approximately 874.87 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Engineer Maneuver/Training Area Command Post Exercise Training Infantry Tactics Maneuver Area Mechanized Assault Training Large Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  434.3 Acres of Wetlands, 1.47 Acres of RCW

- Maneuver Area Restrictions
  This area contains TLZ/DZ Albatross, TLZ Quail, GP-14, GP-15 and GP-18
  Borders Highway Onlsow Beach Road, AIWW, IG and Highway 172

FACILITIES: Numerous paved roads, tank trails, Gilets Creek
Two Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IC

Status: Active

Size: Approximately 910.44 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Engineer Maneuver/Training Area Command Post Exercise Training Infantry Tactics Maneuver Area Mechanized Assault Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  46.13 Acres of RCW, 155 Acres of Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas

- Maneuver Area Restrictions
  A portion of the IC area is closed down when the MICLIC Line Charge (Inert) is fired
  Borders Highway 172, IG, AIWW, ID, IF

FACILITIES: Numerous gravel roads, tank trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: ID

Status: Active

Size: Approximately 1192.87 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Amphibious Support Exercises Assault Aircraft Landing Strip Engineer Maneuver/Training Area Helicopter Rappelling Infantry Tactics Maneuver Mechanized Combined Arms Maneuver Area Remotely Piloted Vehicle (RPV) and Drone Maneuver Area Boat Ramp/Launch Area (LCAC)

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  665.3 Acres of Wetlands, No RCW

- Maneuver Area Restrictions
  Borders on AIWW, New River Inlet, IF, IC
  Area contains TLZ/DZ Bluebird, GP-22, Mile Hammock Bay
  Boat Ramp/LCAC Launch Area

FACILITIES: AIWW, Numerous Roads, Tank Trails, 2 Splash Points, the ID area has the approved LCAC routes.

DESCRIPTION OF OTHER STRUCTURES: 1 - Expeditionary Assault Landing Strip

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IE

Status: Active

Size: Approximately 1444.27 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Command Post Exercise Training Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  19.44 Acres of RCW, 273 Ares of Wetlands
  Area contains a Red-cockaded woodpecker habitat, no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restriction
  A portion of the IE area is shut down when the MICLIC line charge inert is fired from ETA-2
  TLZ Egret, GP-25, GP-30, GP-26
  Borders on Highway 172, HG, HC, HB, IA

FACILITIES: Numerous Tank Trails and Gravel Roads, Two Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IF

Status: Active

Size: Approximately 1439.58 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Engineer Maneuver/Training Area Infantry Tactics Maneuver Area Command Post Exercise Training Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  439.70 Acres of Wetlands, 22.75 Acres of RCW

- Maneuver Area Restrictions
  A portion of the IF is closed when the line charge inert MICLIC is fired
  Area contains TLZ/DZ Canary, ETA-1, ETA-2, ETA-6, GP-27
  Borders on AIWW, IC, Highway 172, Courthouse Bay

FACILITIES: Numerous Tank Trails, Gravel Roads, One Tank Crossing Pad, Howard Bay, Numerous Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: IG

Status: Active

Size: Approximately 545.30 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Engineer Maneuver/Training Area Infantry Tactics Maneuver Area Command Post Exercise Training Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  275.5 Acres of Wetlands, 112 Acres of RCW

- Maneuver Area Restrictions
  Area contains TLZ/DZ Albatross, GP-18, GP-19
  Borders on AIWW, IC, Highway 172, IB

FACILITIES: Numerous Tank Trails, Gravel Roads, One Tank Crossing Pad, Sellers Bay

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: I

Range Name: J

Status: Active

Size: Approximately 1,110 acres.

Training Area Use:

Primary Use:	Amphibious Support Exercises
Alternate Use:	Engineer Maneuver Training Area
	Infantry Tactics Maneuver Area
	Amphibious Training Area
	Tactical Maneuver Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
103.6 Acres of Wetlands, 32 Acres of RCW

- Maneuver Area Restrictions
No troop training south of coordinate TP810296 to 820296. Area contains amphibian vehicle school, barracks, and AAV maneuver areas. Courthouse and Stone Bay used extensively for AAV training. Borders HG, New River, Courthouse Bay

- Area contains GP-31, GP-32, GP-33, TLZ Oriole, TLZ Sandpiper, LHA Deck, TLZ Kite

- Other Considerations
J is subdivided into four sections: JA, JB, JC, and JD.

FACILITIES: Numerous Tank Trails, Gravel Roads, Highway 172 runs through the center

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: J

Range Name: JA

Status: Active

Size: Approximately 333.59 total acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Engineer Maneuver/Training Area
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  115.15 Acres of Wetlands, 45 Acres of RCW

- Maneuver Area Restrictions
  Area contains TLZ Sandpiper, Oriole, GP-31, GP-33
  Borders on Highway 172, HG and New River

FACILITIES: Numerous Tank Trails, Gravel Roads, 4 Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: J

Range Name: JB

Status: Active

Size: Approximately 267.01 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Engineer Maneuver/Training Area
	Amphibious Training Area
	Small Unit Training Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  25.55 Acres of Wetlands

- Maneuver Area Restrictions
  Borders Highway 172, New River, JC area

FACILITIES: Numerous Tank Trails and Gravel Roads
Numerous Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: J

Range Name: JC

Status: Active

Size: Approximately 266.81 total acres.

Training Area Use:

Primary Use:	Amphibious Training Area
Alternate Use:	Swim Site/Vehicular Water Crossing Small Unit Training Tactical Maneuver Training Engineer Maneuver/Training Area Small Boat Launch Operating Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  44.6 Acres of Wetlands, American Bald Eagle Site
  (Acres unknown)

- Maneuver Area Restrictions
  Area contains TLZ Kite, GP-32, Courthouse Bay, Boat Ramp

FACILITIES: Roads and Trails, TLZ Kite

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: J

Range Name: JD

Status: Active

Size: Approximately 242.91 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Swim Site/Vehicular Water Crossing
	Small Unit Training
	Infantry Tactics Maneuver Area
	Amphibious Training Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  33.65 Acres of Wetlands, Environmentally sensitive area

- Maneuver Area Restrictions
  Area contains Sneads Ferry Gate, LHA Deck
  Borders on New River, Highway 172 and JB

FACILITIES: Sneads Ferry Bridge, Recreational Area

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: J

Range Name: K

Status: Active

Size: Approximately 3,181 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training Formal School Training (SOI)
Alternate Use:	Small Unit Training Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  828 Acres of Wetlands, 146 Acres of RCW
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas

- Maneuver Area Restrictions
  Area contains the K-2 Impact Area, 19 firing ranges, and TLZ Cardinal, GP-34, EOD-2, ETA-5.

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.
  R5306E, R5306D Restricted Airspace

- Other Considerations
  K is subdivided into four areas: KA, KB, KC and KD.

FACILITIES: Various Tank Trails, Gravel Roads, Small Buildings and Range Towers, Various Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: K

Range Name: KA

Status: Active

Size: Approximately 635.31 total acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Command Post Exercise Training
	Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  84.9 Acres of Wetlands, 75.32 Acres of RCW

- Maneuver Area Restrictions
  Area contains N/A
  Borders MC, KC, KB and New River

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

FACILITIES: Numerous Tank Trails, Gravel Roads, Splash Points

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: K

Range Name: KB

Status: Active

Size: Approximately 1105.11 total acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area
Bivouac Sites for Live Fire Ranges

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  275 Acres of Wetlands, 112 Acres of RCW

- Maneuver Area Restrictions
  Area contains TLZ Cardinal, GP-34
  Area borders Verona Loop Road, KC, KA, KD and New River

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

FACILITIES: 2 Splash Points, Numerous Tank Trails, Gravel Roads, Parking Areas for the K Live Fire Ranges

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: K

Range Name: KC

Status: Active

Size: Approximately 1007.62 total acres

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Command Post Exercise Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  62.97 Acres of RCW, 415.3 Acres of Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas

- Maneuver Area Restrictions
  Area contains SOI Land Navigation Course
  Borders Verona Loop Road, MB, MC, KA, KB

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

FACILITIES: Numerous Tank Trails, Gravel Roads, 1 Tank Crossing Pad

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: K

Range Name: KD

Status: Active

Size: Approximately 433.31 total acres

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Command Post Exercise Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  63.33 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains EOD-2, ETA-5
  Area borders New River, K-2 Impact Area, KB Area

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training area.

FACILITIES: Numerous Tank Trails, Gravel Roads, 2 Splash Points, Water Drop Zones Farnell Bay is off the coast of the KD area

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: K

Range Name: L

Status: Active

Size: Approximately 7,720 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Tactical Maneuver Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains Lima 5, K-405, TLZ Owl, TLZ Vulture, ALZ-27, ALZ-19, Base Rifle Range and SOTG Compound. Borders on Highway 210, Highway 17, M Areas, New River

- Other Considerations
  L is subdivided into seven areas: LA, LB, LC, LD, LF, LG.
  Of those areas, only LA, LB, and LC approximately 5200 acres, are suitable for tactical unit training. The remaining acres are occupied by the Base Rifle Range.

FACILITIES: Stone Bay, Rifle Range/SOTG Area, Numerous Tank Trails, Gravel Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LA

Status: Active

Size: Approximately 1444.59 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Conflicts
  L-5

- Environmental Restrictions
  172 Acres of RCW, 4 Archaeological Sites, 275 Acres Wetlands
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains L-5 range and related surface danger zones
  Borders on LE, LB, LD, Stone Creek and LF

FACILITIES: Numerous Tank Trails, Gravel Roads, Buildings, Towers for L-5

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LB

Status: Active

Size: Approximately 741.59 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  102 Acres RCW, 1 Archaeological Site, 325 Acres of Wetlands
  Close proximity to civilian population
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas

- Maneuver Area Restrictions
  Borders on Highway 17, Highway 210, LD, LA

FACILITIES: Numerous Tank Trails, Roads, an entrance to L-5

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LC

Status: Active

Size: Approximately 1280.03 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No RCW area
  314.5 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains TLZ Owl, ALZ-19
  Close proximity to civilian population, LC area is close to a sensitive HAZMAT site

FACILITIES: Numerous Tank Trails, Gravel Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LD

Status: Active

Size: Approximately 873 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No RCW area
  122 Acres of Wetlands

- Maneuver Area Restrictions
  Close proximity to civilian population

FACILITIES: Numerous Tank Trails, Gravel Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LE

Status: Active

Size: Approximately 1,117 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Infantry Tactics Maneuver Area
Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  217 Acres of RCW, 1 Archaeological Site
  315 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains N/A
  Close proximity to civilian population, Highway 17
  LE Area a portion is closed down when L-5 is in hot Status
  Borders on Highway 17, Verona Loop Road, LF, LA and LB

FACILITIES: Numerous Tank Trails, Gravel Roads, Tank Crossing Pads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LF

Status: Active

Size: Approximately 1,277 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  53 Acres of RCW, 9 Archaeological Sites
  472 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains K-405, Surface Danger Zone for L-5, Surface Danger Zone for the Stone Bay Rifle Range Borders on Verona Loop Road, Mills Creek, New River, LA, LE

FACILITIES: Numerous Tank Trails, Gravel Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: LG

Status: Active

Size: Approximately 380 acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Infantry Tactics Maneuver Area Small Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No RCW area
  175 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains TLZ Vulture, SOTG Small Arm Ranges, SOTG Non-Lethal Range
  Borders New River, LC and Stone Bay Rifle Range

FACILITIES: Numerous Trails, Gravel Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: L

Range Name: M

Status: Active

Size: Approximately 9250 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Command Post Exercise Training
	Small Unit Training
	Small Dismounted Unit Training
	Tactical Maneuver Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Areas contains a Red-cockaded woodpecker habitat, wetlands; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains TLZ/DZ Condor, TLZ Parrot and TLZ Eagle. SOI base camp (Camp Devil Dog)

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

- Other Considerations
  M is subdivided into six areas: MA, MB, MC, MD, ME, MF

FACILITIES: Roads, Tank Trails, Tank Crossing Pads and OP-7

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: MA

Status: Active

Size: Approximately 990.28 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No RCW, 330 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains SOIs Camp Devil Dog.
  Borders BD, Highway 17, MB area

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

- 2 Administrative Landing Zones (SOI Base Camp)

FACILITIES: Roads/Tank Trails/Land Navigation Course, SOI Confidence Course, SOI MOUT Facility, Electrical Power Lines

ELECTRICITY AVAILABLE: Yes

INSTALLED COMMUNICATIONS: None Water System: Yes

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: MB

Status: Active

Size: Approximately 1500 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area Helicopter Operations

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No RCW, 750 Acres of Wetlands, 2 Archaeological Sites

- Maneuver Area Restrictions
  Area contains TLZ Parrot.
  Borders Highway 17, MA, MC, Verona Loop Road

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

FACILITIES: TLZ Parrot, Roads/Trails, Old Field ASP, Southwest Creek

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: MC

Status: Active

Size: Approximately 1313.38 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Helicopter Operations

RESTRICTIONS/COMMENTS:

- 5.20 acres of restricted area

- Environmental Restrictions
  No RCW, 720 Acres of Wetlands, 2 Archaeological Sites

- Maneuver Area Restrictions
  Area contains TLZ Eagle.
  Borders on Southwest Creek, New River, KA, KC, MB

- FAA Restrictions
  Communication with MCAS, New River control tower
  required for air support operations in training areas.

FACILITIES: Roads and Tank Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: MD

Status: Active

Size: Approximately 1336.80 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas. 288 Acres of RCW, 700 Acres of Wetlands

- Maneuver Area Restrictions
  Borders on Verona Loop Road, ME and MF area

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

FACILITIES: Roads and Tank Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: ME

Status: Active

Size: Approximately 1,570 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training
	Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas. No RCW, 500 Acres of Wetlands

- Maneuver Area Restrictions
  Borders on Highway 17, MD, MF and Verona Loop Road

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

FACILITIES: Roads/Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: MF

Status: Active

Size: Approximately 1,280 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training Infantry Tactics Maneuver Area Drop Zone, Para-Ops

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  RCW 280 Acres, 3 Archeological Sites, 480 Acres of Wetlands

- Maneuver Area Restrictions
  Area contains TLZ/DZ Condor, Op-7.
  Borders on MF, Verona Loop Road, LF, ME

- FAA Restrictions
  Communication with MCAS, New River control tower required for air support operations in training areas.

FACILITIES: Road/Trails, Training Site A, Small Buildings, Bleacher Area and several armor vehicles.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: M

Range Name: Q

Status: Active

Size: Approximately 2,500 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercises Training
	Small Dismounted Unit Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat/wetlands; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Area contains TLZ Robin, TLZ Woodpecker, GP-3
  Borders on Highway 172, FB, FE, FC

- Other Considerations
  Q is subdivided into two areas: QA and QB.

FACILITIES: Close proximity to civilian property, Highway 172 and Highway 24.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: Q

Range Name: QA

Status: Active

Size: Approximately 1,225.67 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Small Unit Training Infantry Tactics Maneuver Area Command Post Exercises Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains a Red-cockaded woodpecker habitat; no vehicular traffic or bivouacking in designated areas. RCW 380 Acres, Wetlands 560 Acres

- Maneuver Area Restrictions
  Area contains TLZ Woodpecker and GP-3 and TLZ Robin. Note: This area conflicts with F-18 (50cal)

FACILITIES: Roads/Trails and close proximity to civilian property, large civilian antenna nearby, locked gates.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: Q

Range Name: QB

Status: Active

Size: Approximately 508.30 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Cross Country Vehicle Maneuver Area
	Small Dismounted Unit Training
	Wheeled Vehicle Driving Course

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Area contains 250 Acres of Wetlands, no RCW; no vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  Armor is limited to the use of tank trails.
  Borders on Highway 172, FE, FC

- Area contains GP F-102
  Area conflicts with F-18 (50Cal) range fan.

FACILITIES: Locked gates, trails, roads. Close proximity to civilian property.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: Q

Range Name: R

Status: Active

Size: Approximately 2,000 acres.

Training Area Uses:

Primary Use:	Tactical Maneuver Training
Alternate Uses:	Command Post Exercise Training
	Small Unit Training
	Small Dismounted Unit Training
	Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Contains no RCW. Contains Wetlands habitat and Archaeological sites.

- Maneuver Area Restrictions
  The FASP area at TP 873425 is restricted.

- Other Considerations
  R is further subdivided into two areas: RA and RB

FACILITIES: Temporary Landing Zone roadrunner to support Division Squad and Platoon Training Lanes, Camp Lejeune Main Gate, Piney Green Road Gate, Henderson Pond, Wallace Creek, locked gates.

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: R

Range Name: RA

Status: Active

Size: Approximately 1,120 Acres

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Dry conditions and tree harvesting creates a high probability for forest fires.
  Contains no RCW, Approximately 250 Acres of Wetlands
  Borders Highway 24, Holcomb Blvd, the FG and RB areas.

- Maneuver Area Restrictions
  Vegetation is 25% sparse, and 75% moderate.

FACILITIES: Camp Lejeune Main Gate, Piney Green Road, Henderson Pond, Wallace Creek, and other Base buildings

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Location in TA: R

Range Name: RB

Status: Active

Size: Approximately 790.65 acres.

Training Area Use:

Primary Use: Tactical Maneuver Training
Alternate Use: Small Unit Training
Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  Natural Heritage Registered Areas, approximately 250 acres, 2 Archaeological sites, no RCW, approximately 175 Acres of Wetlands

- Maneuver Area Restrictions
  The FASD area at TP 873425 is restricted. 2nd Mar Div has priority of use in this TA. All others must coordinate through 2nd Mar Div, G-3 prior to scheduling. Borders RA, Highway 24, FA, FF, FG

FACILITIES: 2D Marine Division, Squad and Platoon Training Lanes, Temporary TLZ Roadrunner

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: R

Range Name: SA

Status: Active

Size: Approximately 1,249.21 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  850 Acres of Wetlands
- Maneuver Area Restrictions

FACILITIES: Tank Trails, Roads and Locked Gates

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SB

Status: Active

Size: Approximately 1,1280.30 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7 Ranges
  Contains no RCW, Approximately 900 Acres of Wetlands

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions

FACILITIES: Trails/Road, Locked Gates

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SC

Status: Active

Size: Approximately 1,201.59 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Approximately 800 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Roads/Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SD

Status: Active

Size: Approximately 1,455.58 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  480 Acres of Wetlands

- Maneuver Area Restrictions
  368.70 acres of live fire range.

FACILITIES: SR-7/TLZ Snipe, Locked Gates

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SE

Status: Active

Size: Approximately 1,686.05 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  10 Acres of Loosestrife, 780 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: 245.3 Acres of Live Fire, TLZ Partridge

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SF

Status: Active

Size: Approximately 4,101.09 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6 N&S, SR-7, SR-10 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Dry conditions and tree harvesting creates a high probability for forest fires.
  750 Acres of Wetlands

- Maneuver Area Restrictions
  Vegetation is 20% sparse, 30% moderate and 50% heavy.

FACILITIES: Tank Trails/Roads, TLZ Pippit, SR-6N

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

Range Name: SG

Status: Active

Size: Approximately 1,743.02 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions
  243 Acres of Live Fire, SR-6 N&S, SR-7, SR-10, TLZ Flamingo

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SH

Status: Active

Size: Approximately 1,076.41 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range/SR-7 TOW (Inert)

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  622 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Trails/Roads, Locked Gates

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SI

Status: Active

Size: Approximately 2,824.06 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-10 Ranges
  2,824.06 Acres of Live Fire

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Dry conditions and tree harvesting creates a high probability for forest fires. No RCW, 2,200 Acres of Wetlands

- Maneuver Area Restrictions
  Vegetation is 20% sparse, 30% moderate and 50% heavy.

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SJ

Status: Active

Size: Approximately 2,367.81 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-6, SR-7, SR-10 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Dry conditions and tree harvesting creates a high probability for forest fires. No RCW, Approximately 2,200 Acres of Wetlands

- Maneuver Area Restrictions
  Vegetation is 40% sparse, 30% moderate and 30% heavy.

FACILITIES: Locked Gates, Trails and Roads, TLZ Peewee

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: No

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SK

Status: Active

Size: Approximately 2,563.05 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Approximately 2,000 Acres of Wetlands

- Maneuver Area Restrictions

- 1,855.55 acres of live fire range.

FACILITIES: Trails and Roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SL

Status: Active

Size: Approximately 5,311.85 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range
  874.2 Acres of Live Fire

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Approximately 4,800 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Trails and Roads, Locked Gates and future site of Drop Zone Turkey

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SM

Status: Active

Size: Approximately 1,107.45 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Area contains Loosestrife
  Approximately 900 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Locked Gates, GSRA Building Complex, GSRA Fire Dept, Fire Tower, Roads and Trails

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SN

Status: Active

Size: Approximately 1,584.05 acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  No RCW, Approximately 750 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Roads, Trails, Locked Gates, Observation Posts

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SO

Status: Active

Size: Approximately 1,658.04 Acres

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10/SR-11 Ranges

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Dry conditions and tree harvesting creates a high probability for forest fires. No RCW, Approximately 800 Acres of Wetlands

- Maneuver Area Restrictions
  Vegetation is 20% sparse, 30% moderate and 50% heavy.

FACILITIES: SR-10 Range Complex, Buildings, Loading and Unloading Area, Range Towers

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Yes, only approved laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SP

Status: Active

Size: Approximately 981.72 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Area contains Loosestrife, No RCW, Approximately 975 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Gravel Road leading to the SR-10 Range

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SQ

Status: Active

Size: Approximately 561.59 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Infantry Tactics Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10 Range
  Area contains 241.28 Acres of Live Fire

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  No RCW, Approximately 350 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SR

Status: Active

Size: Approximately 989.99 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10/SR-11 Range

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  Approximately 750 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: None

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: ST

Status: Active

Size: Approximately 2,421.45 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Command Post Exercise Training

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.
  No RCW, Approximately 2,000 Acres of Wetlands

- Maneuver Area Restrictions
  A/C Operating Grid Line 26 should monitor OLF Frequency of BLACKBURN for Air Ops.

FACILITIES: TLZ Phoenix, Locked Gates and Observation Posts

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: S

Range Name: SU

Status: Active

Size: Approximately 1,447.30 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Small Unit Training
	Small Dismounted Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training
	Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Area contains Loosestrife, Approximately 1,200 Acres of Wetlands

- Maneuver Area Restrictions

FACILITIES: Locked gates, trails and roads

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SV

Status: Active

Size: Approximately 2,458.76 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Multipurpose Exercise Training Area Small Unit Training Small Dismounted Unit Training Infantry Tactics Maneuver Area Mechanized Combined Arms Maneuver Area Air Strip Take Down Seizure Facility

RESTRICTIONS/COMMENTS:

- Conflicts with Camp Davis N/S Runway

- Contains DZ Pheasant/TLZ Duck
  A/C Aircraft monitoring OLF frequency BLACKBURN when operating in Camp Davis N&S runways and TLZs.

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas. Close proximity to Town of Holly Ridge. Area contains no RCW, Approximately 650 Acres of Wetlands

- Maneuver Area Restrictions
  This area contains 50% clear.

FACILITIES: Air Field Seizure Facilities and Buildings, Trails and Roads, Locked Gates

ELECTRICITY AVAILABLE: No

INSTALLED COMMUNICATIONS: None Water System: No

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

Range Name: SW

Status: Active

Size: Approximately 658.36 acres.

Training Area Use:

Primary Use:	Tactical Maneuver Training
Alternate Use:	Mechanized Assault Training
	Multipurpose Exercise Training Area
	Small Unit Training
	Small Dismounted Unit Training
	Infantry Tactics Maneuver Area
	Command Post Exercise Training
	Mechanized Combined Arms Maneuver Area

RESTRICTIONS/COMMENTS:

- Conflicts with SR-10/SR-11 Range

- DZ Pheasant

- Environmental Restrictions
  No vehicular traffic or bivouacking in designated areas.

- Maneuver Area Restrictions

FACILITIES: SR-10 Range Complex Buildings/Roads, Trails

ELECTRICITY AVAILABLE: Yes

INSTALLED COMMUNICATIONS: Yes Water System: Yes

Laser Use Auth: Only approved Eye-Safe laser devices

Night Use Auth: Yes Maneuvers Auth: Yes

LOCATION: Located in TA: GSRA

APPENDIX D

ACRONYMS/DEFINITIONS

A. ACRONYMS

AAAV	Advanced Assault Amphibious Vehicle
AAV	Assault Amphibious Vehicle
AAW	Anti-air Warfare
AC	Active Component
A/C	Aircraft
ACE	Aviation Combat Element
ACF	Air Contingency Forces
AD	Air Defense
AIWW	Atlantic Intracoastal Waterway
ABN	Airborne
ALO	Air Liaison Officer
ALZ	Administrative Landing Zone
ANGLICO	Air/Naval Gunfire Liaison Company
AOA	Amphibious Objective Area
AOI	Area of Interest
AOR	Area of Responsibility
ARG	Amphibious Ready Group
ARGEX	Amphibious Ready Group Exercise
ARTY	Artillery
ASP	Ammunition Supply Point
AT	Antitank
ATF	Amphibious Task Force
ATGM	Anti-tank Guided Missile
BDA	Battle Damage Assessment
BIP	Blow In Place (EOD)
BTRY	Battery
C2	Command and Control
CAS	Close Air Support
CATFAE	Catapult-Launched Fuel-Air Explosive
CAX	Combined Arms Exercise
CE	Command Element
CEB	Combat Engineer Battalion
CINC	Commander-in-Chief
CMC	Commandant of the Marine Corps
COB	Close of Business
COMMARFOR	Commander, Marine Forces
COMMCORSYSCOM	Commander, Marine Corps System Command
COMMARFORLANT	Commander Marine Force Atlantic
CP	Command Post
CPX	Command Post Exercise
CRRC	Combat Rubber Reconnaissance Craft

CSS	Combat Service Support
CSSA	Combat Service Support Area
CSSD	Combat Service Support Detachments
CSSE	Combat Service Support Element
CVBG	Carrier Battle Group
DASC	Direct Air Support Center
DA PAM	Department of Army Pamphlet
DOD	Department of Defense
DODIC	Department of Defense Identification Code
DS	Direct Support
DU	Depleted Uranium
DWT	Division-Wing Team
DZ	Drop Zone
ESE	Expeditionary Airfield/Expeditionary Air Facility
ECM	Electronic Countermeasures
ECCM	Electronic Counter-Counter Measures
EOD	Explosive Ordnance Disposal
EW	Electronic Warfare
EWTGLANT	Expeditionary Warfare Training Group Atlantic
FAA	Federal Aviation Administration
FAC	Forward Air Control
FACSFAC	Fleet Area Control and Surveillance Facility
FARP	Forward Area Refueling Point
FARRP	Forward Area Refuel/Rearm Point
FLEETEX	Fleet Exercise
FM	Field Manual
FMF	Fleet Marine Force
FP	Force Protection
FPC	Final Planning Conference
FSCC	Fire Support Coordination Center
FSSG	Force Service Support Group
FTX	Field Training Exercise
F/W	Fixed Wing
GCE	Ground Combat Element
GP	Gun Position
GPS/NAVSTAR	Global Positioning System/Navigation Satellite
HA HO	High Altitude - High Opening
HA LO	High Altitude - Low Opening
HA MO	High Altitude - Medium Opening
HE	High Explosive
HMG	Heavy Machine Gun
HQ	Headquarters
HRST	Helicopter Rope Suspension Training
ICM	Improved Conventional Munitions
IED	Improvised Explosive Device (EOD)

IID	Improvised Incendiary Device (EOD)
IPC	Initial Planning Conference
ITS	Individual Training Standards
KD	Known Distance
LAR Bn	Light Armored Reconnaissance Battalion
LATAR	Land and Training Area Requirements
LAV	Light Armored Vehicle
LCAC	Landing Craft Air Cushion
LIC	Low Intensity Conflict
LLL	Left Lateral Limit
LMG	Light Machine Gun
MAGTF	Marine Air-Ground Task Force
MALS	Marine Aviation Logistics Squadron
MBST	Marine Battle Skills Training (common skills)
MEB	Marine Expeditionary Brigade
MEDEVAC/CASEVAC	Medical Evacuation
MEF	Marine Expeditionary Force
METL	Mission Essential Task List
MEU	Marine Expeditionary Unit
MG	Machinegun
MHE	Material Handling Equipment
MIC	Mid-Intensity Conflict
MILES	Multi-Intergraded Laser Engagement System
MMR	Military Munitions Rules
MOA	Memorandum of Agreement or Military Operational Airspace
MOOTW	Military Operations Other Than War
MOU	Memorandum of Understanding
MOUT	Military Operations in Urban Terrain
MP	Military Police or Mortar Position
MPF	Maritime Preposition Force
MPS	Maritime Propositioning Ship
MRE	Meal Ready to Eat
MSC	Major Subordinate Command
MSR	Main Supply Route
MTT	Mobile Training Team
NBC	Nuclear, Biological, and Chemical
NCO	Non-Commissioned Officer
NGF	Naval Gunfire
NLT	No Later Than
NLW	Non Lethal Weapons
NM	Nautical Mile
NSN	National Stock Number
NVG	Night Vision Goggle
OIC	Officer-in-Charge
OPFOR	Opposing Forces
OPLANS	Operations Plans

ORM	Operational Risk Management
OTH	Over-the-Horizon
PLRS	Position Location and Reporting System
POI	Program of Instruction
POL	Petroleum, Oil, and Lubricants
POM	Program Objectives Memorandum
POW	Prisoner of War
PSO	Position Safety Officer
RC	Reserve Components
RCW	Red-Cockaded Woodpecker
R/W	Rotary Wing Aircraft
RETS	Remote Engagement Target System
RIO	Radio In/Out
RLL	Right Lateral Limit
RP	Red-Phosphorus
RPV	Remotely Piloted Vehicle
RSO	Range Safety Officer
SACEX	Supporting Arms Capability Exercise
SATEX	Supporting Arms Training Exercise
SEAD	Suppression of Enemy Air Defense
SDA	Secondary Danger Area
SDZ	Surface Danger Zone
SIMCAS	Simulated Close Air Support
SMAW	Shoulder-Launched Multi-Purpose Assault Weapon
SOC	Special Operations Capable
SOCEX	Special Operations Capable Exercise
SOI	School of Infantry
SO-LIC	Special Operations/Low Intensity Conflict
SOP	Standing Operating Procedures
SOTG	Special Operations Training Group
TACP	Tactical Air Control Party
TAR	Training Area Request
TC	Track Commander
TCAT	Type Commanders Amphibious Training
T/E	Table of Equipment
TECOM	Training / Education Command
TEWT	Tactical Exercise Without Troops
TLZ	Tactical Landing Zone
TM	Technical Manual
T/O	Table of Organization
TOW	Tube Launched Optical Tracked Wire Guided Missile
TRAP	Tactical Recovery of Aircraft and Personnel
T/R	Training and Readiness Manual
UAV	Unmanned Aerial Vehicles
UCMJ	Uniform Code of Military Justice
UDP	Unit Deployment Program

UHF	Ultra High Frequency
UXO	Unexploded Ordnance
VHP	Very High Frequency
V/STOL	Vertical/Short Takeoff and Landing
VTOL	Vertical Takeoff and Landing
WDZ	Water Drop Zone
WMD	Weapons of Mass Destruction
WP	White Phosphorus

B. DEFINITIONS.

1. Administrative Area. An area assigned for administrative and logistical functions, such as housing, troop billets, offices, industrial areas, storage, and maintenance areas. Field training and live firing is not conducted in administrative areas.

2. Administrative Landing Zone (ALZ). A designated helicopter-landing zone, which provides major, commands a ready access to air transportation and medical evacuation. ALZs are designated by number.

3. Air Sentry. An individual designated by the officer in charge of firing to maintain surveillance of an assigned sector of airspace to warn of the approach of aircraft. In some cases, air sentries also observe navigable waters for the approach of vessels.

4. Approach and Retirement Route. A predestinated air traffic lane for helicopters, generally used in air or air/ground training exercises. These routes may be utilized by the RCDO, the DASC or a helicopter direction center to route helicopter traffic around potentially dangerous areas.

5. BLACKBURN. Radio call sign for Range Control Duty Officer on 38.60 FM or 325.0 UHF.

6. Blast Focus. The refraction patterns of shock waves through the earth's atmosphere.

7. CHIEFTAIN. The radio call sign for the 2d MAW DASC (when activated) for all aircraft (Radio 38.60 VHF or 325.0 UHF).

8. Coast Pilot. Regulations concerning federally controlled waterways from Cape Henry to Key West. Published by the U.S. Department of Commerce. It delegates to the Commanding General, Marine Corps Base, Camp Lejeune enforcing agency power for

waters in the "New River, N.C. and vicinity: Marine Corps Firing Ranges."

9. Common Impact Area. The impact area created when the surface danger zone of concurrently used ranges overlap.

10. Control Zone. An airspace of defined dimensions designated by appropriate authority, usually the FAA. The zone extends upward from the ground or water and includes one or more air zones, within which rules apply for the protection of air traffic.

11. Cook-Off. The detonation of any or all of the explosive components of a round chambered in a hot weapon, caused by the heat of the weapon.

12. Danger Area. A sea or water space in which hazards may exist to mariners. The New River and Atlantic Coast Sector areas are designated by Coast Pilot 4 as danger areas due to military training exercises conducted at Camp Lejeune.

13. Dearmer (.50 CAL). An explosive actuated tool unique to EOD, used to defeat fuses or IED’s in a rapid manner. Uses either an electric or ball (minus the projectile) .50 caliber cartridge to fire either blast, steel shot, water or various slugs through a 12 inch hand carried barrel.

14. Demolitions. Explosive charges designed to add realism to training or to destroy material/unsafe ammunition.

15. Direct Air Support Center (DASC). A subordinate operational component of a tactical air control system designed for control and direction of close air support and other tactical air support operations, and normally collocated with fire-support coordination elements. Call sign "Chieftain."

16. Direct Fire Weapons. Weapons that deliver fire when the weapons are laid by sighting directly on the target using the weapons sighting equipment.

17. Disrupter. An explosive tool used from a robot or hand placed to defeat a fuse of an IED.

18. Drop Zone (DZ). A tactical landing zone in which personnel or cargo paradrops are authorized.

19. Dual Communications. Two means of communication, usually radio backed up by telephone, (either cellular, MAG line or dial telephone). Required between a unit and "BLACKBURN" before any live fire training.

20. DUD. Any ammunition that having been fired, placed, dropped or thrown, fails to function in the manner intended.

21. Emergency Disposal. The immediate disposal of hazardous munitions by detonation or burning at EOD Site #1, EOD Site #2, or the G-10/K-2 impact areas.

22. Exclusion Area. Those areas, by the very nature of the operation of hazards existing therein, i.e., the Ammunition Supply Point, the Field Ammunition Dump when occupied, preclude their use for any type of troop/vehicle maneuver or tactical training. Training units and individuals will remain clear of these areas at all times. Access is limited to authorized personnel in the performance of official duties.

23. Field Training Facilities. Those areas designated for a specific type of training, normally not requiring the use of live ordnance. For example, dry net training facilities, the MOUT CTF, and Combat Town are classified as field training facilities.

24. Fire and Maneuver Range. Ranges on which troop movement and live firing may be conducted simultaneously.

25. Firing Lane. The area within which an aircraft or vehicle-mounted weapon is firing. It consists of a start-firing line, cease-firing/disarm line and left and right limits of fire.

26. Firing Line or Point. The location from which a weapon is fired at a target or impact area.

27. Flanking Fire. Live fire delivered against the flank of a target.

28. Flat Trajectory / High Velocity Weapons. Tank main guns, LAV main guns, artillery when firing direct fire, and machineguns.

29. Food Plots. Food plots are cultivated sites within various maneuver/training areas. They are intended to assist in the preservation of natural wildlife. Accordingly, units engaged in

field training exercises may enter, bivouac, and use a food plot, but will not cause any damage.

30. Forest Fire Danger Conditions. A restriction placed on training exercises due to the possibility of forest fire. (Fire-Readiness Plan 1-8).

31. Forward Air Controller (FAC). An officer (aviator/pilot) member of the tactical air control party who, from a forward ground or airborne position, controls aircraft in close air support for ground troops.

32. Gun Position (GP). Preselected and surveyed positions from which artillery and mortars engage in high ordinate indirect firing exercises.

33. Hang-Fire. A delay in the functioning of ordnance. The duration of such delay is unpredictable and may extend from a fraction of a second to several hours.

34. Hazardous Area. Areas made dangerous to personnel by live firing, mines or dangerous contaminants. Specific authorization from Range Control must be obtained before entering such areas at Camp Lejeune.

35. High Ordinate Firing. Firing of projectiles above an altitude of 500 feet.

36. High Explosive Impact Area. Impact areas specifically designated for all types of ordnance, such as BT-3/N-1, G-1O, and K-2 high explosive impact areas. These areas are referred to as dedicated, or permanent impact areas. They must not be confused with the danger area forward of live firing activity.

37. Impact Area. The area into which the fire of weapons is directed. It usually extends from the far boundary of the target line or area to the maximum range of the weapon and ammunition fired. It is bounded on the flanks by the right and left limits of fire established in the surface danger area diagram for each weapon.

38. Indirect Fire Weapons. Normally considered to be artillery and mortars.

39. Known Interference. Conditions affecting the safe conduct of live firing or training exercises.

40. Land Line (LL). A metallic line between two telephones or between telephones and a switchboard.

41. LASER TERMS:

a. Area S: A 5O-meter radius around the target from which all specular surfaces should be removed, covered, painted, or destroyed.

b. Area T: The area directly down range of the laser to the distance set forth in the reference for each laser. No objects will be lased within Area T. Exposure hazard to the skin is insignificant compared to exposure to the eye, but personnel should avoid direct exposure to the unprotected skin up to t meters from the laser device.

c. Backstops: Opaque structures or terrain in the controlled area such as a hill, a dense tree line, or a windowless building, that would completely obstruct any view beyond it and completely terminate a laser beam that may miss the target.

d. Buffer Zone: A safety margin on either side and above and below the approved target area, extending to a distance at which the beam is terminated by a backstop extending across the target zone, or the Nominal Ocular Hazard Distance (NOHD) limit is reached. A vertical buffer zone covers the angular distances below the highest point on a backstop or above the non-lasing area. The laser horizontal buffer zone covers the angular distance to the left of the left most targets and the right of the right most targets.

e. Intrabeam Viewing: Looking directly at the source of the beam or reflected beam from within the beam.

f. LASER: A device capable of producing a narrow beam of intense light.

g. Laser Range Safety Officer/Laser Range Safety Noncommissioned Officer(LRSO/LRSNCO): A designated officer, warrant officer or noncommissioned officer of the firing unit who is responsible for ensuring compliance with the unit SOP and this Manual for laser operations and training.

h. LASER Range-Finder: A range-finder employing a laser device to emit a pulsed laser beam that is aimed at the target. The range is determined automatically by electronically

measuring the length of time it takes for the light beam to travel from the laser to the target, be reflected from the target and return to the range-finder.

i. LASER Safety Eyewear: Protective eyewear designed specifically to permit the user to be exposed to either the direct or reflected laser beam from specific laser devices without eye injury.

j. LASER Surface Danger Zone (LSDZ): A V-shaped zone designed to contain the laser beam (while lasing) with buffer (safety zones on either side, and above and below the approved target area).

k. Nominal Ocular Hazard Distance (NOHD):The NOHD for direct intrabeam viewing is the minimum distance beyond which an unprotected person may stand in the beam and be exposed repeatedly without injury provided he or she does not look at the beam source with unfiltered magnifying optics.

l. Nominal Ocular Hazard Distance-Magnified (NOHD): The NOHD for intrabeam viewing through magnifying optics with an 80MM objective and 7 MM exit pupil.

m. Specular (mirror-like): A specular surface is one in which an individual can see his/her undistorted reflection. Examples of specular surfaces are; vehicle windows, vision blocks, searchlight cover glass, sheets of plastic, or mirrors and unpainted metal.

42. Live Fire Range. A range on which live fire exercises, including the use of some types of practice ammunition, may be conducted.

43. Magneto Line (MAG Line). A line from which field telephone equipment is operated from the field to a main switchboard in order to obtain dial capability.

44. Maneuver Area (MA). Training areas, designated alphabetically by a single letter in which approved field training exercises using blank ammunition, certain pyrotechnics and limited demolitions may be conducted.

45. Misfire. A complete failure to fire which may be caused by a faulty firing mechanism or a defective element in the propellant charge.

46. Navigable Waters. Waters upon which navigation of vessels is possible, but not always permissible. Navigable waters in the Camp Lejeune complex are governed by Coast Pilot 4, which delineates the circumstances and areas within which vessels may or may not navigate.

47. NBC. Nuclear, Biological, Chemical.

48. NBC Agents. Devices, biological agents and chemicals, which may cause damage, incapacity, injury, sickness, and/or death.

49. No Fire Zone (NFZ). An area specifically designated into which no ordnance may be fired/delivered.

50. Notice to Airmen (NOTAM). A message to aircraft pilots operating in a specific area warning of airspace restrictions caused by dangerous conditions such as high ordinate firing or scheduled air-training exercises.

51. Notice to Mariners. A publication to mariners and vessels warning of conditions dangerous to navigation such as live firing or amphibious exercises.

52. Observation Post (OP). A point from which impacting projectiles may be observed.

53. Overhead Fire. The firing of projectiles over the heads of personnel, or over areas in which the presence of personnel is suspected.

54. Paradrop. The controlled aerial delivery by parachute of personnel or equipment.

55. Practice Range. A range upon which only specified types of practice ammunition may be fired.

56. Prohibited Area. An area in which training is not authorized; i.e., the BT-3/N-1, G-1O, and K-2 impact areas.

57. Protected Area. An area in which training normally is not authorized. Those areas placed off-limits for the protection of endangered animal and plant species: historical/archaeological sites and those with environmental concerns, i.e., Red-cockaded woodpecker habitat, Rough-leaved Loosestrife areas, and the beach sand dunes as described in Chapter 6 of this SOP.

58. Pyrotechnic. Non-injurious Smoke or Signals, Either Flares (pop ups or hand held) or Grenades. White phosphorous is not considered a pyrotechnic for the purpose of this SOP.

59. Quiet Hours. No artillery or mortar firing permitted during stated times.

60. Range. A training facility designated for live fire, practice firing of weapons, demolitions, or fire and maneuver exercises.

61. Range Control. The Base organization responsible for safely scheduling, coordinating, and controlling all ranges, training areas, air space and water space. Range Control maintains a staff non-commissioned officer on communications watch during all live firing, paradrop, and fixed-wing air exercises.

62. Range Control Officer (RCO). The officer responsible for enforcing adherence to safety regulations, scheduling and assigning use of ground, air and sea space.

63. Range Control Duty Officer (RCDO). The commissioned officer assigned communications watch duty during live firing, paradrop, and fixed-wing exercises (call sign "BLACKBURN"). The direct representative of the Range Control Officer.

64. Range Firing Warning and Airspace Utilization Order. Current listing of scheduled ranges, airspace, and training/maneuver areas.

65. Range Guard. An individual designated to maintain surveillance over an assigned locale to prohibit unauthorized entry into the surface danger area and to give the alarm in the event he detects such entry. Usually assigned in pairs.

66. Range Officer in Charge of Firing (ROIC). Designated by the Commanding Officer of the training unit. The ROIC of Firing assumes responsibility for all aspect of live fire, paradrop or air exercises. This term is used synonymously with Forward Air Controller and DZ/LZ commander.

67. Range Operator (RO). A contractor that provides a service on a specific range and its equipment.

68. Range Safety Officer (RSO). An officer or staff noncommissioned officer assigned by the ROIC to assist in

enforcing all safety measures within the air/surface danger area.

69. Restricted Airspace. Hazardous airspace established by the Federal Aviation Administration. Permission must be granted to aircraft before traversing a restricted area during periods when the area is in use. Restricted areas are effective during various times and to various altitudes. Details as to boundaries, altitudes, time of use, and controlling agencies are published by the Federal Aviation Administration and may also be found on radio Facility Charts. Changes in a restricted area are published in Notices to Airmen (NOTAMs) and the "Airmen's Guide."

70. Restricted Area. A general definition applicable to areas in which controls are imposed over troop and vehicular movements due to the proximity of quarters, schools, recreational facilities, etc.

71. Rocket Wrench. An explosive actuated tool unique to EOD, which uses two M147 cartridges to remove hazardous fuses from projectiles, rockets and bombs by turning rapidly.

72. RSP. Render Safe Procedure for any ordnance or IED based on EOD 60 Series Publications or best known avenue of attack to defeat an item devised by the Senior EOD Technician on site and recommendation to the On Scene Commander.

73. Special Electric Impulse .50 Caliber Cartridge. M174, .50 Caliber ball round, minus the projectile and set up to function electrically.

74. Surface Danger Zone (SDZ). An SDZ is generally composed of a firing line/area or gun position, an impact area, and a secondary danger area. An SDZ exists from the moment the projectile leaves the muzzle/launcher until impact. The SDZ will vary with each weapon. The impact area and associated secondary danger area are also considered as an SDZ. For further information on SDZs consult MCO P3570.1_.

75. Survey Control Point. A permanent or semi-permanent marker placed to denote a topographical reference point.

76. Tactical Landing Zone (TLZ). A predestinated helicopter landing zone, usually named after a bird, which provides air and ground units a site for helicopter operations.

77. Temporary Interruption of the Atlantic Intracoastal Waterway (AIWW). Blocking traffic on the AIWW due to training exercises. A temporary interruption will not exceed one hour.

78. Toxic Agent. Poisonous agents that is capable of causing physiological injury.

79. Training Area (TA). An area designated alphabetically by letters within which authorized training exercises using blank ammunition, certain pyrotechnics, and limited demolitions may be conducted.

80. Training Area Request (TAR). Request to use ranges, airspace, TLZ's, ALZ's, training/maneuver areas, adjacent waterways, etc. Submitted electronically or manually to Range Control.

81. Training Facility. A structure, range or area specifically designed for military training.

82. Unserviceable Ammunition. Ammunition beyond its life expectancy or which fails to respond as its designer intended: can include a single round or a complete ammunition lot.

83. Verona LOOP. A complex of training facilities located west of New River.

84. Warning Area. Airspace similar to a restricted area, posing a potential hazard to flight or navigation. Warning areas are located outside the continental limits of the United States. Penetration of a warning area during periods of activity may be extremely hazardous to the pilot, aircraft, and passengers. Warning areas are established to permit military maneuvers and firing in certain offshore areas as a necessary feature of combat training. Changes in warning areas are made in the same manner as changes to restricted areas.

85. Wet Bulb Globe Temperature Index(WBGTI). A rating of temperature and humidity as it affects personnel. Intensity of human exertion must be reduced as the WBGTI reaches specific levels.

APPENDIX E

OPERATIONAL RISK MANAGEMENT

1. Purpose. To establish operational risk management procedures in accordance with MCO 3500.27A, and as an integral part of Live Fire Training at all levels in order to optimize operational capability, readiness, and enhance mission accomplishment.

2. ORM is a decision making process that enhances operational capability. Risk management and risk assessment are formal, essential tools of operational planning. Sound decision making requires the use of these tools both in battle and training. It is a method for identifying hazards, assessing risks and implementing controls to reduce the risks associated with any operation or training event.

3. These instructions apply to all Marine Corps units and other service units that use Camp Lejeune live fire ranges.

4. Principles of ORM.

a. Accept risk when the benefits outweigh the cost.

b. Accept no unnecessary risk.

c. Anticipate and manage risk by planning.

d. Make risk decisions at the right level.

5. Unit Commanders will:

a. Implement the ORM process within their command when conducting live fire aboard Camp Lejeune.

b. Incorporate identified hazards, risk assessments, and controls into written operation orders and plan for live fire events.

c. Conduct a thorough risk assessment for all new or complex evolutions (Live Fire Movement/Maneuver Events) and define acceptable risk and possible contingencies for the evolution.

d. Address the ORM process in safety, training, and lessons learned reports to the Base Range Safety Officer as directed.

e. Inform the chain of command as to what hazard cannot be controlled or mitigated at their command level.

f. Submit to Base Range Control an ORM worksheet with each Special Range Request.

g. Review MCO 3500.27A/Army FM 100-4 for additional information on Operational Risk Management.

6. Sources of cause factors from accidents and injuries: Individual 48%, Leader 18%, Standards 18%, Training Standards 8%, Support 8%.

HAZARD PROBABILITY

DEGREE OF PROBABILITY	**DESCRIPTION**
Likely (A)	Likely to occur immediately or within a short period of time. Expected to occur frequently to an individual item or person or continuously to a fleet inventory, or group.
Probably (B)	Probability will occur in time. Expected to occur several times to an individual item or person or frequently to a fleet, inventory, or group.
May (C)	May occur in time. Can reasonably be expected to occur some time to an individual item or person or several times to a fleet, inventory, or group.
Unlikely (D)	Unlikely to occur.

HAZARD SEVERITY

CATEGORY	DEGREE OF SEVERITY
CATEGORY I	The hazard may cause death, loss of facility/asset or result in grave damage to national interests.
CATEGORY II	The hazard may cause severe injury, illness, property damage, damage to national or service interests, or degradation to efficient use of assets.
CATEGORY III	The hazard may cause minor injury, illness, property damage, damage to national, service or command interests or degradation to efficient use of assets.
CATEGORY IV	The hazard presents a minimal threat to personnel safety or health, property, national, service or command interests, or efficient use of assets.

RISK ASSESSMENT MATRIX

RISK ASSESSMENT MATRIX					
PROBABILITY					
SEVERITY	CATEGORY	A	B	C	D
	I	1	1	2	3
	II	1	2	3	4
	III	2	3	4	5
	IV	3	4	5	5

RISK ASSESSMENT CODE (RAC)

RISK ASSESSMENT CODE (RAC)	
Number	**Corresponding Level of Risk**
1	Critical
2	Serious
3	Moderate
4	Minor
5	Negligible

RISK MANAGEMENT WORKSHEET

Note: See next page. This is to allow the removal of document for reproduction as needed.

A. Mission or Task	B. Date/Time Group Begin: End:	C. Date Prepared:

D. Prepared By:

E. Task	F. Identify Hazards	G. Assess Hazards	H. Develop Controls	I. Determine Residual Risk	J. Implement Controls (“How To”)

K. Determine overall mission/task risk level after controls are implemented (circle one)
LOW(L) MODERATE(M) HIGH(H) EXTREMELY HIGH(E)

L. SUPERVISE AND EVALUATE

A-D	Self explanatory
E	Identify task relating to the Mission or Task in Block A
F	Identify Hazards - Identify hazards by reviewing METT-T factors for the Mission or Tasks. Additional factors include historical lessons learned, experience, judgment, equipment/weapon characteristics and warnings, and environmental considerations.
G	Assess Hazards – Assessment includes historical lessons learned, intuitive analyses, experience, judgment, equipment/weapon characteristics and warnings, and environmental considerations. Determine initial risk for each hazard by applying risk assessment matrix. Enter the risk level for each hazard into the worksheet.
H	Develop Controls – Develop one or more controls for each hazard that will either eliminate the hazard or reduce the risk (probability and/or severity) of a hazardous incident. Specify who, what, where, why, when, and how for each control. Enter controls into the worksheet.
I	Determine Residual Risk – Determine the residual risk for each hazard by applying the risk assessment matrix. Enter the residual risk level for each hazard into the worksheet.
J	Implement Controls – Decide how each control will be put into effect or communicated to the personnel who will it happen (written or verbal instruction: tactical, safety, garrison, SOP’s, rehearsals, battle drills). Enter controls into the worksheet.
K	Determine Overall Mission/Task Risk Level – Select the highest residual risk level and circle it. This becomes the overall mission or task risk level. The Commander decides whether the controls are sufficient to accept the level of residual risk. If the risk is too great to continue the mission or task, the commander directs development of additional controls or modifies, changes, or rejects the courses of action.
L	Supervise and Evaluate - The last step is not on the worksheet. Plan how each control will be monitored for implementation (continuous supervise, spot-checks, inspect, command presence, after action review) and reassess hazards as the situation changes. Determine if the controls worked and if they can be improved. Pass on the lessons learned.

Extremely High: Loss of ability to accomplish the mission if hazards occur during mission. A frequent or likely probability of catastrophic loss or frequent probability of critical loss exists.

High: Significant degradation of mission capabilities in terms of required mission standard, inability to accomplish all parts of the mission, or inability to complete the mission to standard if hazards occur during mission. Occasional to seldom probability exist of a critical loss exists. A likely to occasional probability exists of a critical loss. Frequent probability of marginal losses exists.

Moderate: Expected degraded mission capabilities in term of the required mission standard; will have a reduced mission capability if hazards occur during mission. An unlikely probability of catastrophic loss exists.

Low: Expected losses have little or no impact on accomplishing the mission. The probability of critical loss is unlikely, while marginal loss is seldom or unlikely. The probability of a negligible loss is likely or of personal injury.

APPENDIX F

ROIC/RSO CHECKLIST INSTRUCTIONS

A. GENERAL.

1. This document is meant to be a helpful reference for personnel acting in the capacity of Range Officer in Charge (ROIC) and Range Safety Officer (RSO). This document is not a replacement for the Range Control SOP. ROICs and RSOs are responsible for understanding and abiding by everything contained in the Range Control SOP when executing their duties. Training must be safe and well coordinated.

2. Report all serious incidents to BLACKBURN and chain of command. When a serious range incident is declared by the ROIC/RSO, the training event will be stopped until sufficient information is gathered to determine what happened, how it happened, and what steps are needed to preclude a recurrence.

3. ROICs will report to BLACKBURN once you have occupied a range and departed.

4. All ROICs and RSOs should be familiar with the Marine Corps Base Range Regulations and MCO P3570.1_ and other related orders and policies as required or directed.

5. Observe prescribed field sanitation procedures on ranges. Ensure that a complete police call is conducted after training is completed, and remove all ammunition type debris. At no time will you allow burning or burying trash on your range.

6. Do not allow any modifying of the range or its facilities without prior written approval from Range Control/Range Maintenance.

7. Anyone observing a fire in the training area or impact area will report it to BLACKBURN. The observer will give exact location if possible. Units will continue to train unless notified by BLACKBURN. At no time will Marines enter an impact area to extinguish or control the fire. If the fire is in the training area, the ROIC will move the unit out of danger and take necessary action to extinguish or control the fire, if possible or required.

8. Units will not bivouac on live fire ranges; using unit should/will request the training areas adjacent to the live fire range for that purpose.

9. ROICs/RSOs must be alert for severe weather conditions; additional alerts and information will be provided by BLACKBURN, as information is made available.

10. At no time will privately owned firearms be allowed on a live fire range unless authorized by range control. This does not include MCCS, involved in authorized recreational events.

11. ROICs/RSOs will conduct all safety briefs before live fire begins. Ensure that the RSOs have a total count of personnel/weapons/ammunition and equipment on his/her range.

12. When tracked/wheeled vehicles are used in the live fire event and vehicles are in close proximity of ground personnel, ground guides will be used. RSOs will enforce speed limits.

13. The RSO will return all equipment to BLACKBURN 24 hour after the training event.

B. ROIC/RSO QUALIFICATION.

1. All ROICs/RSOs of live fire ranges must possess a valid Camp Lejeune, Range Safety Card. Cards are valid for two years, safety briefs are conducted once a week at Range Control, Building 54 on each Friday at 0800, door to the conference room will be open at 0700, first come, first served basis. Special briefings are conducted on a case-by-case basis and must be coordinated 10 days in advance by calling 451-1240. The range safety card must be in their possession on the range.

2. ROICs will be qualified to supervise a live fire range with that weapon/weapon system and ammunition being fired.

3. RSOs will be qualified to supervise all safety activities with that weapon/weapon system and ammunition being fired.

4. The RSO/ROIC will have on hand and be familiar with current field and technical manuals for the weapon system/ammunition being fired. Thinks safety, do not throw, kick or otherwise rough handle ammunition. When opening ammunition boxes use only approved tools (no e-tools/axes or k-bars).

C. ROIC/RSO RESPONSIBILITIES.

1. ROIC/RSO will be present on the range during all periods of live fire firing and exercise full control over all activities conducted on the range.

2. ROIC must maintain constant (dual) communication with BLACKBURN. Must maintain dual, functioning and monitored communication. The ROIC/RSO will put the range into a “Check Fire” status if either means of communication ceases working. Your call sign is the range number that you are requesting permission to go HOT on (Example Lima-5/Fox-2/GP-22)

3. Entry into any impact area is prohibited without prior approval from Range Control/EOD. Any entry into the impact area is considered hazardous, appropriate control and supervision is mandatory. Handling or removing unexploded ammunition (duds) by unauthorized personnel is not permitted.

4. Ensure all road guards are posted at correct locations, properly equipped, properly trained on the communication gear equipped, and fully understand the mission/responsibilities. If the range has gates ensure that they are secured/locked. Personnel will not pass or circumvent road guards or roadblock/gates without permission from Range Control. Violators will be reported to BLACKBURN.

5. Report all range repairs and problems to the Range Inspectors and report it at Range Control on the range report.

6. ROICs/RSOs must understand and comply with all environmental and conservation requirements.

7. ROICs/RSOs will ensure during live fire that helmets, flak jackets are worn by all members conducting live fire. Hearing protection is also mandatory. To request a waiver of this requirement, a letter must be submitted to Range Control ten (10) working days before the scheduled event. Example (Scout Sniper Platoon conducting live fire).

8. The RSO will supervise storage of all munitions at the range and issue point. Ammunition will be under guard at all times and must be stored properly. Units will avoid excess breakout. Ammunition should be protected from the elements. Flame/spark producing items, flammable liquid and designated smoking areas should be at least 50 feet from ammunition storage/issue site.

9. RSOs will separate all blank type ammunition from live fire type ammunition; ensure all BFAs have been removed from weapons. Double check magazines to ensure no live ammunition are present or mixed with blank ammunition.

10. Ammunition that fails to perform as expected can normally be attributed to a malfunction, human error, or a weapon/equipment deficiency. In every instance, it must be report up the chain of command. Follow the instructions on the Ammunition Malfunction Data Collection Guide (8025 NAVMC 10135) and unit SOPs. Ammunition will always be inspected for obvious defects. Think safety, conservation and accountability with ammunition.

11. ROICs/RSOs must ensure that all proper procedures for handling Misfires/Hangfires are followed. Required time limits and procedures must be followed to prevent injury as prescribed by applicable TMs/FMs/MCDP/MCWP/MCO/Army Order and other required references.

12. ROICs/RSOs will report all duds, fired munitions and/or projectiles will not be tampered with. Any item/object that appears to be a dud will be treated as such.

13. To prevent accidents caused by blast effects of certain training ammunition, artillery simulators, hand grenade simulators, flash bangs will be limited for the use designated by unit leaders and under the supervision of a Marine experienced in the proper use of the training device. Ensure safe distance when using training devices or training ordnance.

14. The destruction of excess powder bags and charge increments under field training conditions is authorized if part of the training event. Precautions will be taken when burning field artillery powder bags and mortar charges/increments to ensure all established safety and fire prevention procedures are met.

15. Privately owned vehicles will not transport ammunition, weapons, pyrotechnics, and explosives.

16. RSOs must ensure that each weapon is inspected before and during live firing to assure safe operation. PFI/LTI should be current and complete, weapons should be properly cleaned and lubricated. Ensure all weapons have been proper cleared and inspected before leaving the firing line.

17. If weather conditions, rain, fog, smoke, dust, or other factors obscure the target area or range limits markers, firing will stop until conditions improve. Firing indirect weapons requires the FO to have eyes on target/impact area.

18. During periods of dry weather, which produce a severe danger of fire, BLACKBURN will impose restrictions covering certain munitions/and ranges to reduce the probability of range fires. Fire Readiness Plan 1-8.

19. No digging is authorized on ranges except to properly emplace weapon systems. If in a training area, all fighting positions will be filled in after the training event. No digging in ALZs/TLZs/GPs.

20. Report any and all POL/HAZMAT spills immediately to EMD.

21. Remove all comm wire, concertina wire, trip wire and guided missile wire from the range or training area. Do leave any barrier material on roads.

22. If your live fire training event requires a special range request it must be on the range with the OIC/RSO at all times.

23. Review with the safety vehicle driver/corpsman, the quickest, safest route to the nearest medical facility.

D. CHECKLISTS AND BRIEFS.

1. RANGE LIVE FIRE SAFETY BRIEF

a. This is your Range_____Safety Brief.

b. The Officer in charge (ROIC) is
_____

c. The Range Safety Officer (RSO) is
_____

d. The Position Safety Officers (PSO) (If Required)_____

e. The Misfire Pit is located
_____ (If Required)

f. Safety is Paramount. Safety will always be priority **NUMBER ONE** . No movement on the range will done without the RSO

being informed. All road guards will be briefed and placed by the RSO only. Anyone departing or entering the range will notify the RSO before doing so.

g. Everyone is a Safety Officer. If you observe a situation that you feel is unsafe call an immediate **cease-fire** (check fire for mortars) or **stop** (for individuals, Javelins, SMAWs, Blasting caps). A cease-fire must be given verbally and physically by giving the hand and arm signal to cease-fire. (Palm outboard, moving your arm up and down in front of your face.) In the case of a cease fire all weapons will go to condition 4 do not wait to be told. OIC/RSOs will check the backblast area to ensure it is properly cleared.

h. Red Pyrotechnics will be used for emergency cease-fire. (Smoke, Pyrotechnic Signals)
Note: Using unit must provide the red pyrotechnics (Unit SOP)

i. During firing the ROIC will be located _____ _____ and the RSO will be located _____. The PSO's will be located _____. The Corpsman will be located at the safety vehicle.

j. The dedicated safety vehicle is located _____ the safety driver is _____. Strip Map to Hospital.

k. MEDEVAC/CASEVAC will be handled by the safety corpsman and the OIC or RSO; all other personnel will stay clear of the emergency. (Go over routes to hospital or nearest LZ.) Muster at the assembly area for accountability.

l. Duds (UXO)(are/are not) found on this range. Do not pick up, kick, or hit any ordnance on this range. Notify the RSO immediately of possible dud locations. Dud procedures for this range are as follows _____.

m. There (will be/will not be) maneuvering on this range. If a Marine is within 17 Degrees or a thumb hand fist width of your muzzle **DO NOT FIRE**. Be aware of your position and the Marines around your position. If you are in doubt of the situation **DO NOT FIRE.**

n. Overhead fire (is/is not) authorized for this range. The overhead firing procedures for this range are as follows

_____

_____

o. The 4 Weapons Safety Rules are:

(1) Treat every weapon as if it were loaded.

(2) Never point your weapon at anything you do not intend to shoot.

(3) Keep your finger straight and off the trigger until you are ready to fire.

(4) Keep your weapon on safe until you are ready to fire.

p. If you should encounter a stoppage apply immediate action and if necessary remedial action and **complete the drill**. Continue with the drill until you hear the command cease-fire or stop, at which point you will comply unless told to do otherwise by a safety officer. (Go over immediate action for all weapons being fired on the range.) Each weapon system has different immediate action procedures and must be strictly followed to prevent an accident.

q. The uniform for this range is _____ Hearing protection is/is not required on this range while conducting live fire. (If maneuvering, hearing protection should not be worn or just one ear. Observe the downrange area. Your left lateral limit is _____, your right lateral limit is _____. Your internal lateral limits are the left and right of your targets. Your limit of advance is _____. All of your rounds will impact in this range fan. You will fire on your designated targets only. Muzzles will be pointed in a safe direction at all times.

r. The only types of ammunition that will be used on this range are _____.

Note: Brief any notice of ammunition reclassification or ammunition information notice, this will come out as a message.

s. The weapons going to be used on this range are _____. (Go over the condition codes for all weapons being fired.)

t. Any left-handed shooter or thrower (for hand grenades).

u. Does anyone here wear glasses or contacts and does not have them here.

v. Brief any range regulations that might apply.

w. The designated smoking area is_____ There is no smoking around ammunition.

x. Brief the range layout. (Left/Right Lateral Limits)

y. This concludes your Range _____Safety Brief. Are there any questions?

z. Helmets/flak jackets and hearing protection will be properly worn and used.

aa. Ammunition issue point is located _____ and ammunition is properly stored and guarded.

bb. No cross range firing.

cc. Continually check range impact area to ensure it is clear of all personnel and equipment. Should look out for low flying fixed-wing and helicopters.

dd. Shakedown of all personnel will take place and 100 percent accountability of ammunition.
Note: Expenditure reports for ammunition will be filled out at the range after the unit shakedown.

ee. Location of Armor:
_____.

ff. All ammunition dunnage will be taken _____ _____ensure it is separated; brass/links/trash. At no time will live ammunition/ brass/links or other types of ammunition dunnage, that would normally be turned in to DRMO, be put into any of the dumpsters/trash aboard the Base. At no time will this material be burned or buried. SNCOs/NCOs will supervise.

gg. Report all Marines trained, ammunition expended by type to BLACKBURN.

ALWAYS REFER TO LOCAL RANGE REGULATIONS

2. POSITION SAFETY OFFICER BRIEF (If required)

a. Review MEDEVAC/CASEVAC procedures. Ensure safety vehicle driver familiar with route.

b. Review training objectives, individual training standards, mission performance standards, commanders' intent, METL, time line and scheme of maneuver.

c. Walk the ground and go over signal plan/cease fire plan.

d. Review the level of training and the associated risk, think ORM, and fill out ORM worksheet.

e. Assign Position Safety Officer specific duties for exercise.

f. Discuss potential friction points or critical areas within the Scheme of Maneuver that require specific attention.

g. Closely supervise immediate action procedures at all times.

h. Enforce muzzle awareness.

i. Enforce proper weapons handling.

j. Supervise weapons conditions/weapons safety rules.

k. Verify the use of required safety gear.

l. Take actions necessary to prevent dangerous situations.

m. Walk range with Marines/Sailors.

n. Brief range lateral limits by ground feature or azimuth.

o. Use compass to measure weapon safety angles. No cross range firing.

p. The requirements for initiating a cease-fire and the signal for cease-fire.

q. The location of limits of advance for individual target engagement.

r. Action on prolonged weapon stoppages.

s. The evaluation system if necessary.

t. The sequence of the debrief/after action review/hot washup.

u. Issue start line brief. Ensure timelines are met.

v. Do not mix blank ammunition with live fire ammunition. Ensure the BFA has been removed before firing live ammunition and installed before firing blank ammunition.

w. Ensure weapons are cleaned, lubricated and properly checked before conducting live fire.

NOTE: READ ALL LOCAL RANGE REGULATIONS BEFORE FIRING

3. OFFICER IN CHARGE BRIEF

STATIC LIVE FIRE

ADMINISTRATIVE:

a. Ensure all range flags are up/red lights are set.

b. Ensure all targets are set up.
____ Targets in stands. Target type_____.

c. Establish solid/dual communication with range control via radio.

d. Assign person to prepare ammo for issue for all relays.
_____ Rounds per shooter. _____Relays.

e. Ensure the range is laid out correctly.

(1) Within the SDZ.

(2) Target line in correct spot, spot check.

(3) Firing lines are in the correct spot.

(4) Ammo issue point is in correct spot.

(5) First aid kit is in the correct spot.

PRELIMINARIES:

(Shooters are facing down range at the _____ yd line/firing line).

Count off and assign relays if necessary.

Conduct a complete safety check (CLEAR EXTRA WPNS!)

Prepare weapons for firing. (Have two bottles of CLP at ends of the firing line. Line shooters will take a knee and stand when done)

Brief safety PSO's while weapons are getting prepared.

PSO's: Constantly watch the shooters for any safety violations and immediately correct them as well as report it to myself or to the RSO. _____ will position himself on the left half of the firing line and will be the center of the firing line when moving up and down range. _____ will position himself on the right half of the firing line and will take down all scores on any scored event.

AMMO SNCO/NCO: _____ will be the ammo NCO. You will break down the ammo into ____ piles of ____ rounds each with one set of earplugs per pile. You will also be responsible for the first aid kit.

NOTE: READ ALL LOCAL RANGE REGULATIONS BEFORE FIRING

COURSE OF FIRE:

DISTANCE	#ROUNDS	POSITION	#DRILLS

CONDUCT OF FIRE: In the event a weapon has a stoppage or malfunction and cannot be cleared by the shooter or PSO's, the weapon will be left on the firing line, muzzle pointed down range, if possible weapon on safe. The shooter will complete the drill with a stock weapon. An armorer will be called to clear it.

MEDICAL EMERGENCY PLAN: If a medical emergency arises _____ will contact the corpsman via radio. The command for cease-fire will be given and _____ will clear

the firing line, moving the rest of the shooters away from the casualty, and to the designated assembly area. He will also take charge, clear, and maintain the casualties weapon. The other PSO's will administer 1st aid to the casualty until the corpsman arrives. RANGE CONTROL WILL BE CONTACTED TO GO INTO A CHECK FIRE.

READ THE SAFETY BRIEF!!!
Give local safety rules

4. ORGANIZATIONAL BRIEF

a. Appointments:

The OIC is _____
The RSO is _____
Safety supervisors are _____
_____
Ammo SNCO/NCO is _____
The Corpsman is located _____
Safety Vehicle/Driver Located: _____

b. Range Layout: Your targets are the down range area. Face about.
You are at the _____ yd line. The yard lines are
_____
_____

NOTE: READ ALL LOCAL RANGE REGULATIONS BEFORE FIRING

To your left/right is range _____,_____, it is hot/cold And may go hot/cold anytime.
The ammo issue point is _____.

The First aid kit is located _____.

c. System of Work:

There will be _____ relays (they have been designated already). There are ____ target pullers. After completion of all of the shooting you will evaluate and repair your target.

d. Scoring System: Your score will be the number of rounds on target out of _____.

e. Ammo Issue:
You will be issued _____ rounds of _____.

You will fill your magazines with _____ rounds each. When I give you the command, you will face to the right and file off to the ammo point.

Then you will move to the _____ yard line, take a knee and fill your magazines.

f. Road Guard Positions/Equipment

Note: Road Guards should be positioned in pairs.

6. INTRODUCTION/INSTRUCTION FOR ROIC/RSO SAFETY BRIEF

a. Stages Reached: Up to this point you have been given BWI's, Practice Periods, and the Weapons handling test.

_____

_____

b. Purpose: The purpose of this shoot is for the shooter.

_____

_____

c. Reason Why And Incentives: The reason for this shoot.

_____

_____

d. Remind And Review: Common mistakes are. Remember everything from your BWI and Practice Period.

_____

_____

e. Teaching Points:

_____

_____

f. General Brief of Exercise: This is what is going to happen.

_____

_____

g. Supervised, Operation Risk Management, Leadership:

_____

_____

6. DURING LIVE FIRE

a. ENSURE THAT SHOOTERS HAVE EAR PROTECTION IN. DETAILED BRIEF BEFORE EACH DRILL: Explain each drill before it is fired.

b. FOLLOW THE COURSE OF FIRE: Do not deviate.

CONDUCT SHOOT SAFELY: As always safety is paramount!

c. CHECK FOR ERRORS AND CORRECTIONS: Ensure the SNCOs/NCOs conduct proper checks and coaching techniques.

7. AFTER FIRING

a. CONDUCT A COMPLETE SAFETY CHECK**: POLICE CALL**

(1) Have the shooters get on line at the _____ yard line, and face down range, THEN UNLOAD/SHOW CLEAR. Clear the extra weapons! After they are clear face up range.

(2) Have details appointed to take down targets, police call, etc. Once done go to next step.

SUMMARIZE, BRING UP POINTS, QUESTIONS TO/FROM, STATE STANDARD ACHIEVED AND LOOK FORWARD TO NEXT TRAINING EVENT:

_____
_____
_____
_____
_____
_____

RETURN RANGE PROPERTY: 24 HOURS AFTER EVENT.

Now the range flags come DOWN! Regroup at a convenient place.

8. COMPLETE SAFETY CHECKS ARE AS FOLLOWS:

a. **Unload, show clear, check magazines, check magazine pouches, and conduct shakedown of personnel.**

b. Range clearance: The range will be inspected by a range inspector and a Viper Card will be issued once the range is cleared.

10. AFTER FIRING

INSPECT WEAPONS: REPORT ALL PROBLEMS TO THE ARMORY. TURN IN WEAPONS FOR REPAIR.
Request from Blackburn a range inspector. COMPLETE POLICE CALL, LEAVE THE RANGE ALWAYS IN BETTER SHAPE THEN YOU GOT IT.
Fire Commands

Direct Fire

Key Word: **ADDRAC**

ELEMENT	DEFINITION	EXAMPLE
Alert	Alerts the firing unit for further instruction.	“Squad”
Direction	General direction to target.	Direct Front
Description	Brief description of target	“Machinegun Bunker”
Range	Approximate range in meters to target	“Three hundred”
Assignment	Tells who is to fire on the Target	“Rifleman”
Control	The command to commence and control the fires	“Rapid” “On my signal”

FIRING COMMANDS

COMMAND	DEFINITION	EXAMPLE
FILL	Used to alert the shooter to fill magazines.	Fill one magazine ten rounds.
LOAD	A magazine is inserted into the weapon.	with a magazine of ten rounds, load.
MAKE READY	A round is chambered.	Make ready.
FIRE	The shooter is allowed to fire the weapon.	On my command…Fire. Fire at will. You may commence firing.

DUD ROUND PROCEDURES

a. When firing dud-producing ammunition such as TOW, AT-4, SMAWs, 60/81mm Mortars, Mk19 40 mm, Hand Grenades and M203 the RSO is required to have a minimum of 1 misfire pit. (Not required for TP rounds) All misfire pits will be located 50 meters from both ends of the firing line and should be 5 feet long, 3 feet wide and 2 feet deep with the long end pointing down range. The pit must be large enough to place the largest weapon on the range into it. If a dud is found on the range, the using unit will not touch the round but will call Base EOD and report it to BLACKBURN. If the dud can’t be removed from the weapon the weapon will be placed in the dud pit pointed down range and EOD will be called by the RSO or OIC. Depending on the local range regulations firing may continue. OIC or RSO must check with range control before firing may begin. Never leave the range with a dud in the pit until someone from EOD or the ammunition technician takes responsibility for it.

E. RANGE OPERATIONS CHECKLIST

1. MISSION ANALYSIS

a. Who will be firing the range? Number of personnel.

b. What weapons and courses of fire will be used?

c. What range will the training be conducted on?

d. When is the range scheduled and when does it go hot?

2. LOGISTICAL REQUIREMENTS

a. Has sufficient ammunition been requested for the number of personnel?

b. Are the range facilities adequate for the type of training to be conducted?

(1) Has the range request been submitted?

(2) Has enough time been scheduled to complete the training?

(3) Have conflicts that surfaced been resolved?

c. Has the transportation request been submitted?

(1) Safety vehicle as well as additional transportation as needed.

d. Has the communication request been submitted?

(1) A primary and alternate plus additional radios for road guards.

(2) Is an OE254 needed?

(3) Is a RTO needed?

e. Has the chow request been submitted?

f. Has a corpsman been requested?

(1) Back board, stretcher and C collar.

(2) Unit-five.

3. BECOME THE EXPERT

a. Review TM’s and FM’s on the weapons/weapons systems and related equipment to be fired.

b. Have armorer LTI/PFI weapons to be fired.

c. Read the range regulations on the range to be fired. If questions arise, visit range control.

d. Check MPS and ITS manuals to see if training tasks can be integrated into the range training plan.

4. DETERMINE PERSONNEL REQUIREMENTS

a. OIC- overall responsible for the safety and conduct of the range. The OIC will position himself where he can best control the shoot. All personnel who have questions and concerns about the training will go through the OIC and not walk up to the firing line and make suggestions to the RSO. The OIC is responsible for ensuring that the Battalion Gunner and Battalion Commander have received a confirmation brief. He will call in to Range Control when requesting to go HOT or COLD, the OIC must be Gunnery Sergeant or above.

b. RSO - responsible for the safety of the range and will conduct all training on the range. He will be in position near the firing line and have control of the NCO giving the commands,

PSO’s and the shooters. Prior to the shoot the RSO will give the safety brief to all persons involved in the shoot in any way. The RSO will ensure all shooters have a weapon they have BZO’d and that any shooter needing eyeglasses that does not have them will not shoot. He will ensure every Marine on the firing line is wearing hearing protection. Upon completion of live fire the RSO will ensure a proper police call is conducted. The RSO must be a Staff Sergeant or above unless your unit has been granted a waiver from the Commanding General, MCB requesting a waiver from the rank requirements set forth by Marine Corps Order P3570.1_.

c. PSOs - are responsible for executing the plan that the OIC and RSO have designated. They will ensure the Marines on the firing line are following all safety precautions and are following the commands of the RSO. They will have a bore punch already assembled and will ensure weapons are in condition four when the Marines leave the firing line, except in emergency procedures. PSO’s should be a Corporal or above.

d. Command NCO - is responsible for giving all commands on the line. He will be briefed by the OIC and RSO as to the course of fire. He will assist the corpsman in an emergency situation after he ensures that all weapons are in condition four. The Command NCO should be a Corporal or above.

e. Ammunition NCO - is responsible for breaking the ammunition down according to instructions passed by the RSO. He is responsible for ensuring that Marines get the proper amount of ammunition and that it is distributed in an orderly manner. He will save all ammunitions cans to ensure there is enough for ammunition turn in. The Ammunition NCO should be a Corporal or above.

f. The OIC/RSO will brief the target detail and target operators on their duties and functions and all safety requirements.

g. Tower operator - Generally is a civilian who will operate the target system.

h. The using unit should have a backup plan for hip pocket classes that would support the live fire exercise to fill in for delays in transportation, weather, logistics or any other requirements.

i. Radio/Telephone Operator (RTO)is responsible for establishing communications. The RTO will continuously monitor the safety net and ensure that radio checks are conducted every

30 minutes (on the hour/half hour) while in a hot status. The RTO will immediately let the RSO know when communications are no longer established with range control.

j. Road guards - will be properly positioned and briefed on their duties by the RSO. The RSO must have positive communications with all road guards. See Chapter 5 to see if road guards are required.

k. Corpsman - is responsible for providing immediate first aid to anybody incurring an injury. He will need to be stationed with his unit-five off from the firing line but in a position where he can observe the firing line.

l. Armorer - is responsible for ensuring that the OIC and RSO are briefed on any weapons malfunctions/discrepancies prior to, during and after the shoot. The armorer will provide on the spot maintenance as within his capability. He will ensure there is CLP on hand, and any special tools necessary to assist him in his duties for that particular shoot. The armorer will not approach the firing line unless called for by the RSO.

m. Safety Vehicle Driver - must have the vehicle physically present during all live fire exercises as readily and close to training as terrain permits. The driver must be familiar with all routes to Emergency facilities.

5. Equipment

a. Range Flag. Range regulations requires it on each live fire range.

b. Surface Danger Zones.

c. Other safety equipment (aiming circle, compass).

d. EOD support, if necessary.

e. Appropriate publications pertaining to the training that will be conducted. And light (night firing).

f. Radios.

g. Field phones and wire, if necessary.
h. OE254 antenna, if necessary.

i. PA set with back up bullhorn, if necessary.

j. Training aids for concurrent training stations.

k. Sandbags.

l. Bivouac site (Will not bivouac on a live fire range).

m. White tape or green chemical light for helmets for control of personnel.

n. Vehicle flag for vehicles involved in firing.

o. Safety vehicle.

p. Ear Plugs.

q. Water cans with water.

r. Score card, if necessary.

s. Cleaning equipment for weapons.

t. Shovels, brooms and other cleaning supplies and equipment, if necessary.

u. Target, and target accessories, if necessary.

v. Tarp, stakes, and rope, to cover the ammunition.

w. Spare weapons and repair parts as needed.

x. Tow bar and slave cables for vehicles, if necessary.

y. Fuel cans for vehicles, if necessary.

6. DETERMINE AVAILABLE RESOURCES

a. Keep unit integrity.

b. Utilize NCOs.

c. Effect coordination with supporting organizations.

(1) Ammunition

(2) Transportation

(3) Training aids

(4) Corpsman

(5) Chow

(6) Weapons

(7) Other equipment (safety pyrotechnics and security ammunition).

7. PROPER SUPERVISION

a. Publish LOI

(1) Uniform for range and firing personnel.

(2) Mode of transportation, departure times and places.

(3) Method of messing to be used.

(4) Any special requirements being placed on the unit.

(5) Operational Risk Management/Worksheet.

(6) Emergency Medical Evacuation Plan.

(7) Concept for training.

(8) Scheme of maneuver.

(9) Rest/Sleep/Mess Plan.

b. Organize a plan for firing:

(1) Determine range organization.

(2) Outline courses of fire/individual training standards to be used.

(3) Have fire commands ready for use on the range.

(4) Set rotation of stations.

c. Rehearse concurrent training instructions.

d. Brief Radio Operators/Road Guards/Other Safety Personnel.

e. Brief and rehearse PSOs on range operations and all his duties.

f. Collect and concentrate equipment for use on the range in one location.

g. Obtain training aids.

h. Pick up target, if required.

i. Report to range control to sign for range.

8. OCCUPY THE RANGE.

a. Request permission to occupy the range, from BLACKBURN.

b. Establish good/dual communications.

c. Have designated areas prepared:

(1) Parking.

(2) Ammunition Supply Point.

(3) Medical Station, safety vehicle location.

(4) Water and messing point.

(5) Concurrent training.

(6) Tactical landing zones.

(7) Smoking Area.

d. Inspect range for operational condition.

e. Raise flag when occupying or firing according to the Range Control SOP, Chapter 5.

f. Check ammunition to ensure it is the correct type and quantity and that it is serviceable.

g. Ensure that range personnel are in proper uniform and the equipment is in position.

h. Receive firing unit.

i. Conduct safety checks on weapons.

j. Check for clean, lubricated and fully operational weapons.

k. Conduct safety briefing (to include administrative personnel on range).

l. Organize personnel into firing order (keep unit integrity if possible).

m. Request permission to go hot from Range Control (BLACKBURN).

9. CONDUCT OF FIRING.

a. Maintain continuous communications with Range Control. Radio checks every 30 minutes (on the hour/half hour).

b. Commands from the tower or command NCO clear and concise.

c. Range areas policed.

d. Ammunition accountability maintained.

e. Personnel accountability maintained.

f. Vehicles parked in appropriate areas.

g. Personnel in proper uniform.

h. Ear plugs in use.

i. On the spot corrections being made when Marines use poor techniques or fail to hit the target.

j. Conservation of ammunition enforced.

k. Weapons cleared before they are taken from the firing line.

l. Personnel checked for brass and ammunition before they leave the range.

m. Ensure all safety rules are enforced and proper weapon condition codes are used.

n. Muzzle awareness.

10. CLOSING OF THE RANGE.

a. Close down the range according to the Range Control SOP, Chapter 5.

b. Remove all equipment, ammunition and dunnage from the range.

c. Police range and all surrounding areas.

d. Request a range inspector from Range Control when ready to be inspected.

e. Submit after actions report, report all range problems.

f. Report any noted safety hazards to proper authorities.

g. RSO/OICs can go to the following web page and fill out an Interactive Customer Evaluation (ICE) form on Range Control and submit it on line. Listed below is the web page. http://ice.disa.mil/index.cfm?fa=site&site_id=113

11. Ammunition accountability when delivered to the range; processing of expenditure reports and completion of turn-in documents (when required) before ammunition leaves range.

a. Accurate expenditure reporting cannot be overemphasized. MCO P8020.10_ specifically requires RSO’s to complete this report before departing the range. If this document is completed correctly, on time, and at the range (after a thorough shake-down), then we can potentially reduce ammo-theft, improper ammo storage (in wall lockers, desks, armories, etc.) and the subsequent investigations that follow.

Accurate malfunction reports cannot be overemphasized. Providing this information as required to higher headquarters ensures that ammunition available for issue is safe and the best available in order to maximize training time.

APPENDIX G

NAVAL GUNFIRE

1. PURPOSE.

In order to enhance the level of training for Shore Fire Control Party(s) (SFCP) and other Marine units (MEU, MLE, Force RECON, RECON BN) required to maintain proficiency in delivery of Naval Surface Fire Support (NSFS), the Commanding General, Marine Corps Base, Camp Lejeune, North Carolina (CG, MCB CLNC) has authorized NSFS firing from qualified ships (as defined below) into the G-10 Impact Area. To ensure the safe conduct of SFCP/NSFS training, this annex prescribes procedures for the planning, coordination and firing of Naval Surface Fire (NSF) aboard MCB CLNC. The following is a list of references that will be used when Naval Gunfire is used at Camp Lejeune/G-10.

(a) Marine Corps Order P3570.1

(b) Army Regulation 385-63

(c) US Navy Fleet Exercise Publication (FXP) 5B Chg 2

(d) Allied Tactical Publication (ATP) 4E – Naval Gunfire Procedures

(e) US Navy SW 323-AB-ORD-020 Rev 2

(f) NAVORD PUB TW024-AA-ORD-010, Ammunition (Serviceable, Suspended, and Limited Use)

(g) Marine Corps Base (MCB) Camp Lejeune, Base Order P3570.1

(h) 10th Marines SFCP SOP (TBP)

(i) Navigational Chart 11543 (Cape Lookout-New River) River) NAD 83/WGS-84

(j) Camp Lejeune Military Installation Map (V742S Edition 1-DMA) NAD 83/WGS-84

2. SCOPE.

The procedures described in this Appendix and references (a)-(j) apply to all Marine and Naval Forces conducting SFCP/NSFS training aboard MCB CLNC. CG, MCB CLNC is the only approval authority for deviation from this Order.

3. GENERAL.

a. Inert ordnance is not cleared for fire into the G-10 impact area.

b. Prior to firing, the Range Officer In Charge (ROIC), Range Safety Officer (RSO) and/or Naval Gunfire Liaison Officer (NGLO) shall conduct a face-to-face range safety brief with the firing ship(s). This brief will be conducted after the ROIC/RSO/NGLO has conducted a face-to-face brief with Range Control BLACKBURN/Scheduling. The purpose of this brief is to ensure shipboard personnel are cognizant of range safety requirements, procedures, and scheduled training events.

c. Prior to firing into the G-10 impact area, the supporting ship(s) must conduct a Pre-Action Calibration Fire (PACFIRE) seaward in order to verify 5”/54 gun system operation, check meteorological data, determine Initial Salvo Velocity (ISV) and conduct barrel warming. Results of this PACFIRE must be updated into the ship’s fire control computer and verified by Gunfire Liaison Officer (GLO) prior to any firing into G-10.

d. IAW this SOP, ROIC/RSO and participating ship(s) will maintain two-way communications with BLACKBURN, on frequencies designated in paragraph 7 below, while the range is “HOT.”

e. Prior to live-fire, a non-firing rehearsal utilizing reference (j) geography should be conducted. This rehearsal may be conducted while in route to MCB CLNC/Onslow Beach.

f. Ships are responsible for maintaining clearance of water surface area 350 meters from ship along gun-target line.

g. Ships are cleared for overhead fire beyond the 350-meter point. Ships must verify munitions to be fired are cleared for overhead fire IAW Ref (f). Approved DODICs for firing in to G-10 Impact Area are (no exceptions):

Projectile	**DODIC**
HE-CVT	D350
	D295
	D346
	D803
HE-PD	D330
	D343
	D884

HE-MT/PD	D338
	D340
HE-VT	D331
	D332
	D347
ILLUM	D328
	D353
	D354
VT-NON-FRAG	D333
	D334

h. The G-10 Impact Area is defined by the following coordinates:

(1) 3438.70N5-07717.23W7 (GRID 18STD90373605)
(2) 3438.88N4-07716.57W3 (GRID 18STD91403637)
(3) 3438.62N6-07716.08W9 (GRID 18STD92123585)
(4) 3438.18N7-07715.90W9 (GRID 18STD92393504)
(5) 3437.90N6 07716.92W2 (GRID 18STD90833455)

Note: Rounds impacted outside G-10 will result in an immediate “Check Fire” until target coordinates/gun fire control solution can be verified.

i. NSF Spotters/Observers will normally be placed in a vantage point perpendicular to the gun-target line in order to adjust fires. Primary Observation Post will be OP-5/G-3 (GRID 8951634423, ALTITUDE 25), but other OPs may be utilized when training more than one SFCP/Spot Team.

j. No intentional discharge of ordnance into the water is permitted.

k. Naval vessels will not discard refuse overboard or pump bilges while in the vicinity of MCB CLNC.

l. Ships must report number and type of rounds expended to the ROIC/NGLO at end of training. This information will then be forwarded to BLACKBURN along with number of Marines/Sailors trained.

m. Ships must maintain a constant lookout (visual and radar) for low flying aircraft and surface vessels that may interfere with live-fire training.

n. U.S. Coast Guard Regulations require that the Atlantic Intracoastal Waterway (AIWW) between Onslow Beach Bridge and Bear Tower be closed to routine marine traffic during NSFS live-firing events. MCB CLNC will coordinate with U.S. Coast Guard for issuance of applicable Notice To Mariners (NTM) and Broadcast Warnings and will schedule the Navy Boat Crew to enforce closure.

o. State Highway 172 aboard MCB CLNC will also be closed between the intersections with Sneads Ferry Road (south) and Lyman Road (north) during all NSFS live-firings. The unit(s) conducting training is/are responsible for providing the personnel and equipment required to accomplish the HWY 172 closure. At a minimum, six personnel with VHF communications gear and transportation will be employed. The following checkpoints will be established prior to and maintained throughout any live fires:

(1) Intersection of HWY 172 and Sneads Ferry Road (mechanical gate with flashing lights installed).

(2) Intersection of HWY 172 and Lyman Road (mechanical gate with flashing lights installed).

(3) Sneads Ferry Road vicinity of LZ HAWK Fire Tower to preclude use of tactical trails in reaching HWY 172.

(4) At ETA-4 and Sneads Ferry Road

(5) At Freeman Creek Landing and Highway 172

p. Two-way communications between all three checkpoints and the RSO/ROIC must be maintained continuously while the range is “HOT.”

q. Additionally, Road Guards will be deployed one hour prior to commencement of live-fires in order to thoroughly sweep HWY 172, LZ HAWK, and Freeman’s Creek Road and Boat Launch areas prior to HWY 172 closure.

4. SAFETY.

a. Every person involved in this training is a safety officer and can initiate a “Check Fire,” when an unsafe condition or act is observed. Only the ROIC/RSO may cancel a “Check Fire.”

b. Unlike artillery, naval gunfire does not depend on the angle of fire to control the angle of fall. Due to the ballistics of naval gunfire and the related trajectory, the angle of fall for naval gunfire is a function of range. As such, the only approved Fire Support Area (FSA) for NGF into G-10 Impact Area is bounded by the following coordinates:

(1) 3429.33N4-07714.61W6 (GRID 18STD94001865)

(2) 3432.31N6-07708.44W0 (GRID 18SUD03552395)

(3) 3430.90N9-07707.43W8 (GRID 18SUD05052130)

(4) 3427.89N3-07713.62W6 (GRID 18STD95451595)

This FSA ensures a minimum range of 14 kyds (13.3 km) to the near boundary of the G-10 Impact Area and an angle of fall greater than 20 degrees.

c. The maximum ordnance of the NGF shall not exceed 17,999 MSL.

d. The ROIC is responsible for determining the minimum and maximum gun target line relative to the assigned FSA. These will be between 309-353 degrees true.

e. The above standards are normally not negotiable and are in place to preclude lower round trajectory resulting in a higher skipping probability.

f. Additionally, an immediate “Check Fire” will be called for any of the following reasons:

(1) Loss of communications between spotters and firing unit; or RSO, firing unit and BLACKBURN; or RSO and HWY 172 Road Guards

(2) Targets (Impact Area) NOT visible to Spotters

(3) Range Foulers (Land, Sea or Air)

(4) Gun or Gun Fire Control System (GFCS) casualty

(5) Gun sight angle less than 15 degrees

(6) Gun Target Line (GTL) outside safe firing limits

(7) Marine mammals within 100 feet of ship

(8) Whales, turtles, or manatees within 500 yards of ship

5. PERSONNEL, DUTIES, AND RESPONSIBILITIES.

When conducting unit level SFCP/NSFS training, not in conjunction with a combined arms exercise live fire, the required personnel with their duties and responsibilities are listed below:

a. OP Range Safety Officer (RSO).

(1) NGLO or qualified NGF spotter E7 or above that has a valid MCB CLNC RSO Card.

(2) Perform duties IAW Chapter 2 of this Order and 10th Marine Regiment Safety SOP.

(3) Schedule G-10 Impact Area and Observer positions as required.

(4) Responsible for conducting face-to-face brief with Range Control, at least one day prior to exercise and prior to briefing Naval Surface Fire Support Ship (NSFS). Brief shall include but not limited to pre-exercise message, FSA, concept of operations, Operational Risk Management, and ship’s readiness ratings.

(5) Conduct a face-to-face brief with designated firing unit(s) prior to any live firing into the G-10 Impact Area.

(6) May also serve as LRSO, when employing lasers.

b. Firing unit.

(1) The Commanding Officer of the NSFS ship is responsible for all aspects of safe firing aboard ship.

(2) Responsible to adhere to all regulations and procedures prescribed in Chapter 2 of this order.

(3) Must request airspace, W122 (surface-17,999ft), from FACSFAC VACAPES and Onslow Beach water space from MCB CLNC Range Control.

(4) Ensure all ammunition is cleared for overhead fire and is on the approved DODIC list.

(5) Maintain positive two-way communication with RCDO(BLACKBURN) on 325.00 UHF (primary) or 38.60 VHF (primary) and commercial telephone (910) 451-3064 (alternate). Conduct communications checks every 30 minutes on the half hour and hour when in a “HOT” status.

(6) To go “HOT,” the ship must follow procedures as prescribed in Chapter 11 of this manual.

(7) When firing in conjunction with a combined arms exercise personnel required include: OP RSO/LRSO, G-10 Helo RSO, R5306D RSO.

6. COORDINATION INSTRUCTIONS.

a. Live-fire NSFS/SFCP training will be scheduled IAW Chapter 3 of this Order. Normally 30 days lead time is required in order to coordinate AIWW closure and issue appropriate NTM and airspace warnings. Request of less than 30 days will be handled on a case-by-case basis. 2d Marine Division and 10th Marines NGLOs will assist in the planning and coordination of all NSFS/SFCP live-fire training and should be contacted early on in the process.

b. Supported unit (SFCP/Spot Team) will publish a pre-exercise message to ALCON NLT 96 hours from execution of exercise. Pre-Ex format IAW reference (e).

c. Full service charge is the only authorized propellant for firing aboard MCB CLNC. Reduced charge is strictly forbidden.

d. Only “qualified” NSFS capable ships may be assigned to conduct live-fire support for SFCP training aboard MCB, CLNC. A qualified ship is designated as one that has successfully completed a FIREX I qualification and has an M-2 or better NSFS readiness rating.

7. COMMUNICATIONS.

a. Range Control MCB CLNC nets:

(1) Range Control Safety Net 38.60 FM Squelch Off

(2) Air Safety Control Net 325.0 UHF

(3) Commercial Telephone Number (910) 451-3064 DSN 751

b. NSFS Coordination/Spotter Nets and Road Guard Coordination Net will be promulgated in the Pre-Ex message.

APPENDIX H

GREATER SANDY RUN TRAINING COMPLEX (GSRA)

A. GENERAL.

1. Background.

The Greater Sandy Run Training Complex is a 41,000+ acre parcel located to the west/southwest of MCB Camp Lejeune. It consists largely of cutover timber, pine plantations, large areas of wetlands and pocosins swamp. Within the GSRA is Camp Davis, a WWII Army Airfield and training facility located at the southern end near the town of Holly Ridge. All support facilities were removed from Camp Davis when the Army departed. The airfield consists of a road network and two runways dating from the early 1940's. **NO DUD PRODUCING ORDNANCE AUTHORIZED IN THE GSRA TRAINING COMPLEX**.

2. Location.

The Greater Sandy Run Training Complex is located within Onslow County. The town of Verona is located adjacent to the eastern boundary of GSRA. US17 is a common boundary that runs east and southeast. Padgett, Haws Run, Dawson Cabin, and High Hill Roads make up the northern boundaries. The Greater Sandy Run Training Complex has a common boundary on the east and southeast side by US Highway 17, by State Road 50 on the southwest and west side, by Padgett, Haws Run, Dawson Cabin, and High Hill Roads on the north side, excluding some out parcels along the northern and western perimeter. Highway US17 along this boundary includes three underpasses, allowing grade-separated access from Camp Lejeune to the GSRA.

3. Threatened and Endangered Species.

Pocosin areas as in the GSRA have long functioned as de facto wildlife refuges in the coastal Carolinas as more suitable areas were developed for human habitation or use. Fauna of these areas is typical of that indigenous to the southern U.S. coastal plain. In addition to the many species of birds, fish, amphibians, and small mammals which occur naturally within the pocosins and surrounding uplands, larger mammals such as bobcats, black bear and white-tail deer are present. Because the GSRA is widely used by local hunters, public safety is always a concern especially during hunting season.

B. RANGES/TRAINING AREAS AND TRAINING FACILITIES.

1. General.

The Greater Sandy Run Training Complex is a 41,000+ acre parcel consists of four live fire ranges, 22 training and maneuvering areas, seven tactical landing zones, one para-drop zones, and an airfield seizure facility. Other ranges are scheduled to be developed and constructed in the future.

2. Live Fire Ranges.

a. SR-6 South.

(1) Description. SR-6 South is an Infantry Platoon Battle Course (IPBC) and field firing range located at grid coordinates 719329. This range is used as a static target practice range, moving realistic target range, basic techniques of fire range and a live-fire maneuver range, where troops are firing at targets as they maneuver down the length of the range. Target arrays and the number of targets engaged are by approved scenarios. PITS targets and operator must be requested. Vehicle-mounted weapons systems for static fire require prior approval. Night exerciser/operations are authorized. Class 1 Lasers are authorized. Primary direction of fire is 320 degrees magnetic.

(2) Access to range. To reach SR-6 South from Verona Loop, vehicles must proceed west on Verona Loop Road, pass Verona Loop Road and Old Wilmington Road intersection, and proceed straight ahead through the vehicle underpass. Crossing under Hwy 17 underpass, vehicles will proceed south to the intersection of Hwy 17 and Moore’s Ridge Road. Vehicles using Hwy 17 exit west at the second overpass and proceed to Moore’s Ridge Road. Vehicles will then proceed west on Moore’s Ridge Road; range is across from the Fire Department. Moore’s Ridge Road is off limits to all track vehicles.

b. SR-7.

(1) Description. SR-7 is a Multi-Purpose Training Range and field firing range located at grid coordinates 722368. It is designed to train both infantry and armored troops, either separately or simultaneously. It consists of a dual track tank trail, with a single return track and a fully RETS-equipped targetry system with multiple target types. Only training plastic projectiles and small arms will be fired from armored vehicles. Down range maneuvering cannot take place or is

limited while firing is occurring at SR-6 and SR-10. Target arrays and the number of targets engaged are by approved scenarios. Night operations are authorized. Class 3B/4 Lasers are permitted. Primary direction of fire is 268 degrees magnetic. If one is operating, the other must be closed down. The inert tow missile is authorized. At no time will dud producing ordnance be used.

(2) Access to Range. To reach SR-7 from Verona Loop, track vehicles must proceed west on Verona Loop Road until you reach the northern Hwy 17 underpass, Loop Road and Hwy 17 intersection. Proceed straight ahead through the vehicle underpass. Crossing under Hwy 17 underpass, vehicles will proceed through SR-Gate #3 to the range entrance. All other vehicles using Hwy 17 exit west at the northernmost overpass and proceed along the tactical trail to the range entrance.

c. SR-10.

(1) Description. SR-10 is a Multi-Purpose Range Complex located at grid coordinates 656267. It is designed to provide collective training facilities for tanks, LAVs, AAVs and AH-1 helicopters. The Range Complex accommodates platoon-level collective training exercises as well as individual and crew qualification training. It consists of dual side-by-side tank ranges, each with multiple tank trails in which tanks can maneuver while firing and a fully RETS-equipped targetry system with multiple target types. Only plastic non-explosive, non-dud producing projectiles will be fired from armored vehicles. Target arrays and the number of targets engaged are by approved scenarios. Night operations are authorized. Lasers are permitted with approval. Primary direction of fire is 5 degrees magnetic.

(2) Access to range. There are two separate tank trails connecting the GSRA firing ranges back to the central part of Camp Lejeune. Track vehicles cross the New River by means of pontoon bridges, barges or on their on power. The crossing point connects Weil Point on the east bank of the New River to Rhodes Point on the west bank. Track vehicles then proceed west on designated tank trails along Rhodes Point Road and Old Town Point Road (LZ Cardinal), crossing Verona Loop Road to Steel Tower Road to Old Wilmington Road. Tank trail divides before reaching Hwy 17. Crossing under Hwy 17, track vehicles proceed south on the perimeter road along a designated tank trail until they reach the range entrance.

d. SR-11.

(1) Description. SR-11 is a pistol qualification, requalification, FAM fire range. It has a bullet trap and a lead collection device. It has 16 firing points. This range is designed to support the 9mm/45cal pistols.

(2) Access to range. It is located next to SR-10.

3. Training and Maneuver Areas (listed North to South).

SA	SI	SQ
SB	SJ	SR
SC	SK	ST
SD	SL	SU
SE	SM	SV
SF	SN	SW
SG	SO	
SH	SP	

4. Tactical Landing Zones.

There are a total of seven designated Tactical Landing Zones (TLZs) within the Sandy Run Training Area. These are distributed evenly throughout the GSRA to give complete access for various training scenarios and for medical evacuation in case of medical emergencies. TLZs consist of a 300-meter area cleared of all vegetation, in the center of which is located a 100 square foot landing pad. An access road serves each TLZ and a telecommunication station, only one is supported by lighted pads, no other utilities are provided.

a. TLZ Flamingo is located within the SG Training Area at grid Coordinates 622356. Enter by way of SR-Gate #11. No Lights.

b. TLZ Partridge is located within the SE training area at grid coordinates 647378. Enter by way of SR-Gate #8 or #11. No lights.

c. TLZ Snipe is located within the SD training area at grid coordinates 723372. Enter by way of SR-Gate 3 (SR-7 Range). No lights.

d. TLZ Kingfisher is located within the SJ training area at grid coordinates 716324. Enter by way of SR-Gate P (SR-6 Range). No lights.

e. TLZ Pheasant is located within the SV training area at grid coordinates 661249. Enter by way of SR-Gate #22 or #23 (Camp Davis). Pheasant is also a parachute drop zone. No lights.

f. TLZ Peewee is located within the SJ training area at grid coordinates 708335. Enter by way of SR-Gate B (SR-6 South Range). TLZ is equipped with lights.

g. TLZ Pipit is located within the SV training area at grid coordinates 693352. Enter by way of SR-Gate #3 (SR-6N Range). TLZ is equipped with lights.

5. Para-Drop Zones.

a. PDZ Pheasant. 667235 1400 meter long/400 meter wide

6. Airfield Seizure Facilities.

There are five cinder block structures located at Camp Davis to provide opportunities for realistic training scenarios in assault and seizure tactics. These structures consist of two mock hangers with dummy aircraft, a mock control tower, a mock terminal building, and a mock maintenance building, evenly distributed along the two airfields. The cinder block structures are only building shells containing no equipment, offices, or providing any other functional services save their usefulness as a pure training device. Buildings are sited as realistically as possible including appropriate airfield safety setbacks so they will not represent a hazard to air traffic at Camp Davis. Also two (2) old F-4 aircraft located out at the old airfield.

a. Bldg SR-25 (Mock Tower) grid 18S TD 662226.

b. Bldg SR-26 (Mock Hanger #1) grid 18S TD 661222.

c. Bldg SR-27 (Mock Hanger #2) grid 18S TD 660222.

d. Bldg SR-28 (Mock Maintenance Bldg) grid 18S TD 662226.

e. Bldg SR-29 (Mock Terminal) grid 18S TD 665232.

7. Observation Posts.

There are a total of four Observation Posts (OPs) distributed throughout the GSRA. These consist of 125-foot tall metal towers with a small-enclosed observation room at the top, tied into the base telephone system, and reached by an access road. Operations are not served by any utilities other than communications and power for electrical receptacles and illumination lights. Lights are located to maximize the view of major training areas as well as other key elements, such as roads, both military and civilian. Towers are in a position to provide feedback on training performance and to spot possible unsafe situations or training conflicts before they develop into more serious situations.

a. OP-8 is located within the ST training area at grid coordinates 647255. Enter by way of SR-Gate #19 (Shepard’s Trail).

b. OP-9 is located within the SD training area at grid coordinates 722373. Enter by way of SR-Gate #3 (SR-7 Range).

c. OP-10 is located within the SG training area at grid coordinates 629357. Enter by way of SR-Gate #11 (Rawls Road).

d. OP-11 is located within the SN training area at grid 18S TD 633303. Enter by way of SR-Gate #13 (DON’S Trail).

8. Battalion Bivouac Areas.

1. There are two Battalion Bivouac Areas (BnBiv) sited in the GSRA.

a. BnBiv #1 is mainly used for units training on Range SR-6. BnBiv #2 is mainly used for units training within the Camp Davis/SV training area. These areas will accommodate up to 1200 troops for an indefinite period of stay.

b. BnBiv #1 is located at grid 18S TD 709318 (Moore’s Ridge Road/SM training area).

c. BnBiv #2 is located at grid 18S TD 677234 near Camp Davis (SV Training Area).

9. Restricted Areas.

a. Vehicle Movement. Vehicle movement off graded maintained roads in all training areas in the GSRA is not authorized. Privately owned vehicles (POVs) are not authorized in training areas. (POVs are authorized during the hunting season for hunters). Designated POV parking areas are provided by DOD permit. Hunters may use registered off-road recreational vehicle to travel to authorized hunting areas designated by the Base Game Warden, all vehicles must display a DOD vehicle permit IAW Base Orders.

(1) Track Vehicles. Track vehicles are not authorized to travel within the interior of the GSRA unless maneuvering on a designated range. Support vehicles must use grade maintained roads while operating in the GSRA. Off-road travel in designated training areas is not authorized. Traveling to and from firing ranges will be accomplished using designated roads. Track vehicles are not authorized in the Camp Davis area. Track vehicles are not authorized to travel south on the outer tactical perimeter road past SR-10 Range entrance. Traveling along the outer tactical road along SR50 is not authorized. Track vehicles traveling from Verona Loop will use designated under-pass IAW track vehicle movement guide which will be provided by Range Control on a case-by-case basis.

(2) Tactical Vehicles. Tactical vehicle movement is allowed, however, movement is restricted to grade maintained roads. The GSRA is mostly wetland and is not suitable for off-road vehicles. There are several bridges within the GSRA that have vehicle restrictions (weight and width). In all cases, unit representatives should conduct a survey prior to training.

APPENDIX I

MOUT FACILITY

A. GENERAL.

This information is provided to all using units to brief and rule out any misunderstandings or myths with rules and regulations pertaining to the MOUT facility aboard Camp Lejeune. The following information concerns basic information on reserving the facility, check-in/check-out procedures, type of training that is authorized within the MOUT, and safety and restrictions, special training and equipment available.

1. Reserving the Facility

a. General. All using units must reserve the facility through RFMSS (Range Facility Management Support System). Ensure that the unit enters the actual training dates and times that the unit will be occupying the facility. Types of training that require an SRR (Special Range Request) are: all live fire (any weapon that will launch a projectile except pyro requires an SRR), any explosives and breaching charges, and the use of CS.

b. Procedures. The using unit must first sign for the facility at **Range Control** by 1200 the day prior to training, or by 1200 on the last working day prior to the training day. The RSO (Range Safety Officer) or the OIC (Officer in Charge) must proceed to the MOUT and sign for the facility by 1400 that day, **and must have all required SRR with them and signed by the Range Control Officer** that day. If the using unit is going to bivouac, they must **reserve** the bivouac site at the MOUT in the RFMSS.

2. Checking In and Out of the Facility.

Once the using unit has reserved the facility, checked out and picked up all required SRR from Range Control, the unit must check in with the MOUT Staff located in building 20 at the facility. The using unit will fill out a check-in/check-out sheet, and a walk through of the facility will be conducted at that time. Any concerns dealing with training or any regulations not covered in this brief can be worked out with the MOUT Staff.

3. Types of Training Within the MOUT.

a. General. The following training does not require an SRR: using the facility with the use of blanks (all types), smoke, pyrotechnics, non-lethal munitions (USMC approved only), booby-trap simulators, illumination flares (M-203 illumination only, pop-ups simunitions). No Special Range Request is required for simunitions. M-20 illumination will not be used/authorized for inside buildings as it is a fire hazard.

(1) Live fire training within the MOUT facility. When SOTG is conducting live fire training in the MOUT facility, it must be monitored by SOTG CQB (Close Quarters Battle) Instructors: SOTG is not responsible for any other live fire events being conducted by other units. Standard ball for 7.62 MM, 5.56 MM, 9 MM, and .45 caliber ammo, M40x sniper rifle, .22 caliber long rifle, and 7.62 MM, 5.56 MM frangible ammo, breaching doors by shotgun or breaching charges, and any explosive charge being used to breach doors not to exceed 1/4 pound Net Explosive Weight (N.E.W.). This is due to the unique training which requires specializes equipment that is needed (such as approved bullet traps).

(2) HRST operations within the MOUT facility. HRST training must be conducted by SOTG Certified HRST Master to include rappelling from any buildings at the MOUT and all fast roping. The use of grappling hooks requires a Safety NCO in position at all anchor points.

(3) Units that have authorized another unit co-use must inform the MOUT personnel and the unit that is co-using the range, must be present on check-in day for the MOUT brief. This can all be accomplished via phone calls/ e-mail.

4. Simunitions Use In the MOUT.

a. General. Using units are authorized to use simunitions within the MOUT. The MOUT Facility has all approved simunitions gear and equipment. The gear can be checked out from the MOUT staff prior to training. A 3-5 day notice is required prior to checkout in order to prepare the gear. A phone call is all that is required (451-3064). You must schedule simunitions in the RFMSS.

b. Simunitions Checklist. Prior to firing simunitions, you must have a copy of the simunitions checklist. It will be provided at the time of checkout at Range Control.

(1) MOUT facility must be reserved.

(2) If gear is required, contact MOUT Staff 3-5 days prior.

(3) All Marines must have a helmet, a flak jacket, gloves, sleeves rolled down, approved facemask, approved neck protector (towel around neck will not be authorized), and groin protector (athletic cup or a towel folded up is acceptable) when firing simunitions.

(4) A corpsman and safety vehicle on sight.

(5) No intentional firing at head or face.

(6) No shots will be taken at distances from 5 feet or closer.

(7) A gate guard will be posted at the main gate of the MOUT.

(8) All personnel in the MOUT participating in training will have all safety gear on at all times.

(9) Must have dual communication with Range Control.

(10) Must have an OIC and RSO.

(11) Radio communications will be the same as any live fire range.

(12) All personnel participating in simunitions use will have a safety brief.

(13) Simunitions use will be in the vicinity of Building 29 (tarpaper house) and the other areas of the MOUT.

(14) Simunition rounds travel at approximately500 feet/second and can cause damage to soft, unprotected tissue including eyes, throat, genitals, and exposed skin. The unit RSO has ultimate responsibility for the safe usage of this training system in its assigned training location.

(15) A 150-meter bubble (range fan) will be placed over the training area to ensure that no innocent bystanders are

injured. All spectators and bystanders within 150 meters must have all protective equipment on at all times.

5. Safety and restrictions.

a. Safety rules.

(1) At least one manhole cover must be removed while the sewer system is in use.

(2) Do not cross any safety chains within the buildings.

(3) All units must have a corpsman and safety vehicle aboard at all times; if not, training will stop.

(4) All roof hatches must be kept closed at all times.

(5) Report all accidents to MOUT Staff and Range Control.

(6) All live fire CQB training must be supervised by a CQB/Breach RSO. RSO must be an E-6 or above.

(7) No smoke in the sewers.

(8) Booby traps simulators will be placed below knee level.

b. Restrictions. Units are not authorized to:

(1) Construct fighting positions in MOUT.

(2) Construct additional mouse holes.

(3) Drive military vehicles in town unless authorized by the MOUT Staff.

(4) Construct open fires.

(5) Bivouac in town.

(6) Drive POVs past main entrance gate.

(7) Use field expedient waste sites (USE port-a-johns only).

(8) Remove rubble from waste areas.

(9) Use false water wells, sewer trainer, or port-a-johns as a trash dump (water obstacle, drain pipes, and basements included).

(10) Deface any buildings or structures.

(11) Use building **19 or 20** as part of your training.

(12) Remove or damage any window shutters, building or roof hatches, lights or light covers, signs, statues, or devices.

(13) Tamper with water wells (wells have non-potable water).

(14) Remove rocks from drainage ditches.

(15) Put trash in any area except trash bags/dumpsters.

(16) Expend ammo, pyrotechnics, etc. in parking lot or bivouac site.

(17) Breach, barricade, block, kick in, or remove doors .

6. Special Training and Equipment.

a. Special training. All MOUT Staff are certified Urban Instructors by the Marine Corps Warfighting Lab. The staff are all 0369 MOS. The staff is available to any using unit for instruction, critiques, and aggressors upon request.

b. Equipment. Gear available for checkout by using units:

(1) Mannequins

(2) Aggressor uniforms

(3) Simunition equipment

(4) Turn charts

(5) Classroom use

(6) Knee/Elbow pads

(7) Blue body grenades

(8) Ladders

(9) Cable Ladders

(10) Assault packs

(11) Battering ram

(12) AT-4's

(13) Wire and stakes

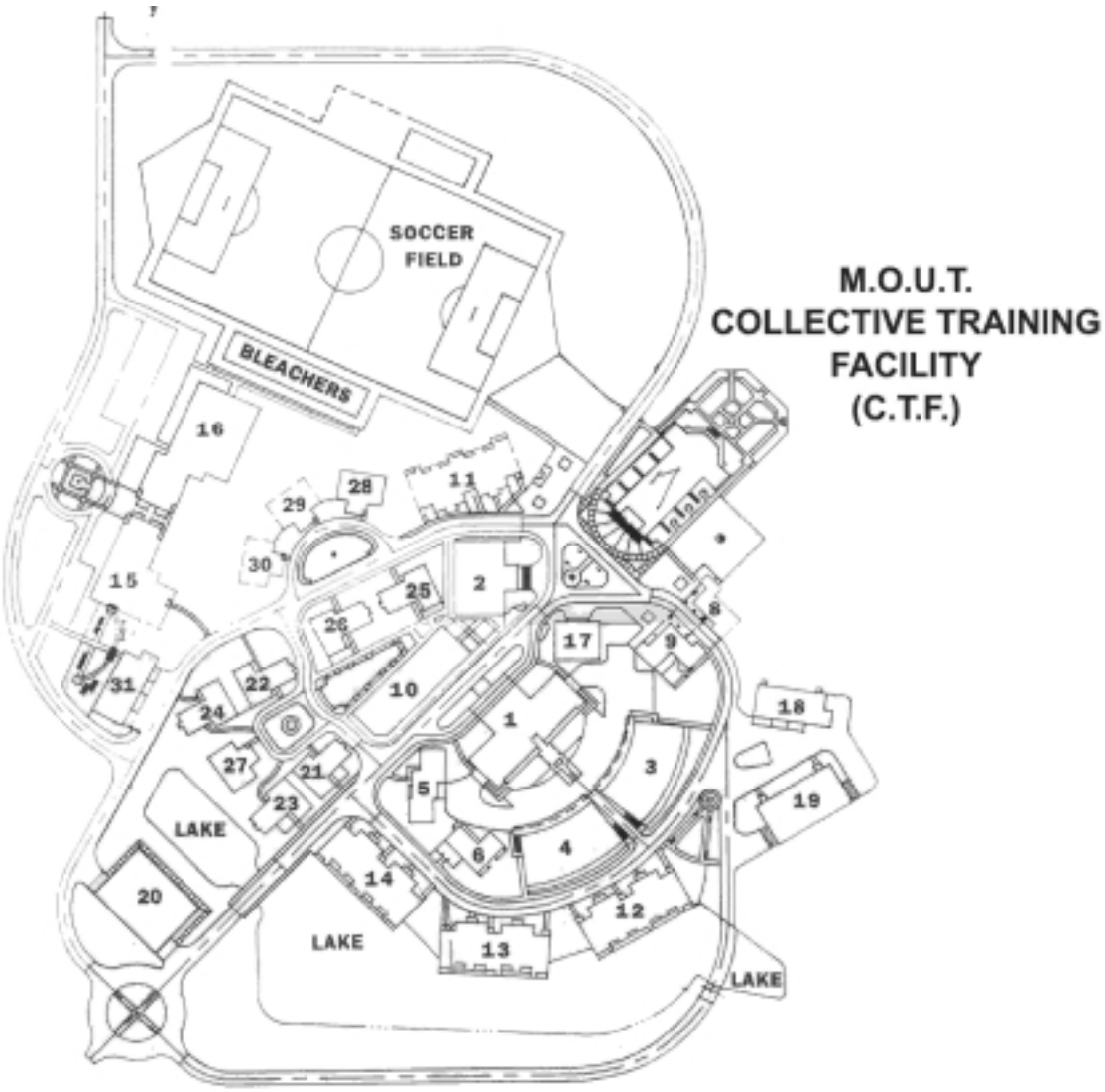
B. MISCONCEPTIONS OF THE MOUT.

1. Using units can't use smoke in the MOUT. **FALSE**: Using units **ARE** allowed to use smoke anywhere in the MOUT except in the sewers and smoke is not required to be in an ammo can.

2. Check-in/check-out procedures are difficult. **FALSE:** The check-in/check-out procedures are not any different from all live-fire ranges. Yes, you have to clean up, but that goes for **all** ranges in the Marine Corps. The checkout inspection is reasonable.

3. Units are not authorized to bivouac in the MOUT Facility unless special arrangements have been made with the SNCOIC of the MOUT Facility/Range Control Officer. **FALSE:** Using units are authorized and **encouraged** to train at night in the MOUT. Units cannot go administrative, stop training, and sleep in the buildings. They must use the bivouac site adjacent to the MOUT Facility for bivouacking.

4. If a unit feels the regulations interfere with realistic training, the MOUT Staff can work through 99.9% of all issues that you may have. The MOUT facility is designed to support the operational forces. The MOUT Staff is available to all using units to answer any questions concerning the MOUT Facility. Phone # 451-2364. Any concerns, questions, or comments with the MOUT facility should be addressed prior to a training evolution. The most common error using units make is not having an SRR submitted to Range Control in a timely manner.



BLDG	DESCRIPTION
1	HOTEL (HELO PAD/ELECTRICAL SUPPLY)
2	CITY HALL
3	APARTMENT (ELECTRICAL SUPPLY)
4	APARTMENT (ELECTRICAL SUPPLY)
5	OFFICE
6	OFFICE
7	CHURCH (ELECTRICAL SUPPLY)
8	APARTMENT
9	APARTMENT
10	BUSINESS / MALL
11	GHOST BLDG
12	TOWN HOUSE
13	TOWN HOUSE
14	TOWN HOUSE
15	SCHOOL
16	SCHOOL GYM (ELECTRICAL SUPPLY)

BLDG	DESCRIPTION
17	BANK
18	SERVICE STATION (ELECTRICAL SUPPLY)
19	WAREHOUSE
20	MOUT ADMINISTRATION BLDG (ELEC. SUPPLY)
21	RESIDENCE
22	RESIDENCE
23	RESIDENCE
24	RESIDENCE
25	RESIDENCE
26	RESIDENCE
27	RESIDENCE
28	RESIDENCE
29	GHOST BLDG
30	GHOST BLDG
31	SERVICE STATION

APPENDIX J

OBSERVATION POSTS

A. GENERAL.

Observation Posts (OPs) are designated and identified as listed below and must be requested in the same manner as other training facilities. Using units will maintain communication with OPs at all times. Using units will report all maintenance problems with OPs to Range Control at 451-2102. Using units will police the OPs and surrounding area. Other terrain may be used for OPs through a special range request by identifying coordinates and stating intended purpose and time period.

OP	COORDINATES	REMARKS
2	18S TD 91553747	Lucky’s Mound, G-10 Impact Area, Lasers Authorized.
3	18S TD 92773704	G-10 Impact Area, Lasers Authorized
4	18S TD 95153597	G-10 Impact Area, GC Area
5	18S TD 89803440	Poggemeyers Peak, Lasers Authorized, Range Control Radar System
6	18S TD 90023225	G-10, Fire Tower
8	18S TD 63983056	SN Area GSRA 125 Ft
9	18S TD 72273673	SD Area GSRA 120 Ft SR-7 Range
10	18S TD 63243001	SG Area GSRA 125 Ft
11	18S TD 64872567	ST Area GSRA 125 Ft
F-5	18S TD 90954289	F-5 Live Fire Range, Control Tower
L-5	18S TD 73563115	L-5 Live Fire Range, Control Tower
Bear Tower	18S TD 97403420	BT-3/N-1, AIWW
North Onslow	18S TD 93072880	BT-3/N-1, AIWW
South Onslow	18S TD 88372518	Onslow Bay, AIWW
Hathcock Range	18S TD 76303080	Firing Tower/Control Tower Rifle Range Sniper Range

APPENDIX K

SPECIAL RANGE REQUEST FORMAT

A. PURPOSE OF SPECIAL RANGE REQUESTS(SRR).

A SRR is required whenever the training unit desires to use a training area, training facility or live fire range for other than the purpose identified in Base Range Regulations; as such the submission of a special range request should be related to a truly unique training requirement. Approval and execution of an SRR requires manual manipulation of the RFMSS which preempts the software's ability to deconflict routine safety issues and could require other training areas and ranges to be in a cold status.

B. SUBMISSION.

The SRR must be submitted to the Commanding General, MCB, Camp Lejeune, N. C. (attn: Range Control). Hand delivery to range control is the preferred manner. **LIVE FIRE SRR MUST HAVE BATTALION LEVEL OPERATIONS SECTION ENDORSEMENT PRIOR AND SHOULD BE RECEIVED AT RANGE CONTROL AT LEAST 15 WORKING DAYS PRIOR TO THE FIRST DAY OF INTENDED TRAINING.** This lead time provides the range control safety officer adequate time to view the request and refine safety perimeters as required. Other time constraints associated with training on Camp Lejeune, such as the closure of the intracoastal waterway (45 working days notice to obtain air sweep support) or activation of the R5306D/E and R5303/R5304A (GSRA air space) (1 & 2 days notice to obtain air space must also be factored into the timeline).

C. EXAMPLES REQUIRING A SPECIAL RANGE REQUEST.

1. Using TLZs for maneuvering (troop or vehicle), ground/raid operations, command post operations or the use of an ALZ for training. Use of ALZs and designated TLZs (such as TLZ recon (Recon Bn), Phoenix (HMT 302), Davis Airfield and TLZ pheasant (MAG 29) require approval (written/e-mail) by the cognizant authority.

2. Using fire and maneuver training on static live-fire ranges. (example: fire and maneuver on F-18).

3. Firing beyond established quiet hours (2400 to 0600) for large caliber weapons systems. (Small arms are authorized to fire past 2400). Unit desiring to fire large caliber weapons past 2400 must submit a special range request, or the use of the MOUT facility beyond prescribed times.

4. Employing a weapon systems/ammunition other than those identified in the base range regulations for the specific range.

5. Requesting to use improvised demolition or night demo training.

D. SRR SUBMISSION FORMAT.

Prior to submitting the SRR, the unit must schedule the training area, live fire range, or TLZ/GP/MP via RFMSS. This precludes range control from reviewing a SRR that cannot be/has not been scheduled. Use the following sequence of paragraphs to ensure all required information is submitted:

1. Paragraph 1. State the standard purpose for the range or training area and nature of the special usage requested. State that the range/training/area facility has been scheduled in RFMSS.

a. Example. HLZ Falcon: Stated usage is for heliborne operations, 2nd Tank Bn requests to conduct tank maneuver training and command post operations. HLZ Falcon is scheduled for 12 – 15 DEC 99 in RFMSS.

b. Example. F-18 is a static firing range. 1st Bn 8th Mar requests to conduct fire and maneuver live fire training. F-18 is scheduled for 12 – 13 JAN 00 in RFMSS.

2. Paragraph 2. State the weapons and ammunition to be employed. List ammunition by DODIC.

3. Paragraph 3. Describe the scheme of maneuver to be employed. Provide a detailed narrative that sequentially lays out the phases of the training to be conducted, including the planned timeline for the scheduled events.

4. Paragraph 4. Provide a risk assessment. Identify the increased risk that may be incurred and the steps to be taken that will mitigate the risks. (Example: Assigning an increased number of RSOs during live-fire maneuver exercises). Use ORM worksheet found in Appendix E.

5. Paragraph 5. Identify the Surface Danger Zones (SDZs).

a. Identify the SDZ for each weapon system you plan to use.

(1) Include a clear transparency on a 1:50,000 scale for SDZ.

(2) Include the following information for SDZ.

(a) map designation

(b) originator’s name

(c) originator’s rank/billet

(d) weapons type

(e) ammunition type by DODIC

(f) distance

(g) listing of appropriate grids

(h) listing of appropriate azimuth (in degrees)

(i) listing of primary direction of fire (in degrees)

(j) SDZ information

b. Example. Surface danger zones for the M240G, M16A2 and SMAW are provided as enclosures (1), (2) and (3).

(1) CLNC 1:50,000

(2) 1stLt I. M. Marine/Unit

(3) 1stLt/plat cmdr/phone number

(4) M249 Weapon System

(5) A064 DODIC

(6) Distance X

(7) (6 digit): firing point 735315

(8) right lateral limit: 65 degrees; left lateral limit: 098 degrees magnetic

(9) PDF 085 degrees MAG/GRID

(10) area (s) a, h, I, etc) as appropriate

E. REVIEW OF SRR.

SRRs should be reviewed and endorsed by the appropriate battalion, regimental, or MEU operations section. Live fire SRR SDZs should be reviewed by a Marine Gunner/Operation Section of the using unit for accuracy and correctness (infantry units only) this ensures that someone above a company size unit has reviewed the training requirement.

F. ASSISTANCE.

Range Control can provide assistance in the conceptual development of the SRR and in some cases provide previously approved SRRs of a similar nature. However, due to the large number of SRRs submitted, Range Control cannot be expected to create the required SDZs or do the required risk assessment (ORM worksheet).

APPENDIX L

TRAINING FACILITIES/AREAS EXTERNAL TO CAMP LEJEUNE

A. AREAS

Outlying Atlantic Field, Oak Grove, and MCALF, Bogue, are training facilities under the command of Marine Corps Air Bases, Eastern Area (COMCABEAST). They are primarily for use by elements of the 2d MAW. Other commands/services may use these facilities on a "not-to-interfere" basis.

B. SCHEDULING

Scheduling requests for Bogue Field, Oak Grove, and Atlantic Field will be submitted to Commander, Marine Corps Air Bases East, Cherry Point, NC (Director of Operations). Limited ground training is permitted in designated areas under strict limitations. Requests will be submitted via the Commanding General, MCB Camp Lejeune (AC/S, T&0), NLT 30 days prior to scheduled dates. The following information is required.

1. Name of unit.

2. Requested dates of training.

3. Number of personnel.

4. Number and type of aircraft/equipment.

5. Type of training to be conducted.

6. Proposed hours of operation.

C. U.S. NATIONAL FOREST LAND.

1. The Commanding General, Marine Corps Base, Camp Lejeune, has the delegated authority to execute an agreement with the U. S. Forest Service when other training areas are required.

2. Requests must be submitted by letter via the chain of command to the Commanding General, MCB, Camp Lejeune (AC/S, T&0) at least 45 days prior to commencement of training.

3. The following information is required:

   a. Unit Requesting Training

b. Date of Request

c. Date of Training

d. Description of Training

e. Attach a map dated and referenced to specific request. Indicate boundary of area requested and special features such as Drop Zones, Command Post, Bivouac Areas, etc.).

f. Number of troops.

g. Number and size vehicles/equipment.

h. Sanitation facilities provided.

i. Field liaison contact. The following information must be provided.

(1) Unit POC

(2) Grade and name

(3) Telephone number

j. MCB Liaison Contact

(1) Unit POC

(2) Grade and name

(3) Telephone Number

k. Unit POC for billing purposes (Title and Telephone Number)

l. Interservice Support Agreement (ISSA) No.

4. The using unit commander will meet with the Forest Supervisor's designated liaison officer at the site of planned occupancy one week prior to the commencement of the exercise. The unit commander will be prepared to post signs around the immediate exercise area to caution the public that military vehicles will be using the roads.

All special instructions received from the Forest Liaison Officer and range regulations of this Manual will apply to training in National Forests.

APPENDIX M

ELECTRONIC WARFARE/DEFENSIVE MEASURES

A. GENERAL.

The Mid-Atlantic Electronic Warfare Range (MAEWR) has expanded into Camp Lejeune. The purpose of the MAEWR is to provide realistic Electronic Warfare (EW) and Defensive Measures (DM) training to combat aircrews.

B. BACKGROUND.

1. The MAEWR covers portions of Beaufort, Carteret, Craven, Hyde, Pamlico, and Onslow counties of North Carolina. During the 1990's, user-generated requirements were identified. MCAS New River squadrons requested "backyard" EW/DM training. The distance to MCOLF Atlantic did not optimize the training evolutions for the rotary wing community. As a result of these requirements COMNAVAIRLANT and CINCLANTFLT have agreed to extend the MAEWR into the Camp Lejeune area.

a. The user communities requested greater dispersion of EW threats associated with the MAEWR in the Camp Lejeune area and support of threat recognition/location/shell game capability in order to improve threat presentation for unit level training and MEUEX/JTFEX support.

b. All Electronic Warfare Requests should be entered into RFMSS by the requesting agency after coordination with Cherry Point EW Range Management, phone number commercial (252) 447-7575, DSN 582-4295. The using unit maintains the responsibility for scheduling not Cherry Point EW Range Management.

C. REFERENCES.

1. The following references require combat aircrews to train in a hostile electromagnetic environment similar to those that would be encountered during an actual combat mission. (A portion of this training involves the deployment of DM, chaff and flares).

a. MCO P3500.15C Aviation Training and Readiness Manual, Volume 2, Tactical Fixed Wing (Short Title: T&R Manual, Volume 2.

b. MCO P3500.16C Aviation Training and Readiness Manual, Volume 3, Tactical Helicopter (Short Title: T&R Manual, Volume 3.

c. MCO P3500.34 Aviation Training and Readiness Manual, Volume 8, Tactical Tilt-Rotor (Short Title: T&R Manual, Volume 8.

d. MCO 3501.4A Marine Corps Combat Readiness Evaluation System (Short Title: MCCRES, Volume III) Rotary Wing Squadrons.

e. MCO 3501.8A Marine Corps Combat Readiness Evaluation System (Short Title: MCCRES, Volume VII, Marine Air-Ground Task Force (MAGTF) Elements.

D. AVAILABLE THREATS.

The following threats are available at Camp Lejeune:

1. Modular Threat Emitter (MTE). The MTE is capable of emulating the SA-8. It has a video camera that is bore sighted with the radar dish and can produce a video of the training evolution.

2. Tactical Radar Threat Generator (TRTG). The TRTG is capable of emulating the ZSU-23. Future versions of the TRTG will be equipped with a video camera that will be bore sighted with the radar dish. They will also be capable of providing a video of the training evolution.

3. Tactical Radar Emitter Simulator (TRES). The TRES is capable of emulating the radars for the ZSU-23, SA-5, SA-6, SA-8, BT and C/R.

E. THREAT EMITTER SITES.

1. The selected sites were optimized based on the type of training that could be supported. Sites 1, 2, and 3 respectively are for unit level training in MCAS New River base squadrons; MEUEX/JTFEX training and anti-ship missile training for the ARG. Sites 4-14 were primarily selected to provide unit level training capabilities.

Mobile/Transportable EW Threat Systems Sites

Site #	Site Name	Lat/Long	Grid
1	OP-2	34.39.45N 077 16.25W	18S TD 915375
2	MOUT Facility	34 39.82N 077 15.02W	18S TD 938380
3	OP-1/CBC	34 37.52N 077 14.64W	18S TD 941339
4	TLZ Hawk	34 36.54N 077 17.58W	18S TD 898321
5	OP-5	34 37.89N 077 17.61W	18S TD 898345
6	TLZ Falcon/Onslow Beach Road	34 34.86N 077 16.70W	18S TD 911288
7	Mock Up Road	34 34.14N 077 16.69W	18S TD 911276
8	SOTG Site/Onslow Beach	34 33.70N 077 17.00W	18S TD 905264
9	TLZ Albatross		18S TD 895276
10	TLZ Bluebird	34 32.96N 077 18.90W	18S TD 696391
11	Moore Road HA Training Area	34 37.41N 077 21.19W	18S TD 843338
12	ALZ Kingfisher(GSRA)	34 35.69N 077 29.57W	18S TD 711324
13	Davis Tram Road(GSRA)	34.35.38N 077 32.86W	18S TD 655302
14	Bridge Road (GSRA)	34 33.19N 077 31.36W	18S TD 685264

F. DEFENSIVE MEASURES TRAINING.

1. All combat aircrews are required to undergo this training prior to being certified for combat or deployment. In addition, they also are required to maintain proficiency in conducting defensive measures utilizing chaff and flares.

a. Chaff. The use of chaff aboard Camp Lejeune is prohibited at this time. If an environmental assessment results in a finding of no significant impact, chaff will be authorized.

b. Flares. The use of flares aboard Camp Lejeune is prohibited at this time. If an environmental assessment results in a finding of no significant impact, flares will be authorized.

c. Restrictions. Any restrictions on the use of chaff and flares will be promulgated once an environmental assessment has been completed and a finding of no significant impact is signed.

G. MOCKUPS.

1. Mockups, including multi-spectral cues, and inflatable armor vehicle targets provide a low-cost, light weight, environmentally-friendly target for various range applications. Due to costs of these targets, live firing will not be directed at them. However, they may be used to simulate a defensive position or provide a threat presence to ground personnel engaged in reconnaissance operations. Primarily they will be used in conjunction with electronic warfare and defensive measures training. Some mockups are resident at MCOLF Atlantic. Mockups that are not available can be procured through the Navy. For further information on procurement items, contact the Training Equipment Systems Specialist in the Training Resource Management Division, (910) 451-7392 or DSN 751-7392.

a. Multi-spectral cues include:

(1) Visual 3-D representation (full scale).

(2) Radar signature (representative radar cross section (RCS) with a copper base paint application.

(3) Choice of paint schemes.

(a) Solid: olive drab or desert sand.

(b) Camouflage: forest or desert.

(4) Skid or trailer mount configurations for east of movement.

2. Inflatable Armored Vehicle Targets include:

a. Radar signature (representative radar cross section (RCS) with a copper base paint application.

b. Camouflage paint: forest or desert.

c. Infra-red tape.

H. SCHEDULING EW/DM TRAINING.

1. Using units are responsible for scheduling EW/DM training using the Range Facility Management Scheduling System (RFMSS)

after making direct liaison with the Mission Coordinators at the MAEWR, Cherry Point. Telephone DSN 582-2823 or DSN 582-2885. All requests must be submitted at least 48 hours in advance.

a. Units will schedule the airspace and ground space. This will ensure there will be no live fire being conducted in the ground space.

b. At the discretion of the Range Control Officer, the ground space may be scheduled on a co-user basis depending on the type of EW/DM training being conducted.

c. Training events that may cause the closure of the Atlantic Intracoastal Waterway, or the N-1/BT-3 impact area must be scheduled at least 30 days in advance.

d. Upon completion of training, the using unit/aircraft will report to BLACKBURN the type of aircraft that received EW/DM training and the number of crew members that were aboard.

e. All electronic warfare requests will have to be submitted via a special range request to the Range Control Officer ten (10) working days before the scheduled training event.

I. USE OF PYROTECHNICS IN SUPPORT OF AVIATION DEFENSIVE MEASURES TRAINING.

1. The use of the GTR-18 (Smokey SAM) pyrotechnic simulator has been authorized for use aboard Camp Lejeune during the conduct of defensive measures training for combat aircrews. The GTR-18 (Smokey SAM) provides a visual cue to combat aircrews undergoing defensive measures training. Requests to use the GTR-18 (Smokey SAM) will be included in the special range request submitted to the Range Control Officer. At no time will the GTR-18 (Smokey SAM) be utilized aboard Camp Lejeune without the express approval of the Range Control Officer.

a. Responsibility. When conducting training with the GTR-18 (Smokey SAM) it shall be the responsibility of each commanding officer and the Branch Manager (SE-55) Naval Surface Warfare Center, Corona to ensure that only qualified and certified personnel operate the GTR-18 (Smokey SAM). The following safety requirements will be adhered to at all times. No deviations are authorized without the express approval of the Base Range Control Officer or Base Range Safety Officer.

b. Personnel Requirements. A minimum of two and a maximum of four certified and qualified GTR-18 (Smokey SAM) operators for each GTR-18 (Smokey SAM) launch site.

c. Safety Requirements

(1) Smoking and flame producing devices are prohibited at the GTR-18 (Smokey SAM) launch site and within a 50-foot perimeter of the launch site.

(2) Two 10-pound A/BC fire extinguishers will be at each GTR-18 (Smokey SAM)launch site.

(3) Each operator will wear gloves and safety glasses or face shields while at the GTR-18 (Smokey SAM) launch site.

(4) Two-way radios to communicate with BLACKBURN.

(5) One hospital corpsman at each launch site.

2. Operating Procedures

a. Prior to the launch of a GTR-18 (Smokey SAM) radio communications will be established with BLACKBURN. Once communications have been established, permission will be requested to go hot.

b. The GTR-18 (Smokey SAM) launch tube(s), (LMU-23E (1-BAY) and LMU-24E (4-bay)), must not exceed 75 degrees from the deck for all launch evolutions.

c. The launcher rack will be set up at an appropriate site in terms of distance from towers, structures, and vehicles (minimum 100 feet); adjust for quadrant azimuth and elevation angle in accordance with wind strength and direction. It is desired that the GTR-18 (Smokey SAM) have a trajectory elevation of 60-75 degrees and a trajectory azimuth away from the launch site (including wind effect of both).

d. The GTR-18 (Smokey SAM) will be launched in such a manner as to obtain the best visual effect while minimizing foreign object damage to aircraft and personnel.

e. The GTR-18 (Smokey SAM) will not be launched directly at an aircraft, vehicle, structure (permanent or temporary), or personnel. The flight path of a GTR-18 must be offset a minimum of 1,000 feet from any participating aircraft’s flight path.

f. Once training is complete, BLACKBURN will be contacted via radio and permission to go cold will be requested. Once permission is granted the total number of rounds will be reported to BLACKBURN.

3. Emergency Procedures

a. Should property damage or personnel injury occur, or serious safety hazards be identified, all GTR-18 (Smokey SAM) simulator operations will be halted and BLACKBURN be notified immediately and the reason for halting training reported and permission to go cold requested.

b. Training will not resume until corrective action has been implemented and reported to BLACKBURN and permission to go hot requested.

c. In the event of a fire/accident, immediately report this information to BLACKBURN, fight with on-site extinguishers and try to contain the fire at the site.

d. Evacuate injured and non-essential personnel to a minimum of 500 feet.

e. If a GTR-18 (Smokey SAM) rocket hang fire occurs, notify BLACKBURN and request EOD support.

f. Unserviceable igniter rods or GTR-18 (Smokey SAM) rockets will be replaced in their respective storage containers for later disposal by EOD.

4. TRANSPORTATION AND TEMPORARY STORAGE. All vehicles, government owned or government furnished, transporting the GTR-18 (Smokey SAM) will be properly placarded with 1.3G explosive signs. These signs must be placed on all four sides of the vehicle and readily visible to all traffic. Each vehicle will be inspected for road-worthiness prior to loading the GTR-18 (Smokey SAM). Two 10-pound B/C fire extinguishers must be on board; one inside the cab and one mounted on the bed of the vehicle. Both fire extinguishers should be stored for easy access in the event of an emergency. The GTR-18 (Smokey SAM) will not be transported in a closed vehicle unless separated from the passenger compartment by a permanent dividing wall. In addition, passengers are prohibited from riding in the open bed of any vehicle transporting munitions.

a. Drivers Licensing Requirements for Military Personnel. Military personnel will attend the explosive drivers course and have a valid government motor vehicle operators permit with an explosives endorsement.

b. Drivers Licensing Requirements for Civilian Employees. For off base transportation of the GTR-18 (Smokey SAM), civilian employees will possess a valid commercial drivers license with a hazardous material endorsement. For on base transportation they will attend explosives driver refresher training on base or attend the explosive drivers course and have a valid government motor vehicle operators permit.

c. Government Contract Employees. For off base and on base transportation of the GTR-18 (Smokey SAM), government contract employees will possess a valid commercial drivers license with a hazardous materials endorsement.

APPENDIX N

LIST OF APPLICABLE REFERENCES

1. Listed below are pertinent publications that will assist in the safe operation of all ranges located at MCB Camp Lejeune. The majority of the directives can be found on the following web sites:

a. http://www.adtdl.army.mil/ (Army)

b. http://www.army.mil/references/default.htm (Army)

c. http://www.usmc.mil/marinelink/ind.nsf/publications (Marine)

d. http://neds.nebt.daps.mil/ (Navy)

DIRECTIVE NUMBER	SUBJECT
Trainers Environmental Handbook	
BO 3440.6D	Destructive Weather Manual
BO 3571.1A	SOP FOR EOD SUPPORT (EODSOP)
BO P8020.1A	SOP for Ammunition and Explosive Safety
BO 11015.6C	Red Cockaded Woodpecker
BO 11015.7C	Sea Turtle Protection Program
BO 11017.1D	Off Road Recreational Vehicles
BO 11090.3A	Oil/Hazardous Substance
BO 11320.1H	Fire Regulation
BO 1710.20N	Hunting, Fishing, Trapping
BO 11015.3B	Endangered Species Protection
BO 11000.19	Archeological/Historic
BO 11000.1C	Environmental Impact Review
Strategic Plan	Marine Corps Base Strategic Plan 2002-2007
Camp Lejeune Range Complex Management Plan (Draft)	
FM 1-140	Helicopter Gunnery, 29 March 1996
FM 2-32	Mine/Countermine Operations
FM 3-4	NBC Protection
FM 3-7	NBC Handbook
FM 3-11	Flame Field Expedient
FM 3-22.37	Javelin (Draft)
FM 3-100.12	Risk Management
FM 4-25-11	First Aid for Soldiers
FM 5-5	Fortification and Obstacles
FM 5-20	Camouflage
FM 5-25	Electrical Firing Systems
FM 5-34	Engineer Field Data

FM 5-103	Survivability, 10 June 1985
FM 5-104	General Engineering
FM 5-250	Explosives and Demolitions
FM 6-50	The Field Artillery Cannon Battery
FM 7-90	Tactical Employment of Mortars
FM 17-12-1-1	Tank Gunnery (Abrams) Vol 1
FM 17-12-1	Tank Gunnery M1/M1A1
FM 19-15	Civil Disturbance
FM 21-10	Field Hygiene and Sanitation
FM 21-11	First Aid
FM 21-26	Map Reading and Land Navigation
FM 21-60	Visual Signals
FM 21-75	Combat Skills of the Soldier
FM 23-9	M16A1/M16A2 Rifle Marksmanship
FM 23-14	M249 Light Machinegun in the Automatic Rifle Role
FM 23-23	Antipersonnel Mine, M18A1 and M18 (Claymore)
FM 23-24	TOW Weapon System
FM 23-25	Launcher and Cartridge, 84mm, AT-4
FM 23-27	MK-19, 40mm Grenade Launcher
FM 23-30	Grenades and Pyrotechnic Signals
FM 23-31	40mm Grenade Launchers, M203
FM 23-24	TOW Weapon System
FM 23–35	Combat Training with Pistols and Revolvers
FM 23-65	Browning Machine Gun, Caliber .50HB, M2
FM 23-90	Mortars
FM 23-91	Mortar Gunnery
FM 90-10	Military Operations on Urbanized Terrain (MOUT)
FM 100-14	Risk Management
FMFM 0-8	Rifle Marksmanship
FMFM 0-9	Field Firing M16A2 Rifle
FMFM 1-8	Ship to Shore Movement
FMFM 2-6	Rear Area Security
FMFM 2-7	Fire Support in MAGTF Operations
FMFM 3-22.1	UAV Operations
FMFM 4-2	Naval Beach Group
FMFM 6-18	Techniques and Procedures for Fire Support Coordination
FMFM 7-32	Raid Operation
FMFRP 6-6-30	Observed Fires
MCBUL 8011	Ammunition Allowance
MCDP 1	Warfighting
MCDP 1-1	Strategy
MCDP 1-2	Campaigning

MCDP 2	Intelligence
MCDP 3	Expeditionary Operations
MCDP 4	Logistics
MCDP 5	Planning
MCDP 6	Command and Control
MCO 1500 54A	Marine Corps Martial Arts Program
MCO 1510.89A	Marine Corps Common Skills
MCO 1553.3	Unit Training Management
MCO 1700.22D	Alcoholic Beverage Control in the Marine Corps
MCO 2400.2	Marine Corps Management of the Radio Frequency Spectrum
MCO 3000.2H	Operational Reporting
MCO 3400.3E	Nuclear, Biological and Chemical NBC Defense Training
MCO 3430.2B	Policy for Electronic Warfare
MCO 3430.7	Marine Corps Program for the Use and Acquisition of Non-Lethal Weapons
MCO 3500.20A	Marine Corps Parachuting and Diving Policy
MCO 3500.33	Marine Corps Aviation Operation Risk Management
MCO P3570.1A	Policies and Procedures for Firing Ammunition for Training, Target Practice, And Combat
MCO 3500.27A	Operation Risk Management
MCO 3500.42	Marine Corps Helicopter Rope Suspension Training Policy
MCO 3501.34	Infantry Training and Readiness Manual
MCO 3574.2J	Entry Level and Sustainment Level Marksmanship Training with the M16A2 Service Rifle and M9 Service Pistol
MCO 4340.1A w/Ch1	Reporting of Missing, Lost, Stolen or Recovered (MLSR) Government Property
MCO P4400.150E	Consumer Supply Material
MCO 4450.12	Storage and Handling of Hazardous Materials
MCO 5090.21	National Environmental Policy Act
MCO P5102.1	Marine Corps Ground Mishap Reporting
MCO 5104.1A	Navy Laser Hazards Control Order
MCO 8011.4	Marine Corps Table of Class V (W) Material
MCO 8020.1A	Ammunition and Explosives Safety Policies, Programs
MCO 8020.10A	Marine Corps Ammunition Management and Explosives Safety Policy Program

MCOP 8020.11	Department of the Navy Explosives Safety Policy
MCO 8025.1D	Class V Malfunction and Defect Reporting
MCO 8400.6	Licensing Procedures for Ordnance Vehicles Operators
MCRP 3-0B	How to Conduct Training
MCRP 3-01A	Rifle Marksmanship
MCRP 3-02B	Close Combat
MCRP 3-02C	Marine Corps Water Survival
MCRP 3-31B	Amphibious Ship/Landing Craft Data Book
MCRP 40.3B	Radio Handbook
MCRP 4-11.1D	Field Hygiene and Sanitation
MCRP 5-12A	Operational Term and Graphics
MCWP 2-1	Intelligence Operations
MCWP 3-1	Ground Combat Operations
MCWP 3-2	Aviation Operations
MCWP 3-11.1	Marine Rifle Company/Platoon
MCWP 3-11.2	Marine Rifle Squad
MCWP 3-11.3	Scouting and Patrolling
MCWP 3-11.4	Tactical Fundamentals of Helicopter Borne Operations
MCWP 3-12.1	Tank Platoon
MCWP 3-14.1	Light Armored Vehicles Gunnery and Employment
MCWP 3-15.1	Machineguns and Machinegun Gunnery
MCWP 3-15.3	Sniping
MCWP 3-15.8	Tactical Techniques and Procedures For the Employment of Non-Lethal Weapons
MCWP 3-16.1	Marine Artillery Operations
MCWP 3-16.6	Supporting Arms Observer, Spotting And Control
MCWP 3-17	Engineer Operations
MCWP 3-21.1	Aviation Ground Support
MCWP 3-23	Assault Support
MCWP 3-25.5	Direct Air Support Center Handbook
MCWP 3-25.10	Low Altitude Air Defense Handbook
MCWP 3-35.3	Military Operation on Urban Terrain
MCWP 3-37	MAGTF NBC Defense Operation
MCWP 3-40.5	Electronic Warfare
MCWP 3-43.2	Mechanized Operations
MCWP 4-1	Logistics Operations
MCWP 4-11.6	Bulk Liquids Operation
MCWP 5-1	Marine Corps Planning Process
MIL-HDBK-828	Laser Range Safety

DOD 6055.9-STD	DOD Ammunition and Explosives Safety Standards
TB MED 524	Control of Hazards to Health from Laser Radiation, 20 June 1985
TB 9-1300-385	Munitions Restricted or Suspended 1 January 00
TC 5-117	Combat Engineer Vehicle Operations
TC 6-40	Field Artillery, Manual Cannon Gunnery
TC 25-1	Training Lands
TC 25-6	Force on Force Collective Training Using the Tactical Engagement Simulation Training System
TC 25-8	Training Ranges
TECOM SOUM'S	Training/Education Command Safety of Use Memorandums
TM 013750-13	Demolition Kit Breaching System (APOBS) DODIC MN79/MN84
TM 02498A-10/1	Machinegun, 50Cal, M2, HB
TM 05538C-10/1A	Rifle 5.56mm, M16A2
TM 05539C-10/1	Sniper Rifle, 7.62mm, M40A1
TM 08594A-10/1B	LAV 25 Turret, 25mm
TM 08670B-10/1A	Machinegun, 7.62mm, M240G
TM 08671A-10/1A	Squad Automatic Weapon (M249SAW)
TM 08673A-10/1A	MK 153 (SMAW), 83mm
TM 09629A-10/1	SASR, M82A2/A82A3
TM 09922A-10/1	Mortar 81mm M252
TM 9-1010-223-10	60mm Mortar M224
TM 9-1010-221-10	40mm, M203 Grenade Launcher
TM 9-1315-886-12	Launcher and Cartridge 84mm AT-4
TM 9-1330-200-12	Operators and Organizational Maintenance Manual For Grenades
TM 9-1330-200-34	Direct Support and General Support Maintenance Manual for Grenades
TM 9-1300-206	Ammunition and Explosive Standards
TM 9-1370-207-10	Operators Manual for Pyrotechnic Simulators
TM 9-1375-213-12	Operators and Unit Maintenance Manual (Including Repair Parts and Special Tools List): Demolition Materials
TM-11-5855-312-10	PAS-13, Thermal Sight for M240G/M249
	TM 43-0001-27 Army Ammunition Data Sheets Small Caliber Ammunition FSC 1305, 29 April 1994
TM 43-0001-28	Army Ammunition Data Sheets for Artillery Ammunition: Guns, Howitzers, Mortars, Recoilless Rifles, Grenade

	Launchers and Artillery Fuses (Federal Supply Class 1310,1315, 1320, 1490)
TM 1005A-10/1A	Machinegun 40mm, KK19, MOD 3
TM 10012A-10/1	Carbine, 5.56 mm, M-4, M4A1
TM 10470A-12&P1A	PEQ-2A, Aiming Device
FAAH 7110.65	Federal Aviation Administration (FAA) Handbook – Air Traffic Controller
FAAH 7400.2	FAA Handbook – Procedures for Handling Airspace Matters
FAAH 7610.4	FAA Handbook – Special Military Operations
NAVAIR 1345-2	SPIE Manual
NAVMC 11381	Expenditure Report
NAVSEA OP-5 Volume 1	Ammunition and Explosives Ashore Safety Regulation for Handling, Storing, Production, Renovation and Shipping
OPNAVINST 5530.13B	Department of the Navy Physical Security Instruction for Sensitive Conventional Arms, Ammunition, and Explosives (AA&E)
OPNAVINST 3770.2J	Airspace Procedures and Planning Manual
SECNAVINST 5100.14C	Military Exempt Lasers
SPAWARINST 5100.12B	Navy Laser Hazards Control Program
Military Handbook 1027/3B	Range Facilities and Miscellaneous Training Facilities
JAG Manual	Chapter XII
Map Edition (TBD)	Camp Lejeune Military Installation Map
Code of Federal Regulations 89071 Title 33, Navigation and Navigable Waters	
VS GS Chart 11543	871128
VS GS Chart 11542	851123
33 CFR Vol 3, 334	990701
33 CFR Vol 66, 334	010420
JT Regt P3570.1B	Marine Corps Artillery Safety Standing Operating Procedures
Division Order P1540.5	SOP for Training (Div Units Only)
MCRP 3-16.8B	J-Fire Multi-service Procedures for the Joint Application of Fire Power
FACSFACVACAPE INST 3120.1G	Fleet Area Control and Surveillance Facility Virginia Capes
BUMEDINST 6470.23	Medical Management of Non-Ionizing Radiation Casualties
DIVO P5100.9B	Division Safety Program (Div Units Only)

SOTG 3500.1d	SOP for Live Fire Training (Live Fire SOP)
DA PAM 385-63	Army Range Safety
AR 385-63/MCO 3570.1B	Range Safety