UNITED STATES MARINE CORPS
MARINE CORPS BASE
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BO P3500.1L
O&TROD
Mar 06 2002

BASE ORDER P3500.1L

From: Commanding General
To: Distribution List

Subj: RANGE AND TRAINING REGULATIONS

Encl: (1) Locator Sheet

Reports Required: List, page v

1. Situation. The Commanding General is republishing information, instructions, and procedures governing the use of ranges, training areas, and airspace operated and controlled by Marine Corps Base, Camp Pendleton, California.

2. Cancellation. BO P3500.1K.

3. Mission. To ensure all agencies and units operating within Camp Pendleton ranges, ground and water areas, and airspace under the control of the Commanding General, Marine Corps Base, Camp Pendleton adhere to these regulations.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. Final result desired is personnel operating within Camp Pendleton ranges, ground and water areas, and airspace operate in a safe manner, preserving life, equipment, and natural resources.

(2) Concept of Operations. This Manual will be distributed as directed and all agencies shall review and incorporate procedures from this most current version.

b. Subordinate Element Missions. The Marine Corps Base Range Working Group will conduct an annual review of this Manual.

c. Coordinating Instructions

(1) This Manual contains substantial revision and should be completely reviewed.

(2) In the event these instructions conflict with those issued by higher authority, the orders of the higher authority shall take precedence. Notify the Commanding General (Attn: Assistant Chief of Staff, Operations and Training) of any conflict or question of interpretation.

(3) Commanders of organizations utilizing the ranges of Camp Pendleton are encouraged to submit recommendations concerning improvements or changes to the Commanding General (Attn: Assistant Chief of Staff, Operations and Training).

5. Administration and Logistics. Directives issued by this headquarters are published and distributed electronically via email at SMB PENDLETON Directives Control Point. Hard copy versions may be obtained through the Directives Control Point at the Base Adjutant's Office.

6. Command and Signal

a. Signal. This Manual is effective the date signed.

b. Command. This Manual applies 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 Pendleton.

L. H. FARMER
Chief of Staff

DISTRIBUTION: A-3 plus AC/S, Ops&Trng 400; CO, SOI (15); WACO (1)
B-2 plus CG, 1stMarDiv (200); CG, I MEF (200);
CO, ACU-5 (10)

Copy to: CG, MCAGTFTC, 29 Palms (2)/COMCABWEST (8)/CG, 3d MAW (50)/CG, EWTG (4)/CG, MCRD, San Diego (10)/ COMNAVBASE, San Diego (1)/CDR, NWC, China Lake (1)/ CG, MCCDC (1)/COMNAVAIRPAC (4)/CO, NWD, Fallbrook Det (1)/CO, MCAS, Miramar (1)/CO, NAS, North Island (1)/COMNAVSURFPAC (10)/COMPHIBGRUEASTPAC (1)/ CO, NAVPHIBSCOL (1)/CO, CBC, Port Hueneme (5)/ COMNAVBEACHGRU ONE (3)/CO, NAB, Coronado (3)/ COMTHIRDFLT (1)/COMPHIBGRU THREE (20)/FACSFACSD (1)/ CG, NTC & Ft Irwin, Barstow (2)/CG, MCB, CamLej (1)/ COMHSLWINGPAC (40)

LOCATOR SHEET

Subj: RANGE AND TRAINING REGULATIONS

Location: _____
(indicate location(s) of the copy(ies) of this Manual)

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RANGE AND TRAINING REGULATIONS

RECORD OF CHANGES

Log completed change action(s) as indicated.

CHANGE NUMBER	DATE OF CHANGE	DATE ENTERED	SIGNATURE OF PERSON INCORPORATING CHANGE

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RANGE AND TRAINING REGULATIONS

CONTENTS

CHAPTER	
	REPORTS REQUIRED
	LIST OF APPLICABLE REFERENCES
1	GENERAL
2	ENVIRONMENTAL PROCEDURES
3	SCHEDULING PRIORITIES
4	AIRSPACE AND AVIATION OPERATIONS
5	MARITIME OPERATIONS
6	RANGE OPERATIONS
7	AMMUNITION AND EXPLOSIVES
8	LASER OPERATIONS
APPENDIX	
A	DEFINITIONS
B	IMPACT AREAS
C	RANGES
D	ARTILLERY FIRING AREAS
E	MORTAR POSITIONS
F	UTILIZATION OF CS
G	OBSERVATION POSTS
H	COMMUNICATIONS
I	FORMS

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REPORTS REQUIRED

REPORT TITLE	REPORT CONTROL SYMBOL	SUBMIT TO	PARAGRAPHS
AMMUNITION MALFUNCTION	MCBCP-8025-1	BASE ORDNANCE OFFICER	7003
LASER RANGE FIRING LOG	EXEMPT	LONGRIFLE	8003
FAC-CAS BRIEF SHEET	EXEMPT	LONGRIFLE	4008

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LIST OF APPLICABLE REFERENCES

DIRECTIVE NO.	SUBJECT
DAFM 21-48	Planning and Conducting CBR and Nuclear Defense Training
WgO 3125.2A	Standing Operating Procedures for Air Support
DivO 1540.10A	Moving Target Tank Training
BO 3125.1C	Standing Operating Procedures for Air Support
BO P3500.2	Standing Operating Procedures for Live-Fire and Maneuver Exercises
BO P3500.3C	Military Operations in Urban Terrain Training Facility Standing Operating Procedures (Short Title: MOUT SOP)
BO 3502.1B	Training Areas, Range and Training Facilities Development Program
MCO P3570.1A	Policies and Procedures for Firing Ammunition for Training, Target Practice, and Combat
BO 3574.1J w/Ch 1	Standing Operating Procedures for Marksmanship Training with Individual Small Arms
MCO 3574.2J	Entry Level and Sustainment Level Marksmanship Training with the M16A2 Service Rifle and M9 Service Pistol
BO P3700.1	Administrative Landing Zones (LZs), Confined Area Landing Sites (CALSITES) and Simulated Decks Study (Short Title: LZ Study)
MCO 4340.1A w/Ch1	Reporting of Missing, Lost, Stolen or Recovered (MLSR) Government Property
MCO P4400.150E	Consumer Supply Manual
MCWP 3-1	Ground Combat Operations
FM 5-25	Electrical Firing Systems

DIRECTIVE NO.	SUBJECT
BO P5000.2J	Base Regulations
MCO 5090.21	National Environmental Policy Act
BO 5090.2	National Environmental Policy Act Compliance
SPAWARINST 5100.12B	Navy Laser Hazards Control Program
OPNAVINST 5530.13B	Department of the Navy Physical Security Instruction for Sensitive Conventional Arms, Ammunition, and Explosives (AA&E)
BO 5740.1F	Incident Reporting
COMELEVENINST 5880.1D	Marine Collisions or Casualties; Report of
DivO P8000.1D	Standard Operating Procedures for Class V(W)
BO P8000.2B	Arms, Ammunition, and Explosives SOP
BO P8000.3	Ordnance Material Standard Operating Procedures (Short Title: ORD SOP)
MCO 8020.10	Ammunition and Explosive Safety Policies, Programs, Requirements, and Procedures
MCO 8025.1D	Ammunition and Explosive Safe Policies, Programs, Requirements, and Procedures for Class V Material
NAVMC 11381	Expenditure Report
Code of Federal Regulations	Title 33, Navigation and Navigable Waters
JAG Manual	Chapter XII
Map Edition (TBD)	Camp Pendleton Military Installation Map
FACSFACSDINST 3120.1A	Amphibious Assault Helo Ops/Bombing and Strafing Regs/Amphibious Assault Area/ Amphibious Vehicle Training Area

DIRECTIVE NO.	SUBJECT
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

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CHAPTER ONE

GENERAL

Overview

This chapter provides a general overview of responsibilities, safety, required reporting, medical evacuation procedures, wild fire procedures, and information regarding operations at Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
1000. Purpose and Scope	1-3
1001. Unit Commander	1-3
1002. Officer-in-Charge (OIC) of Training	1-4
1003. Range Safety Officer	1-5
1004. Safety	1-8
1005. Range Restrictions	1-8
1006. Waivers to Regulations	1-9
1007. Accident Reporting	1-10
1008. Aircraft Accidents	1-10
1009. Medical Evacuation Procedures	1-11
1010. Fire Danger Rating	1-13
1011. Procedures for Dealing with Fires	1-15
1012. Fire Prevention Plan	1-16
1013. Controlled Burns	1-17
1014. Permitted Firing Times	1-17
1015. Grid Coordinates	1-17
1016. Magnetic Headings/Directions	1-18
Figures	
1-1 Officer-in-Charge (OIC)/Range Safety Officer (RSO) Appointment Requirements	1-7
1-2 Fire Danger Ratings	1-14

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CHAPTER ONE

GENERAL

1000. PURPOSE AND SCOPE

1. General This Manual prescribes the regulations and general precautions to be taken in the firing or other use of live ammunition and explosives, the use of training areas, airspace, seaspace, landing and drop zones and other range and training facilities at Marine Corps Base (MCB), Camp Pendleton, California.

2. Purpose The primary purpose of this Manual is to ensure a safe and realistic training environment. Nothing contained in these regulations will be construed as permitting live-fire or other training activities that endanger life or property.

3. LFAM Refer to BO P3500.2 for specific instructions and policies concerning Live-Fire and Maneuver (LFAM) training.

4. Warning Failure to comply with these regulations may subject the offender to administrative action or disciplinary action under the Uniform Code of Military Justice.

1001. UNIT COMMANDER

1. General Ensure compliance with this Manual, directives in the MCO 3570 series, applicable TMs, field manuals (FMs), and Marine Corps Warfighting Publications (MCWPs), installation range guidance, and applicable SOPs for safe training and firing for each weapon system within the command.

2. Briefing Ensure all personnel within the command are briefed on installation range procedures and safety requirements including required personal protective equipment.

3. OIC and RSO Designation Designate an OIC and RSO for training events per the provisions listed in figure 1-1. The RSO may have no additional duties during the firing/training exercise.

4. OIC and RSO Requirements

Ensure OICs and RSOs meet the requirements listed in directives in the MCO 3570 series, and highlighted as follows.

a. Must be competent; and have been properly instructed in the performance of their duties, as well as having satisfactorily completed a range safety certification program.

b. Must be knowledgeable in the weapon systems for which they are held responsible, and in safe ammunition handling and use procedures.

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5. ORM

a. Develop Operational Risk Management (ORM) procedures for all phases of training event(s).

b. Review risk assessments for all training events. An ORM Worksheet is provided in appendix I of this Manual.

1002. OFFICER-IN-CHARGE (OIC) OF TRAINING

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1. Duties

a. The OIC will coordinate with units using adjacent ranges or facilities to ensure safe conduct of training and will ensure that all required communications have been established and are maintained with LONGRIFLE.

b. The OIC will appoint and instruct range guards and other safety personnel as required.

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2. Safety

The OIC shall have a detailed Operational Risk Management (ORM) worksheet, signed by the unit commander that covers all phases of training to be conducted.

a. The OIC shall be a qualified RSO, and shall be knowledgeable in the weapons systems for which they are held responsible.

b. The OIC will ensure that the RSO is familiar with the weapon(s) or weapon system(s) being used.

c. In the event of serious injury or death, the OIC or an appointed representative will suspend fire, and will:

(1) Ensure first aid is rendered.

(2) Contact LONGRIFLE and report the location, nature of the accident, and assistance required.

d. The OIC will ensure that the RSO provides for an emergency vehicle and corpsman for all training on live-fire ranges. OICs using training areas will also

ensure the unit has an emergency vehicle and corpsman. Report the following information to LONGRIFLE by radio (primary) or telephone (secondary).

(1) Training area/range being used (grid if possible)

(2) Unit designation

(3) Time in/expected length of stay

(4) Time out

(5) Number of personnel

(6) Type of ordnance

(7) Type of training

(8) Name and rank of OIC and RSO

e. The OIC shall ensure the requirements in chapter 2 of this Manual have been met.

1003. RANGE SAFETY OFFICER

1. General

The RSO assists in maintaining surveillance of firing and safety within the entire surface and vertical hazard space of the assigned range. The RSO is a supervisory position. The RSO shall not personally participate in training. The RSO will not be assigned other duties nor fire a weapon, and will be the last to leave the range following completion of firing and clean-up, ensuring that the range is clear of all personnel and equipment. The RSO will ensure that all trash and brass are removed from the range after completion of training.

2. Training

Personnel to be assigned duty as RSOs will first attend an RSO class, held every Friday at 0900 in Bldg. 2399, MCAS Camp Pendleton. Further information can be obtained by contacting the Range Control Officer at (760) 725-0355. Camp Pendleton RSO certifications are valid for one year.

3. Forward Air Controllers

All FACs and FAC(A)s shall complete the Camp Pendleton FAC/FAC(A) class prior to controlling aircraft here. Classes are held every Friday at 0800 in BLDG. 2399. FAC/FAC(A) classes may also be scheduled through the Airspace Management Office at DSN 365-8183; or (760) 725-8183. Camp Pendleton FAC/FAC(A) certifications are valid for two years.

4. RSO Duties

a. The RSO is responsible for the enforcement of applicable safety regulations contained in this Manual, directives in the MCO 3570 series, and other applicable field, technical, and ordnance publications.

b. The RSO is also responsible for ammunition accountability. The RSO will have a copy of the applicable portions of this Manual in his possession at all times. RSOs are responsible for personnel shakedown and police call per MCO P4400.150E (chapter 7).

(1) The RSO shall inventory and sign for ammunition and explosives on the NAVMC 11381 Expenditure Report. Refer to paragraph 7001.4 in chapter 7 of this Manual.

(2) RSOs are further responsible for ammunition and explosives malfunction reports. Refer to paragraph 7003 in chapter 7 of this Manual.

c. The RSO shall maintain communication with LONGRIFLE at all times. When the range is firing and communication is lost, the RSO will order a cease-fire until communication is reestablished.

d. The RSO (including FACs) must participate in a "Hot Brief" with LONGRIFLE via radio (primary) (frequencies: UHF 301.9, 249.9, 255.2; VHF 123.2; FM 30.35, or 49.00) or via telephone (alternate means) [(760) 725-4604/3974]. The RSO must identify himself/herself as the RSO/FAC (which will be verified in LONGRIFLE's RSO/FAC database), and then confirm numbers of participating personnel, types of ordnance/weapons to be fired, presence of safety vehicle, etc. Required SDZ diagrams and ground FAC brief sheets shall be submitted via FAX [(760) 725-4090] or delivered to the Range Scheduling Office at BLDG. 2399, MCAS, Camp Pendleton, in advance. Once all regulations and safety requirements have been satisfied, LONGRIFLE will authorize the unit to go "hot." A 60mm ammunition can, which reads, "Range Regs RSOs Only," has been attached to a pole at each range, drop zone, rappel tower, mortar position, and artillery firing area. The RSO will find a red flag and a copy of the regulations for that range/facility in the ammunition can. Range regulations found on ranges shall supersede regulations contained in appendix C of this Manual. Thirty (30) minutes prior to going "cold," the RSO shall notify LONGRIFLE so that a Range Inspector can proceed to the range to ensure a proper police is conducted. The RSO is not released from police responsibility until cleared by the Range Inspector. Ranges used past sunset will be inspected the following morning, and the RSO will then be released from responsibility. The RSO shall ensure that his unit does not exceed its assigned time on the range/position, and the regulations are properly returned to the ammo can immediately upon completion of firing.

e. The RSO/Drop Zone Safety Officer (DZSO) for drop zones shall be a certified jumpmaster per MCWP 3-1, and must be present during drop operations.

f. The RSO for rappelling/HRST must have a qualified, school-trained rappel/HRST master present during rappel/HRST operations.

g. The RSO for assault climbing events shall have a certified assault climber present at all times during training.

h. RSOs of Explosive Ordnance Disposal (EOD) Range 401 may check out that range by telephone with LONGRIFLE. The requesting unit shall coordinate all scheduling of R-401 with the Base EOD Team. The estimated height/frag pattern (in feet) shall be provided to LONGRIFLE upon checking out Range 401. Frag patterns exceeding 1,000' AGL shall be coordinated five (5) working days in advance with LONGRIFLE.

i. RSOs are required for units conducting training in Camp Pendleton training areas and beaches. RSOs for units in training areas and/or beaches shall be a Sergeant or above.

j. RSOs for units conducting non live-fire training at the Military Operations in Urban Terrain (MOUT) Training Facility (Range 131) shall be an E-5 or above. For all live-fire events, the RSO shall be an E-6 or above.

Officer-in-Charge (OIC)/ Range Safety Officer (RSO) Appointment Requirements

EVENT	OIC 1			RSO 1		
	OFF	WO	NCO	OFF	WO	NCO
MOUT/MAC Operations	Please refer to notes 1 & 2 (below)					
Chemical Agents and Smokes 3	X	X	E-6	X	X	E-6
Sub caliber training devices; laser devices; firing devices; simulators and trip flares; small arms; and machine guns	X	X	E-6	X	X	E-5
Field Artillery 4	X	X	E-7	X	X	E-6
Combined arms live-fire exercises using outside fire support, troop, battery, squad, platoon, company; or battalion and larger 5	X	X	E-7	X	X	E-6
Aerial gunnery & air defense weapons; flame-throwers; practice and live grenades, grenade launchers, and grenade machine guns; live mines and demolitions; tank & fighting vehicle cannons; and recoilless rifles	X	X	E-7	X	X	E-6
Mortars	X	X	E-6	X	X	E-6
Direct-Fire Antitank Rockets and Missiles	X	X	E-7	X	X	E-6
Live-fire exercises using organic weapons, squad through company, battery, and troops	X	X	E-7	X	X	E-6
Paradrops	X	X	E-6	X	X	E-4
Rappelling	X	X	E-6	X	X	E-5
Training Area Operation (non live-fire)	X	X	E-6	X	X	E-5
Helicopter Support Team (HST) Operations	X	X	E-4	X	X	E-4
EOD Operations			E-5			E-5

Figure 1-1

(Notes continued on next page)

1. Civilians in the grade of GS-07 or above may act as OIC; and GS-05 or above, or equivalent for RSO. When conducting non live-fire, the RSO for units training at the Military Operations in Urban Terrain (MOUT) Training Facility (Range 131) shall be an E-5 or above with MAC or MOUT instructor certification from Division Schools. The RSO shall be augmented by MOUT instructors for each section used. During live-fire training, the RSO shall be an E-6 or above with the same certification.
2. The RSO for units conducting training in the MOUT Assault Course (MAC) shall be an E-6 or above with MAC or MOUT instructor certification from Division Schools. The RSO shall be augmented by MOUT instructors, E-5 or above, for each site used.
3. The OIC and RSO shall be nuclear, biological, and chemical (NBC) qualified when conducting NBC or smoke training.
4. Use of E-7s as OICs is authorized only when approved by the installation.
5. The OIC for battalion, or larger, CALFEXs and LFAMs shall be a field grade officer.

1004. SAFETY

1. Safety

a. Safety is the responsibility of every individual, at all times, and is a key factor in successful training. Concerns for safety, however, should never be limited to the training event itself, but should always include associated activities as well; including convoy movement to and from training, maintenance activities, bivouac operations, etc.

b. Any individual who observes an unsafe condition shall report this immediately to the chain of command. A training event or any other activity may be halted until the unsafe condition has been corrected. Anyone has the option to call "cease-fire" over their respective LONGRIFLE frequency. The greatest danger to life and limb is associated with live-fire; therefore, range restrictions for various weapons/ ammunition are listed below. These are in addition to other safety requirements listed in this Manual.

c. Where conflicts occur with safety instructions contained in Field and Technical Manuals, the provisions of directives in the MCO 3570 series govern.

2. ORM

Operational Risk Management (ORM) shall be employed during all facets of training activities. An ORM Worksheet is provided in appendix I of this Manual.

1005. RANGE RESTRICTIONS

1. General

a. Firing or bombing will be conducted on authorized ranges and LFAM areas only. This does not prohibit the controlled use of blank ammunition or noisemakers (small, controlled demolition charges of ¼ pound of TNT or equivalent) in accordance with this Manual.

b. The use of chemical ammunition will be in strict compliance with paragraph 7008 in chapter 7 of this Manual. The use of riot agents (CS), smoke, and other obscuration materials shall be in strict compliance with paragraph 7009 and appendix F of this Manual.

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2. POVs and Privately Owned Weapons

a. Privately owned vehicles (POVs) are prohibited on all live-fire ranges, Artillery Firing Areas (AFAs), Mortar Firing Areas (MFAs), and training areas with the exception of the following rifle and pistol ranges: 102, 103, 116, 213, 214, 312A, 313A, and the Edson Range Complex. Parking of POVs on access roads to live-firing ranges, AFAs, MFAs, and training areas is also prohibited, without written authorization from the Range Control Officer. POVs may be authorized at Range 401 at the discretion of the Base EOD OIC/NCOIC. Parking of POVs at the Southern Impact Training Area Control Center is limited to Range Control personnel. During authorized hunting and fishing periods, the Range Control Officer may authorize hunter POV parking along main roads in training areas.

b. Privately owned weapons are not authorized on ranges or training areas without special permission. Submit requests to the Range Control Officer two weeks in advance.

c. Carrying military weapons to and from any range in POVs is not authorized without organizational commander's approval.

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3. Civilian Observers

Military personnel not specifically scheduled to be on ranges or training areas are not authorized. Civilians are not permitted at live-fire training events. Unit-sponsored functions, which include civilian participation, may be requested through the Commanding General (Assistant Chief of Staff, Operations and Training).

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4. Physical Training

Physical training (PT) on Basilone and/or Roblar Roads IS NOT AUTHORIZED. Unit PT or recreational activities in training areas shall be scheduled via the Range Scheduling Office. This includes individual PT.

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5. Alcohol

Alcohol is not allowed on ranges or in training areas unless approved by the Assistant Chief of Staff, Operations and Training.

1006. WAIVERS TO REGULATIONS

Requests for waivers to the provisions contained in this Manual should be addressed to the Commanding General, MCB, Camp Pendleton (Attn: Assistant Chief of Staff, Operations and Training) no less than thirty (30) working days prior to the planned

event. It is recommended that waiver requests be coordinated with the Range Control Officer prior to request submission.

1007. ACCIDENT REPORTING

When a training accident occurs on a range or in a training area, a report will immediately be made to LONGRIFLE by telephone or radio. The Assistant Chief of Staff, Operations and Training (in the case of Base organizations) or the Assistant Chief of Staff, G-3, I MEF (via unit chains of command) will immediately be notified by the unit commander of all training accidents (refer to BO 5740.1F). When ordnance material is involved, the accident will also be reported to the Base or Division Ordnance Officer, as appropriate.

1008. AIRCRAFT ACCIDENTS

a. Notify LONGRIFLE in the event of any actual aircraft accident on Camp Pendleton ranges or training facilities.

b. The following information shall be reported, if available.

(1) Location

(2) Type of aircraft

(3) Personnel involved

(4) Aircraft armament

(5) Name, grade, organization, and present location of the caller

c. If the crash occurs in an impact area, units or personnel involved in emergency rescue operations must ensure live firing in that area has ceased before entering the impact area, and that an EOD Technician is physically present with the rescue party.

d. LONGRIFLE shall call “cease firing” on all ranges that affect the crash site. Clearance will then be given for the rescue party to enter the impact area with the EOD Technician.

e. Firing will not resume until the rescue has been completed and all personnel and equipment have been accounted for.

1009. MEDICAL EVACUATION (MEDEVAC) PROCEDURES

1. General

a. LONGRIFLE has ultimate MEDEVAC initiation responsibilities for all accidents occurring at Camp Pendleton ranges and training facilities. It is critical in order to ensure a timely response to training accidents, that the incident details, victim injuries, and assets necessary to best address victim injuries are clearly relayed to LONGRIFLE. The following information pertains to MEDEVAC responses.

(1) The Camp Pendleton Naval Hospital is not trauma-capable.

(2) The Camp Pendleton Fire Department must be on-scene for the arrival of any civilian air ambulance to ensure the victim(s) is prepared for transport and the landing zone is identified and marked in accordance with civilian air ambulance expectations.

(3) Civilian air ambulance companies advertise a 15 to 20-minute response time, but may be longer if their local assets are already committed.

(4) A victim should not be transported via military aircraft (helo) if he/she cannot stand the vibration or jarring associated with military aircraft transport. It may be better to await a civilian air ambulance and the fire department to adequately stabilize the victim for civilian air ambulance transport.

(5) Extractions requiring airborne support may be delayed for up to one hour due to the non-availability of local airborne extraction assets.

(6) There is not a military MEDEVAC aircraft on standby at Camp Pendleton.

b. Competent medical personnel or the senior Marine on location shall determine the extent of a medical emergency. Sound judgment will always be paramount in any successful response to an emergency.

2. Categories

There are three categories of MEDEVACs. The MEDEVAC category shall be relayed to LONGRIFLE.

a. Emergency (life threatening). Requires immediate response, typically by civilian air ambulance. This category also includes an injury degrading to an emergency (life threatening) status if not transported in a timely manner.

b. Priority (non-life threatening). Evacuation may be accomplished by air or ground.

c. Routine (minor injuries). Transport is accomplished via vehicle.

3. MEDEVAC Controlling Agency

a. LONGRIFLE will remain the principal controlling agency during an actual MEDEVAC emergency. If a radio is the only means of communication, contact LONGRIFLE on FM 30.35/49.00. If a radio is not available, contact LONGRIFLE at (760) 725-4604/3974. If a telephone or radio is not available, use RED SMOKE/ RED FLARE with caution.

b. DURING A MEDEVAC, ALL UNITS ON BASE RANGE CONTROL SAFETY NETS SHALL STAY CLEAR OF THE NETS UNTIL THE MEDEVAC HAS BEEN COMPLETED, UNLESS ANOTHER UNIT REQUIRES MEDEVAC SUPPORT.

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4. Training Accident Reports

a. Training accident reports will include the information listed below. Unless deemed otherwise by competent authority, names and social security numbers of injured personnel should not be relayed over the radio. Range Inspectors may be used to relay or gather sensitive accident and/or medical information.

SUMMARY DESCRIPTION OF EVENT			
WHAT & HOW HAPPENED		WHEN	
		WHERE	
PERSON(s) MISSING			
NAME	GRADE & SVC. BRANCH	SSN	DOB
PERSON(s) INJURED			
NAME	GRADE & SVC. BRANCH	SSN	DOB
PARENT COMMAND	BLOOD TYPE		
CRITICAL/SERIOUS/OR MINOR INJURY (if determined)			
DESCRIPTION OF INJURY (expressed in lay terminology)			

(Summary Description of Event continued on next page)

TREATMENT & EVACUATION SEQUENCE			
PERSON(s) KILLED			
NAME	GRADE & SVC. BRANCH	SSN	DOB
PARENT COMMAND	FACTORS WHICH MAY GENERATE PUBLIC INTEREST (if any)		

b. In most circumstances, evacuation by vehicle will be the most effective means of transportation. Good judgment will always be the paramount factor in determining which mode of transportation should be used.

c. Red smoke is designated as the alternate signal for any emergency. Therefore, red smoke will not be used unless a bona fide emergency exists. Any unit/aircraft sighting red smoke should check fire and immediately contact LONGRIFLE.

1010. FIRE DANGER RATING

1. General

In order to reduce the danger from wildland fires while also accomplishing maximum training during the dry season, the Commanding General, MCB, Camp Pendleton publishes Fire Danger Ratings. Fire Danger Ratings are applicable to all organizations and individuals at Camp Pendleton, whether in a training or off-duty status, and while using ranges, training areas, or impact areas.

2. Fire Danger Ratings

Fire Danger Ratings are defined in figure 1-2 (below).

FIRE DANGER RATINGS

FIRE DANGER RATING (HAZARD)	CAUTION TO BE EXERCISED	NECESSARY PRECAUTIONS
0 – 30 (BLUE = LOW)	Use normal caution.	Any type of ammunition may be used with care. Smoking is permitted. This is the highest allowable FDR for LFAM training without a waiver.
31 - 40 (GREEN = MODERATE)	Use normal caution. Fire will start easily.	Any type of ammunition may be used with care. Smoking is permitted.
41 - 60 (YELLOW = HIGH)	Use extra caution. Fire will start very easily.	The beginning of the high danger period. Any type of ammunition may be used, with care, on ranges and within impact areas. It is recommended that the use of pyrotechnics, demolitions, and heat or flame-producing devices within training areas be limited as much as possible to cleared areas or areas previously burned for that purpose. Smoking is permitted only in cleared areas or firebreaks. Note paragraph 1012.2 concerning restrictions in the perimeter training areas.
61 - 80 (ORANGE = VERY HIGH)	Use extreme caution. Fires are very hard to control.	Firing will be permitted at all times on all ranges unless restricted by LONGRIFLE. Minimal use of pyrotechnics, demolition, and heat or flame-producing devices (including blanks and smoke grenades) is allowed within training areas; however, their use is restricted to cleared or previously burned areas only. Smoking will be permitted only in cleared areas or on firebreaks. Note paragraph 1012.2 concerning restrictions in the perimeter training areas.
81 & Higher (RED = EXTREME)	Flash condition. This is the highest class of fire danger. Fires started are practically impossible to extinguish and usually continue until danger rating conditions improve or they burn themselves out. The utmost caution with fire-producing agents and devices must be exercised at all times.	The firing of high explosives, pyrotechnics, incendiaries, or other ammunition likely to cause fires is prohibited unless specifically authorized by LONGRIFLE. **The use of any type of training/ live ordnance (to include blanks), heat or flame-producing devices (heaters, welders, stoves, or open fires) in training areas is strictly prohibited unless authorized by LONGRIFLE. No off-road activities by vehicles (HMMWVs, etc.) are permitted without authorization from LONGRIFLE.** Firing units will exercise maximum attention to the observation of range fans and other precautions to prevent fires of any nature from starting. Smoking shall not be permitted under any circumstances.

Figure 1-2

3. Dissemination

a. The Fire Danger Ratings are determined and disseminated by the Base Fire Department.

b. When the Fire Danger Rating reaches RED, a notice reenforcing the FDR will be sent by the Assistant Chief of Staff, Operations and Training (Base Command Duty Officer during non-duty hours) to all units at Camp Pendleton.

4. Action

a. RSOs will allow firing or training to commence only after ascertaining the Fire Danger Rating in effect and adopting the appropriate fire prevention measures.

b. LONGRIFLE will notify RSOs of FDR changes as they occur.

c. In the event of a wildland fire on any range, impact, or training area, the RSOs will immediately notify LONGRIFLE by the most expeditious means possible stating the exact location and extent of the fire. LONGRIFLE will then instruct the RSOs as to what action to take prior to the arrival of the Fire Department. The RSO should remain in a safe area with his unit subject to the orders of the Base Fire Chief. Due to the possibility of duds, under no circumstances will anyone enter an impact area to fight fires.

d. The Range Control Officer will monitor all range and training area fires as they occur, and is authorized to assist the Base Fire Chief to safeguard government property and personnel. This will include the control of firing and the removal of units from training areas threatened by fire. Maximum effort will be made not to interfere with scheduled training. However, safety considerations shall take precedence.

e. Fires will not be started on any range or in any training area except when authorized by the Range Control Officer for warmth and cooking. Cutting of trees and brush for such fires is prohibited per paragraph 2001.1 in chapter 2 of this Manual. Fires will be carefully extinguished prior to leaving the area. FIRES WILL NOT BE PERMITTED WHEN THE FIRE DANGER RATING IS **RED** OR **ORANGE**.

f. Burning of powder may be conducted in Artillery Firing Areas during FDRs of BLUE, GREEN and YELLOW. In order to reduce the potential for costly wild fires, when the FDR is ORANGE or RED, the unit conducting training shall burn powder only at AFAs 16 and 31, unless otherwise coordinated with the Range Control Scheduling Office to burn in place. During all powder burning activities, units conducting powder burning shall burn powder in areas cleared to mineral earth and no closer than 200 feet to vegetation. Powder will be burned in single or double rows not to exceed 12 inches in width and not to exceed a total of 40 increments (bags). Units shall have fire extinguishers, water, and shovels at the burn site. Units shall contact LONGRIFLE for permission prior to burning. During FDRs of ORANGE and RED, units shall remain at the burn site for 30 minutes after the last burn, ensuring no fires have been started in the surrounding vegetation.

1011. PROCEDURES FOR DEALING WITH FIRES

1. General

Personnel training on Camp Pendleton will not generally engage in firefighting and under no circumstances will personnel attempt to fight a fire in an impact area. Upon discovering a fire in a training area, the senior person present will determine whether personnel present can extinguish the fire. It is important to remember; however, that firefighting is, at best, a very dangerous activity. Firefighting can be deadly, especially without proper training. In making this determination, the following facts should be considered with the greatest importance placed on safety of personnel:

a. Size and type of fire

b. Speed at which the fire is spreading

c. Probability of injury to those personnel who will attempt to extinguish the fire

d. Probability of damage to government property

e. Equipment available to combat the fire

2. Discovering a Fire

Upon discovering a fire, the senior person present should take the following steps.

a. Inform LONGRIFLE of the fire size and location; provide cause and type of fire (e.g., wildland fire, vehicle fire, fuel fire, etc.) if possible. If unable to contact LONGRIFLE, inform the Base Fire Department by the most expeditious manner at (760) 725-3333 or 911.

b. Evacuate all personnel and all equipment to safety as long as the removal of equipment does not endanger personnel.

c. Remain in the area with his/her unit in a safe area, subject to orders of the Fire Department.

1012. FIRE PREVENTION PLAN

1. General

Most wildland fires result from careless acts rather than being the result of training accidents. All reasonable means available must be taken to prevent such fires, and to reduce damage when they do occur. All personnel must be aware of the dangers of fire at Camp Pendleton, and train in a manner that minimizes fires.

2. Fire Prevention Plan

Wildland fires remain the most destructive (and costly) threats to Camp Pendleton training resources. In past years more money has been spent on fire prevention, firefighting, and post-fire restoration at Camp Pendleton than was obligated for range improvements. In an attempt to continue to control these escalating costs without seriously degrading realistic training, the following Base Fire Prevention Plan is in effect.

a. As required, the Camp Pendleton Fire Department will conduct controlled burns in dud-producing impact areas or firing ranges that have a high fire potential. This will allow the use of all normally authorized ordnance in those dud-producing impact areas.

b. Flame, heat-producing devices, pyrotechnics, or training activities in the perimeter training areas, including Bravo I and II, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, Juliet, Lima, and November, that could cause a fire are PROHIBITED when the FDR is ORANGE or RED (unless approved by Range Control).

c. Blanks are not authorized in the perimeter training areas during Fire Danger Ratings of ORANGE or RED unless approved by Range Control.

d. No ordnance of any kind, flame/heat-producing devices including blanks, or training activities that could cause a fire, are permitted in any training areas when the FDR is RED.

e. All other training, training areas, and ranges in non dud-producing impact areas will be in strict compliance with the Fire Danger Rating.

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3. Fire Danger Rating Updates

Fire Danger Rating updates may be received by contacting LONGRIFLE.

1013. CONTROLLED BURNS

The Base Fire Chief will conduct controlled burning. Requests for controlled burning on ranges and in training areas will be submitted to the Base Fire Chief who will coordinate burning with the Assistant Chief of Staff, Operations and Training and the Assistant Chief of Staff, Environmental Security.

1014. PERMITTED FIRING TIMES

1. 0600-2400

All weapons/ordnance are permitted.

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2. 2400-0600 All weapons/ordnance: Submit a written request via the Director, Range Operations Division to the Commanding General (Assistant Chief of Staff, Operations and Training) with justification at least five (5) working days in advance. NOTE: This is essential for FAA coordination to activate required airspace.

1015. GRID COORDINATES

Unless otherwise described, all grid coordinates used in this Manual correspond to the Camp Pendleton Military Installation Map

1016. MAGNETIC HEADINGS/DIRECTIONS

Unless otherwise stated, all headings/directions used in this Manual are magnetic.

CHAPTER TWO

ENVIRONMENTAL PROCEDURES

Overview

This chapter provides a description of the environmental policies and procedures to be observed at Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
2000. General	2-3
2001. Environmental Constraints Applicable to all Training Activities	2-3
2002. Areas Prohibited to Training	2-4
2003. Police of Ranges and Training Areas	2-6
2004. Field Heads, Urinals, and Wastewater	2-6
2005. Field Drinking Water Supply	2-7
2006. Operation of Vehicles	2-8
2007. Environmental Considerations and Restrictions	2-8
Figure	
2-1 Endangered Species Summary	2-16

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CHAPTER TWO

ENVIRONMENTAL PROCEDURES

2000. GENERAL

The ranges and training areas of Camp Pendleton are heavily used. Camp Pendleton is also the home of many endangered species, wetlands, and sensitive habitats, which are protected by federal laws strictly enforced by local regulatory agencies. To successfully achieve all training objectives while complying with environmental laws and regulations, it is essential to consider environmental concerns while planning training operations and exercises. Proper planning will preserve all training facilities for future generations of Marines; therefore, it is essential that training units adhere to the provisions in this chapter. All users of ranges and training areas are responsible for knowing and adhering to applicable environmental laws and regulations, including, but not limited to, the current Fire Danger Rating and restrictions associated with the environmentally sensitive areas identified on both the Camp Pendleton Military Installation Map and the most current MCB Environmental Constraints Map. The MCB Environmental Constraints Map is a Geospatial Information System (GIS) Map, and may be obtained through the Assistant Chief of Staff, Environmental Security. Questions concerning applicable environmental regulations may also be referred to the Assistant Chief of Staff, Environmental Security [National Environmental Protection Act Branch (NEPA Branch) at (760) 725-9759].

2001. ENVIRONMENTAL CONSTRAINTS APPLICABLE TO ALL TRAINING ACTIVITIES

1. Prohibited Activities

The following activities <u>are prohibited</u> on all ranges and training areas aboard Camp Pendleton:

a. Burying, dumping, abandoning, or disposing of solid waste (e.g., trash, rubbish, or garbage), except in approved containers (i.e., “dumpsters”) or at established landfills.

b. Burying, dumping, abandoning, or disposing of any type of unused military munitions.

c. Unlawfully disposing hazardous waste, including unlawfully releasing (e.g., venting, draining, or spilling) oil, fuel, and all other hazardous substances from vehicles, equipment, storage tanks, or containers into the air, ground, or water.

d. Removing or intentionally destroying threatened or endangered plants, trees, brush, cactus, or any other vegetation (refer to the MCB Environmental Constraints Map). Cutting or removing tree limbs or large portions of any other plant is also prohibited. Limit camouflage material to previously felled vegetation.

e. Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving cutting/removing/trimming of brush, trees, cactus, or any other type of vegetation that may be considered threatened or endangered as indicated by the Environmental Constraints Map; and prior to any activity involving soil excavation, grading, filling, or digging fighting positions in or adjacent to protected habitat areas as indicated by the Environmental Constraints Map.

f. Killing, injuring, or harassing wildlife and livestock. Killing poisonous snakes and other wildlife in self-defense is not prohibited. Most snakebites on the Base have resulted from untrained individuals trying to handle snakes. Contact the Base Game Warden for snake removal.

g. Removing (i.e., stealing), intentionally destroying, or intentionally disturbing archaeological, Native American, and/or historical materials, artifacts, buildings, and/or sites.

***2.* Earthwork**

Impact berms contain lead, a toxic metal and potential hazardous waste. Consult with the Assistant Chief of Staff, Environmental Security, before beginning earthwork on or near impact berms.

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3. Violations

Violations of these provisions may result in disciplinary action under the Uniform Code of Military Justice, or prosecution in state or federal court. Violation of these provisions may also result in potential adverse impacts to future training opportunities aboard the Base.

2002. AREAS PROHIBITED TO TRAINING

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1. Prohibited Areas

Prohibited land areas are listed below.

a. Cantonment areas except those facilities specifically designated for training, (e.g., obstacle courses, rappel towers, gas chambers, etc.)

b. Designated historical/archeological sites

c. Las Pulgas Ammunition Supply Point (ASP)

d. Landfills

e. Range 401 (EOD Range), except for authorized EOD training

f. MASS-3 Area

g. Marine Memorial Golf Course

h. Installation Restoration and National Priority List (NPL) environmental clean-up areas

i. Any area where training land restoration and erosion control work is ongoing (usually, but not exclusively, coastal bluffs and terraces). These areas will be marked with appropriate warning signs and fences.

j. All training areas, ranges, and field training facilities are off-limits to units and personnel unless the training area, range, or field training facility has been properly scheduled; or specifically permitted by LONGRIFLE.

k. Training in the vicinity of rivers, creeks, and natural drainage areas may require special consideration; therefore, it is subject to the provisions of paragraph 2007 in this chapter. Provisions contained in the most current Environmental Constraints Map may also apply.

l. Avoid, to the maximum extent possible, parking vehicles or heavy equipment under the canopies of trees. Do not dig fighting holes under the canopies of trees. These activities damage the root systems, eventually killing the trees.

m. Off-road vehicular traffic during periods of peak soil moisture conditions frequently results in severe gullying and training land degradation. This leads to decreased training opportunities and hazardous conditions that create safety concerns. Whenever possible, vehicular traffic should remain on designated roads following significant rainfall.

n. The Cocklebur Sensitive Area, consisting of non-beach lands west of the I-5 Freeway from the beach access road immediately north of MCTSSA to French Creek Lagoon, excluding the LCAC Facility (598 790 to 605 795 to 595 808 to 595 805 to beginning) is off-limits.

o. Areas marked with signs, which say, “Off Limits for Environmental Reasons,” “California Least Tern Nesting Site,” or “Wetlands” are off-limits to training units.

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2. Other Restrictions

Operational restrictions to comply with environmental laws and regulations, other than identified above, shall be imposed on training occurring within environmentally sensitive areas identified on the Camp Pendleton Military Installation Map and the MCB Environmental Constraints Map. Specific operational restrictions for sensitive areas are delineated in paragraph 2007 in this chapter.

2003. POLICE OF RANGES AND TRAINING AREAS

1. General

Police of ranges and training areas is the responsibility of the using unit. It is the responsibility of the OIC/RSO to ensure ranges, training facilities, and training areas used by their units have been properly policed. All solid waste brought to ranges, training facilities, and training areas; including cardboard, wrapping materials, food waste, communication wire, expended brass, and ammunition containers, shall be removed from those areas and recycled or disposed in approved containers (i.e., "dumpsters") or at established landfills. No unit will depart their training location until that area is in a proper state of police. Exercise units shall dedicate a minimum of 24 hours to range, training facility, and training area policing prior to the departure of any exercise unit. An exercise representative, and a Camp Pendleton Range Inspector, prior to the departure of exercise participants, shall conduct a post exercise inspection.

2. Dumpsters

Dumpsters are not provided at ranges or training areas. If dumpsters are required, units shall coordinate with the MCB Facilities Maintenance Department (FMD). Major exercises may also coordinate delivery of dumpsters with FMD. Users shall also coordinate the planned location of dumpsters with the Range Scheduling Office prior to placement. This ensures the dumpsters will be clear of surface danger zones. Dumpsters shall be removed upon completion of training.

3. Hazardous Material

Hazardous materials (e.g., paint, POLs, etc.) used while training shall be stored in approved, closed, leak-proof containers. All hazardous materials shall be clearly marked, identifying the contents of the container. All hazardous material spills shall be reported immediately to LONGRIFLE, who will immediately notify the Fire Department and the Assistant Chief of Staff, Environmental Security (HazMat). Units should use available resources to prevent and contain spills, at or near the source of the spill, and submit required formal spill reports to the Assistant Chief of Staff, Environmental Security. Hazardous waste shall be removed daily from ranges and training areas by the using unit.

2004. FIELD HEADS, URINALS, AND WASTEWATER

1. General

Any organization assigned to a range and/or training area shall properly police and clean heads and urinals in their assigned area. Trash (e.g., ration containers, cans, etc.) will not be disposed of in any head, urinal, or chemical toilet.

2. Chemical Heads Platoon size or larger units, and stationary units, shall use chemical heads. Chemical heads may be coordinated through Base Property [(760) 725-4532]. Users shall also coordinate the planned location of heads via the Range Scheduling Office prior to placement. This ensures chemical heads will be clear of surface danger zones. As a last resort, squad size or smaller units maneuvering alone may use properly constructed straddle-trenches or cat holes to dispose of solid human waste. However, they shall not be constructed/dug in or adjacent to watercourses. For safety reasons, before using urinals and/or chemical heads, check them for poisonous insects and other hazards.

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3. Wastewater Wastewater from temporary showers (greywater) may be discharged to land if a local permit is obtained through the Assistant Chief of Staff, Environmental Security. Provisions shall be made to ensure that all discharged greywater percolates at the discharge site; and does not flow to surface waters or dry watercourses. Greywater discharge from new permanent facilities shall be permitted through the Assistant Chief of Staff, Environmental Security. All greywater disposal shall comply with Preventive Medicine Regulations and Standards for military field operations.

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4. Messing Spoils Messing spoils shall not be discarded into surface waters or the ground. All messing spoils shall be disposed as wet garbage at appropriate disposal sites. Liquid messing wastewater shall be collected and transported for disposal to a sanitary sewer. Disposal of liquid messing wastewater in the field is not authorized, unless a permit is obtained from the Assistant Chief of Staff, Environmental Security; and approved by Preventive Medicine.

2005. FIELD DRINKING WATER SUPPLY

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1. General All connections to the water system should be attached in such a manner as to prevent cross-connections and back siphoning from a contaminated source to the potable distribution system. Prevent water hoses at vehicle filling sites from contacting any source of contamination, including the vehicle, ground, tools, and equipment.

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2. Pumping Units should obtain approval from the Assistant Chief of Staff, Facilities to pump water from any lake, pond, stream, river, well, storage area, sitting irrigation pumps, and well drilling equipment. Water drawn from the Base distribution system for further transport and use as potable water should be protected from accidental contamination. All hoses or valves marked “potable” shall be kept scrupulously clean at all times.

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3. Reports Report all instances of water pipe breaks, valve and pipe leaks, and other system failures to the Assistant Chief of Staff, Facilities [Emergency Maintenance Branch at (760) 725-4683/4368].

2006. OPERATION OF VEHICLES

a. Whenever possible, vehicles will use secondary [dirt or decomposed granite (DG)] roads within training areas. The speed limit is 25 mph for all areas, unless otherwise posted.

b. To the maximum extent possible, administrative vehicle traffic should use existing roads and paths to or within the established camp, command post, or bivouac site

c. Vehicles operating tactically, in support of a training objective, may transit terrain as dictated by the scenario, providing they do not damage threatened or endangered species habitat, or archaeological sites. Vehicles operating in the vicinity of creeks or rivers should use existing roads, trails, and stream crossings. Refer to paragraph 2007 in this chapter for specific environmental restrictions in these areas.

d. Unit commanders are requested to use prudent judgment in the scheduling and conduct of training and exercises that might result in heavy vehicular traffic over recently burned terrain.

e. No off-road activities by vehicles (HMMWVs, etc.) will be permitted when the Fire Danger Rating (FDR) is RED (extreme fire condition), without permission from LONGRIFLE prior to entering the training area or range.

2007. ENVIRONMENTAL CONSIDERATIONS AND RESTRICTIONS

1. General To comply with federal, state, and local laws for the protection of the environment, special care must be taken when conducting training in sensitive environmental areas. When planning training events, refer to BO 5090.2 (NEPA), the Camp Pendleton Military Installation Map and the most current MCB Environmental Constraints Map to determine locations of sensitive areas, and use the guidance found in this chapter to determine applicable restrictions in those areas. For training events larger than a Marine Expeditionary Unit (MEU) in size, or when operational requirements conflict with the following guidance, exercise commanders must obtain approval from the Assistant Chief of Staff, Environmental Security.

2. Environmental Training

Training for unit S-3 and S-4 officers/SNCOs interested in specific environmental training focused on operational planning and execution (i.e., Environmental Constraint Map) is provided by the Assistant Chief of Staff, Environmental Security. Additional information and course schedule are provided in BBul 5090, or by contacting the Environmental Training Branch at (760) 725-7308/7309.

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3. Environmental Documentation

Provided MEU and smaller size units use the training areas and ranges for the purposes specifically outlined in this Manual, and strictly adhere to the environmental restrictions associated with each range, submission of environmental documentation is not required. This includes training at rappel towers, gas chambers, and training tanks. Exercise commanders shall coordinate with the Assistant Chief of Staff, Environmental Security to determine the level of environmental documentation required for exercises larger than a MEU in size, and when environmental restrictions in this Manual conflict with training requirements. The following is the coordination lead time recommended for those actions requiring formal environmental documentation from the Assistant Chief of Staff, Environmental Security:

a. Company size	60 days
b. Battalion size	90 days
c. Regiment size	120 days
d. Larger than regiment	150 days

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4. Wetlands

Wetlands are found throughout Camp Pendleton, typically in valley bottoms, and are characterized by soil types, hydrology, and specific vegetation. Their distribution is not limited to "wet" areas. Activities in wetlands involving soil disturbance and/or fill may require a permit, and impacts to wetlands supporting threatened or endangered species will require special consultation and approval. Vehicles operating in these areas are authorized year round and should remain on existing roads and creek crossings. Vehicle operations in the vicinity of wetlands are authorized year round on existing roads, trails, and creek crossings. Troop movement on foot is authorized year round on existing roads, trails, and crossings. Foot traffic off of existing roads, trails, and crossings is authorized between 1 September and 14 March. Off-road vehicular traffic, excavations, and/or fill occurring in wetlands must be reviewed by the Assistant Chief of Staff, Environmental Security, and receive appropriate permits prior to conducting the action. Excavations, and/or fill occurring in wetlands must be reviewed by the Assistant Chief of Staff, Environmental Security, and receive appropriate permits prior to conducting the action.

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5. Vernal Pools

Vernal pools are wetlands, usually holding water for only one to four months during late winter and spring, and are known to occur in several training areas on Camp Pendleton. The highest densities of vernal pools are found in the Bravo Two, Oscar One, Oscar Two, Tango, Uniform, and Victor Training Areas; and White Beach.

Many of these pools contain rare and federally endangered plant and animal species. When operating within the vicinity of vernal pools:

a. Foot traffic is authorized year round. Digging, including construction of fighting positions is prohibited in vernal pools.

b. Vehicle/equipment operations near known vernal pool areas should be kept on existing roads, year round (especially in the winter). Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving soil excavation, filling, or grading.

c. Bivouac/Command Post/Field support (e.g., showers, messing, fueling, water purification, etc.) activities should be kept to at least 300 meters from identified vernal pools.

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6. Endangered Species

a. The endangered California Least Tern nests on Blue and White Beaches between 1 March and 15 September. This bird uses coastal lagoons, mud/salt flats, beaches, dunes, ocean, and tide line for nesting, foraging, and resting. Training activities can disrupt nesting, frighten adult birds, cause nest abandonment, and separate chicks from their parents.

b. The threatened Western Snowy Plover nests on Blue and White Beaches between 1 March and 15 September. They may be present on any Camp Pendleton beach throughout the year. This bird uses coastal lagoons, mud/salt flats, beaches, dunes, ocean, and tide line for nesting, foraging, and resting. Training activities can disrupt nesting, frighten adult birds, cause nest abandonment, and separate chicks from their parents.

c. The Light-footed Clapper Rail is a secretive marsh bird. It has been found in the Santa Margarita Estuary, Las Flores Marsh, and Cocklebur Canyon Lagoon. This bird was last documented nesting at the Santa Margarita Estuary in 1988, but some are still occasionally found using the coastal marshes of the Base. Vehicles must stay on existing roads and trails in the vicinity of coastal marshes and lagoons from 1 March to 15 September. Foot traffic is prohibited in all coastal marshes from 1 March to 15 September, and prohibited all year in the Santa Margarita Estuary (portions of Beach Section G or Blue Beach) and the mouth of Cocklebur Canyon (Beach Section F).

d. The endangered Tidewater Goby is a small fish living in the shallow water of coastal lagoons and estuaries on Camp Pendleton. These small fish are most abundant in lagoons where fresh water flowing downstream meets the salt water from the Pacific Ocean. All coastal estuaries and lagoons aboard Camp Pendleton provide habitat for this species, including those on Red, Blue, and Green Beaches; and Beach Sections D and F. Activities disturbing the waters and vegetation of coastal lagoons/ estuaries, or causing sediment to be transported into these lagoons will affect the Tidewater Goby. Any vehicular traffic within or across a lagoon/estuary can be

harmful due to the very limited area of suitable Goby habitat within most lagoons and estuaries. Even small POL leaks from vehicles can contaminate water enough to adversely impact the Gobies.

e. Vehicle operation and foot traffic in the vicinity of coastal marshes, estuaries, and lagoons are authorized year round on existing roads, trails, and established crossings. Off-road vehicular traffic or foot traffic, excavations, and/or fill activities needing to occur in coastal marshes, estuaries, and lagoons must be reviewed by the Assistant Chief of Staff, Environmental Security, and receive appropriate permits and approvals prior to conducting the action.

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7. Estuarine/ Beach Endangered Species Management Zones

To protect the California Least Tern, Western Snowy Plover, Light-footed Clapper-rail, and Tidewater Goby, the restrictions listed below apply when operating within the following areas: all coastal lagoons and estuaries; marshes and salt flats associated with French Creek, San Onofre Creek, San Mateo Creek watersheds; and the Santa Margarita Endangered Species Management Zone, defined as the beach area extending from the south end of White Beach (594 797) to the southern end of the Santa Margarita River Estuary, delineated by the dirt access road running seaward at the southern edge of the estuary (620 760), encompassing the Cocklebur Canyon outlet and the Santa Margarita River Estuary, extending inland to Stuart Mesa Bridge.

a. Obtain authorization from the Assistant Chief of Staff, Environmental Security before entering any lagoon or estuary, marsh, mud/salt flat, or posted nesting area. Bivouacking and digging of fighting positions are prohibited in the vicinity of the Estuarine/Beach Endangered Species Management Zones during the period of 1 March to 15 September.

b. Between 1 March and 15 September, all activities involving smoke, pyrotechnics, loud noises, blowing sand, and large groupings of personnel (14 or more) shall remain at least 300 meters away from fenced or posted nesting areas. All other activities shall be kept at least five meters from these areas.

c. Foot traffic involving less than 14 personnel shall be kept as far away as possible, and approach shall be no closer than five meters to posted nesting areas between 1 March and 15 September. Unit hikes shall remain on the hard packed sand, as close to the ocean water edge as possible. When passing posted nesting areas, minimize all noise.

d. Vehicle and equipment operations in the management zones shall be kept to a minimum between 1 March and 15 September. All vehicles shall travel on hard packed sand as much as possible, and shall not approach posted nesting areas or lagoons closer than five meters on Blue and White Beaches, and Beach Section F. Speeds shall not exceed 25 mph. Tracked vehicles shall travel as close to the water (upper few inches of waves) as possible, year round, in the Santa Margarita Endangered Species Management Zone. Vehicle operations, inside fenced areas on the edge of the bluff between Aliso and French Creeks (White Beach), are not authorized between 1 March and 15 September.

e. Engineering operations, outside of approved landing exercise support, shall be coordinated with the Assistant Chief of Staff, Environmental Security prior to the initiation of activities. Generally, earth-moving activity at beaches is authorized only for areas of unvegetated sand at least 300 meters from posted nesting areas, unless specifically requested and approved by the Assistant Chief of Staff, Environmental Security.

f. Boat operations are not authorized in lagoons and estuaries. Landing Craft Air Cushions (LCACs) shall not enter the management zones between 1 March and 15 September, except when entering or exiting seaward; and on return, should exit the ocean heading directly up to the facility access ramp. Small boats may be permitted in the Santa Margarita Estuary between 16 September and 1 March, with prior approval from the Assistant Chief of Staff, Environmental Security.

g. To the maximum extent possible, vehicles and troops accessing the beach at White Beach during the period of 1 March and 15 September shall follow a route along the base of the northerly bluff to maintain the maximum distance from the tern colony.

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8. Other Endangered Species

a. The Least Bell's Vireo is a small, inconspicuous endangered bird living in low, dense growths of willows, brush, and weeds along the drainage's on Camp Pendleton between March and September. The vireo is known to nest in the vicinity of the Santa Margarita river and in creek/river bottom areas in the following training areas: Alpha Two, Alpha Three, Bravo Three, Golf, Hotel, India, Juliet, Lima, November, Oscar One, and Oscar Two, and the Santa Margarita River basin.

b. The Southwestern Willow Flycatcher is a small, inconspicuous endangered bird living in taller trees, willows, brush, and weeds along the drainage's on Camp Pendleton between March and September. The flycatcher is known to nest in creek/river bottom areas in the following training areas: Alpha Two, Alpha Three, Bravo Three, Golf, Hotel, India, Juliet, Lima, November Oscar One, and Oscar Two, and the Santa Margarita River basin.

c. The endangered Arroyo Southwestern Toad is found in and around stream and river bottoms. This toad has been found along the Santa Margarita River; the DeLuz, Roblar, San Onofre, San Mateo, Cristianitos, and Talega Creeks; and within the Alpha One, Alpha Two, Alpha Three, Bravo One, Bravo Two, Bravo Three, Charlie, Delta, Golf, Foxtrot, Hotel, India, Kilo Two, Oscar One, Yankee Training Areas; and the Quebec and Whiskey Impact Areas. The adults breed and deposit their eggs in shallow pools adjacent to streams or in slow moving portions of the streams between February and June. Adult toads have been found up to one kilometer from streams in many different habitats. Toads are active at night, from the beginning of the late winter rains until late July. They may be found at night on roads and trails near streams, especially during wet weather in late winter and early spring.

d. For the conservation of the Least Bell's Vireo, Southwestern Willow Flycatcher, and the Arroyo Southwestern Toad, the following measures shall be taken for training activities in creek/river bottom (riparian) habitat areas.

(1) Extreme caution beyond that required by the Fire Danger Rating (FDR) is necessary when using pyrotechnics; and when conducting other activities likely to cause a fire.

(2) Foot traffic is authorized year round on existing roads, trails, and creek crossings. Foot traffic in creek bottom/riparian areas is authorized between 1 September and 14 March. Consult with the Assistant Chief of Staff, Environmental Security prior to cutting/removing vegetation.

(3) Vehicles operating in the vicinity of creeks, rivers or drainages should use existing roads, trails, and established creek/river crossings. Vehicle traffic on roads in arroyo toad habitat between 15 March and 31 August should be minimized to the maximum extent practical.

(4) Consult with the Assistant Chief of Staff, Environmental Security prior to bivouacking, cutting/removing vegetation, trenching, grading, filling, or conducting engineering operations in or adjacent to creek/river bottom areas.

(5) Dust produced in or adjacent to creeks and rivers shall be minimized to the maximum extent practical.

---

9. California Gnat-catcher

Threatened California Gnatcatchers live in open to dense coastal sage brush areas. These small songbirds are year round residents of Camp Pendleton. They are known to inhabit the Alpha Two, Bravo Two, Bravo Three, India, Juliet, Kilo Two, Lima, Mike, November, Oscar One, Oscar Two, Papa One, Papa Two, Romeo Two, Romeo Three, Tango, and Uniform Training Areas. Fires and other activities such as crushing or removing brush negatively affect these birds and their habitat. Activities involving loud noises, smoke, and concentrations of personnel disrupt their behavior, particularly during the breeding season between 1 February and 15 August. For the conservation of this threatened species, the following measures should be followed for training activities in identified occupied coastal sage brush areas:

a. Extreme caution beyond that required by the FDR is necessary when using pyrotechnics and when conducting other activities likely to cause a fire.

b. Foot traffic between 1 February and 15 August should be kept to existing roads, trails, and established training facilities to the maximum extent practical. Foot traffic may be authorized in California Gnatcatcher habitat areas between 16 August and 31 January; however, care must be exercised to avoid crushing or otherwise destroying brush vegetation.

c. Vehicle/equipment operations should be kept on existing roads. Vehicles may leave existing roads between 16 August and 31 January, as long as the FDR permits, and brush vegetation is not crushed or removed.

d. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least 300 meters from California Gnatcatcher habitat areas, year round.

---

10. Pacific Pocket Mouse

Endangered Pacific Pocket Mice live in very open to relatively dense brush areas within three miles of the coast. They have been found in the Oscar One Training Area, immediately east of the San Onofre II Housing Area, and State Park leased lands north of Cristianitos Road. These rodents spend the day in burrows and come out at night to feed on seeds. Nighttime aerial illumination can increase their susceptibility to predators between 15 March and 15 September, when they are most active above ground. Activities that could crush the rodents in their burrows, dig them up, or bury them shall not be permitted at sites they occupy. Soil compaction caused by vehicle operations off existing roads and trails degrades their habitat by preventing them from digging their burrows. Soil compaction occurs most easily between December and June, when soil is moist. For the conservation of this endangered rodent, units training in habitat areas should follow the following measures:

a. Foot traffic is authorized, year round; however, digging, including construction of fighting positions, should be avoided.

b. Vehicle/equipment operations near known habitat should be kept on existing roads, year round. Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving soil excavation, filling, or grading.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) shall be kept at least 300 meters from California Gnatcatcher habitat areas, year round.

---

11. Stephens' Kangaroo Rat

The endangered Stephens' Kangaroo Rat lives in relatively open (non-brush), weedy areas. They live in areas that frequently burn. This rodent is known to inhabit the Bravo One, Golf, India, Juliet, Kilo Two Training Areas; and the X-Ray, Whiskey, and Zulu Impact Areas. These rodents spend the day in shallow burrows and come out at night to feed on weed seeds. Activities that could crush the rodents in their burrows, dig them up, or bury them, should not be permitted at occupied sites. Soil compaction caused by vehicle operations off existing roads and trails degrades their habitat by preventing them from digging their burrows. Soil compaction occurs most easily between December and June, when soil is moist. For the conservation of this endan-gered rat, the following measures should be followed by units training in habitat areas.

a. Foot traffic is authorized year round; however, digging, including construction of fighting positions, should be minimized.

b. Vehicle/equipment operations near known habitat should be kept on existing roads, year round. Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving soil excavation, filling, or grading.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) should be kept at least 300 meters from the Stephens' Kangaroo Rat habitat areas, year round.

---

12. Rare Plant Species

Rare and federally listed plant sites are found throughout Camp Pendleton, and are carefully noted on the Environmental Constraints Map. For the protection of identified sites, the measures listed below should be followed by units training in the areas.

a. Foot traffic is authorized, year round; however, digging, including construction of fighting positions, should be avoided at locations of rare plants.

b. Vehicle/equipment operations near known habitat should be kept on existing roads, year round. Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving soil excavation, filling, grading, off-road vehicular operations, or vegetation cutting/removal.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) should be kept at least 300 meters from identified rare plant sites. No cutting or trimming of rare plants is allowed without consultation with the Assistant Chief of Staff, Environmental Security.

---

13. Archaeological and Cultural Resources

Archaeological sites are located throughout Camp Pendleton. Archaeological sites are the physical remains of the lives and activities of the people who lived in the prehistoric or historic past, and may include artifacts such as stone (arrowheads, projectile points), human bone materials, pottery, and other physical remains of life. Some sites are visible on the soil surface; others are visible only after some level of ground disturbance has occurred. Since all sites and their contents are protected under law, approval must be obtained from the Assistant Chief of Staff, Environmental Security prior to any activity adversely impacting archaeological sites. The Base will have surveyed and documented locations of all visible archaeological sites by the year 2003. Until then, refer to the MCB Environmental Constraints Map. For the protection of known and unknown archaeological sites, the following measures should be taken.

a. Foot traffic is authorized, year round. Digging, including construction of fighting positions is prohibited at known archaeological sites.

b. Vehicle/equipment operations should be kept on existing roads through known archaeological sites, year round. Contact the Assistant Chief of Staff, Environmental Security prior to conducting activities involving mechanical soil excavation, filling, or grading in the vicinity of known archaeological sites.

c. Bivouac/command and post/field support activities (e.g., showers, messing, fueling, water purification, etc.) should be kept at least 300 meters from identified archaeological sites.

d. When conducting operations away from known archaeological sites, units should avoid disturbing any sites where archaeological materials are discovered on the ground or below soil surfaces.

(1) Notify the Assistant Chief of Staff, Environmental Security as soon as possible (with the exact grid coordinates, if possible, and site description).

(2) Materials should not be removed from the area.

e. If human bone material (to include fragments) is discovered during any operation, the area must immediately be evacuated, leaving the remains intact. Notify LONGRIFLE as soon as possible.

---

14. Endangered Species Summary

Figure 2-1, located on pages 2-16 and 2-17, provides a summary of endangered species/protected habitat locations.

ENDANGERED SPECIES SUMMARY

Sensitive Environmental and Natural Resources in Training Areas										
Beach	**Least Bell's Vireo**	**Arroyo Southwestern Toad**	**Stephens' Kangaroo Rat**	**California Gnatcatcher**	**Least Tern/ Western Snowy Plover**	**Pacific Pocket Mouse**	**Rare Plant Sites**	**Light-footed Clapper Rail**	**Vernal Pools**	**Southwestern Willow Flycatcher**
Sect. A	B						B			
Sect. B							B		B	
Sect. C	B						B		B	
Sect. D							B		C	
Sect. E					C		B		C	
Sect. F				C	B			B	B	
Sect. G					C		B			
Sect. H					C					

A: Camp Pendleton Military Installation Map

B: Environmental and Natural Resource GIS Data Map

C: Both A and B

(Continued on next page)

Figure 2-1

ENVIRONMENTAL PROCEDURES

ENDANGERED SPECIES SUMMARY (continued)

Sensitive Environmental and Natural Resources in Training Areas										
Training Area	**Least Bell's Vireo**	**Arroyo Southwestern Toad**	**Stephens' Kangaroo Rat**	**California Gnatcatcher**	**Least Tern/ Western Snowy Plover**	**Pacific Pocket Mouse**	**Rare Plant Sites**	**Light-footed Clapper Rail**	**Vernal Pools**	**Southwestern Willow Flycatcher**
Alpha 1	C	B								
Alpha 2	C	B		C			C			B
Alpha 3	C	B								B
Bravo 1		B		C			C		B	
Bravo 2		B		C			C		B	
Bravo 3	C	B		C						
Charlie		B					C			
Delta		B							C	
Echo							C			
Foxtrot							C			
India	C	B	C				B			B
Golf	C	B	C				C			
Kilo 1			C				B		B	
Kilo 2		B	C	C			B		B	
Juliett	B		C	C			B			
Lima	A			C			B			B
Mike	B			C			B			
November	C			C			C		C	
Oscar 1	C	B		C		B	C		C	
Oscar 2	C			C			B		C	B
Papa 1	B			C			B			
Papa 2				C			B			
Papa 3							B			
Romeo 1										
Romeo 2				C			B			
Romeo 3				C			C			
Tango				C						
Uniform				C			B		B	
Victor							B		C	

A: Camp Pendleton Military Installation Map

B: Environmental and Natural Resource GIS Data Map

C: Both A and B

Figure 2-1

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CHAPTER THREE

SCHEDULING PRIORITIES

Overview

This chapter provides details regarding the policies and procedures to be used when submitting range, training area, training facility, airspace, and sea space scheduling requests at Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
3000. General	3-3
3001. Scheduling Priorities	3-3
3002. Training Area Requests (TAR)	3-5
3003. Rifle and Pistol Known Distance (KD) Range Requests	3-6
3004. Airspace and Aviation Ranges/Facilities Scheduling Requests	3-6
3005. Contractor Operation and Maintenance of Training Systems Ranges	3-7
3006. Automated Target and Simulator Support	3-8
Figure	
3-1 Scheduling Precedence	3-4

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CHAPTER THREE

SCHEDULING PRIORITIES

3000. GENERAL

1. General

The Range Scheduling Office is the scheduling agency for all Camp Pendleton ranges, training areas, training facilities, airspace, and sea space. To schedule, the Range Control Scheduling Office must receive a Training Activity Request (TAR) or Range Facility Management Support System (RFMSS) data entry up to ninety (90) days prior to the planned activity, but no later than seven (7) working days prior to planned use. USMC Formal Schools (MOS-producing) may submit requests up to one hundred eighty (180) days prior to planned training. MEU level or higher exercises may submit requests up to one hundred twenty (120) days prior to planned training. The TAR may be submitted by FAX to (760) 725-4090, delivered to the Range Scheduling Office (Bldg. 2399), by e-mail attachment, or via Naval message. A copy of a Camp Pendleton TAR is provided in appendix I of this Manual.

2. Canceling

Once ground ranges, training facilities, airspace, and/or sea space have been scheduled, it is the responsibility of the unit scheduled to use the facility to conduct its training during the allotted time period. Should there be a requirement to modify a scheduled range time, or a need to cancel the range request, the unit shall notify the Range Scheduling Office at the earliest opportunity via a RFMSS data entry, FAX, or e-mail. Should there be a requirement for the Range Operations Division to cancel a previously scheduled unit due to a priority event, the unit will be notified at the earliest opportunity via a RFMSS data entry, FAX, or e-mail.

3001. SCHEDULING PRIORITIES

1. Precedence

Range and training facilities will be assigned to requesting units in the precedence outlined in figure 3-1.

2. "Priority Use" for Zulu Impact Area

To increase training efficiency, a "Priority Use" scheduling system for the Zulu Impact Area has been implemented at Camp Pendleton. "Priority Use" establishes priorities for range and airspace utilization for that particular day as follows.

a. Air Priority Days. Aviation operations have priority use of the Zulu Impact Area on Wednesdays and Thursdays during the first three weeks of the month. Ground units desiring to conduct Close Air Support (CAS) operations should schedule the event on Air Priority days. Parachute operations with patterns over flying the Zulu Impact Area will be afforded priority on air priority days only.

b. Ground Priority Days. Ground operations have "Priority Use" of the Zulu Impact Area on Monday, Tuesday, Friday, Saturday, and Sunday during the first three weeks of the month. During the last week of the month, ground operations have priority during the entire week. Rotary-wing operations driven by ambient light requirements will also be considered on a case-by-case basis during the last week of the month.

---

3. "Priority Use " for Whiskey Impact Area

"Priority Use" establishes priorities for range and airspace utilization for firing into the Whiskey Impact Area on that particular day as follows.

a. Air Priority Use. Monday through Friday, 1400 - 1700 and 2000 - 2300.

b. Ground Priority Use. Monday through Friday, 0600 - 1400, 1700 - 2000, 2300 - 2400; and all day on Saturday and Sunday.

---

4. Coordination

It is the responsibility of non-priority units desiring to use the Whiskey and/or Zulu Impact Areas to coordinate use with priority units.

---

5. "Priority Use" Period

"Priority Use" will not be honored if scheduling requests are received within seven (7) working days of the planned event.

---

6. Exceptions to "Priority Use"

For key events (e.g., MCCREs, VIP Demos, FIREXs), when access to the Whiskey and/or Zulu Impact Areas is not accommodated by Priority Use as described in paragraphs 3001.2 and 3001.3, units may coordinate with the Director, Range Operations Division for access to impact areas for the number of consecutive days required to successfully accomplish required training.

SCHEDULING PRECEDENCE

PRECEDENCE	UNIT	REMARKS
1	USMC Formal Schools	MOS-Producing
2	MEU or higher level exercises (including USMCR)	ADCON/OPCON units will schedule via higher headquarters, who will consolidate and submit to Range Scheduling

(Continued on next page)

Figure 3-1

SCHEDULING PRECEDENCE (continued)

PRECEDENCE	UNIT	REMARKS
3	Resident FMF (including USMCR)/Division Schools/Base Commands	
4	Non-resident FMF (includes USMCR)/Navy Commands	
5	Other DoD/Reserve/National Guard	
6	Civilian Law Enforcement/Recreation/ Hobbyists	

Figure 3-1

3002. TRAINING AREA REQUESTS (TAR)

1. Scheduling Requests submitted to the Range Scheduling Office, using the methods described in paragraph 3000.1 in this chapter, will use the format in appendix I of this Manual.

2. Beaches Requests for use of the State Beach (north, center, and south), Green Beach, and leased areas will be submitted in the same manner described above, thirty (30) days prior to the planned event. Approval will be on a case-by-case basis.

3. Surface Danger Zone (SDZ) Overlays For indirect-fire techniques requiring a SDZ, the SDZ overlay will be submitted to the Range Control Officer (LONGRIFLE) at least ten (10) days prior to firing. The SDZ date of event, unit, weapon types, coordinates of firing positions, charge(s) to be fired will be constructed per MCO 3570 series, and will include the following information.

a. Charges fired

b. Grid azimuth of safety limits

c. Minimum and maximum range

d. Maximum ordinates (expressed in feet MSL)

4. Waivers An appropriate waiver request and any required overlays shall accompany any training not covered by this Manual. Waiver requests shall be submitted to the Range Scheduling Office thirty (30) days prior to the planned event.

5. Hikes Units requesting training areas for hikes or convoy operations shall submit an overlay of the proposed route to the Range Scheduling Office when submitting the request.

6. Environmental Any environmental considerations and requirements associated with the requested training shall be initiated, prior to submitting a training request, by contacting Environmental Security at (760) 725-5182..

7. Port-a-johns Units must request additional port-a-john support for any training areas/beaches from the Base Property Office at (760) 725-1979.

3003. RIFLE AND PISTOL KNOWN DISTANCE (KD) RANGE REQUESTS

1. Requests Requests for rifle and pistol KD ranges shall be submitted to the OIC, Marksmanship Training Branch at (760) 725-3436. Upon approval, requests will be consolidated and forwarded to the Range Scheduling Office on a monthly basis by the OIC, Marksmanship Training Branch.

2. KD Scheduling Conference An annual Marksmanship Training Scheduling Conference is held during the April/May time frame to coordinate rifle and pistol range scheduling for the next fiscal year. A Basegram is published stating the location, date, and time of the conference.

3004. AIRSPACE AND AVIATION RANGES/FACILITIES SCHEDULING REQUESTS

1. General Specifics concerning Camp Pendleton Special Use Airspace (SUA) and aviation training activities, ranges, and facilities are provided in chapter 4. TARs supporting

all aviation training activities must be submitted to the Base Range Scheduling Office as described in paragraph 3001.1 in this chapter. Scheduling requests involving fixed-wing CAS/ SIMCAS must specify the appropriate IP, type mark/mark facility, type of ordnance, and restricted airspace.

2. Overlays

Scheduling requests or TARs shall be accompanied by overlays corresponding to the Camp Pendleton Military Installation Map and depicting flight routes and altitudes of participating aircraft under the following circumstances.

a. CAS/SIMCAS not using IP and the ingress/egress routes described in chapter 4

b. Flights in support of LAAD training

c. UAV operations

d. Any other aviation training as identified by the Range Scheduling Office

The overlays depicting flight routes/altitudes of participating aircraft shall be submitted no later than seven (7) working days prior to the event.

3005. CONTRACTOR OPERATION AND MAINTENANCE OF TRAINING SYSTEM RANGES

1. General

The USMC Contractor Operation and Maintenance of Training Systems (COMTS) Program supports certain ranges aboard Camp Pendleton. This program places civilian contractors under contract to operate and maintain live-fire ranges. The Commander, Marine Corps Systems Command (ComMarCorSysCom) funds COMTS contracts after tasking by the Commanding General, Marine Corps Combat Development Command (CG, MCCDC). ComMarCorSysCom has authorized the Naval Air Warfare Center Training Systems Division (NAWCTSD) to enter into contracts with civilian contractors to provide COMTS support at Marine Corps installations. At the time of publication of this Manual, Ranges 409A, 215A, 117A, 218A, and 223B are COMTS-supported ranges. As new ranges are built or modified, they may be covered under the COMTS umbrella.

2. Scheduling

Units desiring to train on COMTS ranges will schedule their training as described in paragraph 3002 in this chapter. Units will schedule the occupation times in the start and stop boxes of the TAR and must put a remark in the remarks section stating if contractors are required or not, and the times they are required. If these remarks are not on the request, the TAR will be disapproved. Due to contractual limitations, requests to extend training time on COMTS range that are received at Range Scheduling less than 48 hours prior to actual range usage cannot be approved. All units shall coordinate with the COMTS contractor at least 48 hours in advance to

arrange for an in-brief, and to develop a training scenario. The Range Control Officer will review all new scenarios. Failure to do so will result in losing the use of the facility.

3. Questions

Questions regarding the scheduling and training of COMTS ranges shall be referred to the Range Scheduling Office. Questions and comments related to COMTS contractor performance shall be referred to the OIC, Automated Support Branch (ASB) at (760) 725-5105.

3006. AUTOMATED TARGET AND SIMULATOR SUPPORT

1. General

Units with approved scheduling requests for automated target and simulator support on non-COMTS ranges shall contact the ASB at (760) 725-4446/4805 AT LEAST FOURTEEN (14) WORKING DAYS PRIOR to the planned training event to coordinate their training scenarios. The ASB will reconfirm support requirements with the scheduled unit a minimum of two (2) working days prior to the planned training event.

2. Portable Infantry Target System (PITS) Targets

The ASB will provide operator support for units desiring to use PITS targets and artillery, or machine gun noise simulators after the unit has properly requested its requirements through the Range Scheduling Office. PITS operators are not normally provided to units who have already been issued PITS targets through a Combat Visual Information Center (CVIC) supply account. However, the ASB can provide PITS operator support to these units if their operator requirements exceed their internal capability to provide PITS operators. Additionally, for these units, the ASB can provide PITS operator instruction through a civilian contractor at the unit's request. Requests for PITS operator instruction may be coordinated directly with the NCOIC, ASB at (760) 725-4446. The placement of all PITS targets will be pre-approved by the Range Control Officer.

CHAPTER FOUR

AIRSPACE AND AVIATION OPERATIONS

Overview

This chapter provides details regarding Camp Pendleton's airspace, and the conduct of aviation operations.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
4000. General	4-3
4001. Special Use Airspace (SUA)	4-3
4002. Federal Airway Structure	4-10
4003. No Over Flight Areas	4-10
4004. Marine Corps Air Station (MCAS), Camp Pendleton	4-11
4005. Local Flying Notices	4-14
4006. Airspace and Aviation Facility Scheduling	4-18
4007. Airspace Control Procedures	4-18
4008. Close Air Support (CAS) Procedures	4-19
4009. Helicopter Operations	4-25
4010. Helicopter Transit Routes	4-28
4011. Night Vision Goggle (NVG) Operations	4-29
4012. Helicopter Terrain Flight (TERF) Routes	4-31
4013. Helicopter Outlying Landing Field (HOLF) Operations	4-32
4014. Helicopter Landing Zones	4-37
4015. Confined Area Landing Sites (CALSITES)	4-40
4016. AV-8 Vertical Short Takeoff and Landing (VSTOL) Sites	4-42
4017. AV-8 Road Operations	4-43
4018. Simulated Flight Decks	4-44
4019. Drop Zones	4-44
4020. Aircraft Refueling Sites	4-47
4021. Unmanned Aerial Vehicle (UAV) Operations	4-49
4022. Chaff and Flares	4-49
Figures	
4-1 Camp Pendleton Restricted Airspace	4-5
4-2 Camp Pendleton Special Use Airspace	4-6
San Onofre Low MOA	4-7
San Onofre High MOA	4-8
Area Alpha	4-9

Topic	See Page
Figures (continued)	
4-3 Runway 3 Arrival/Departure Routes Runway 21 Arrival/Departure Routes MCAS, Camp Pendleton Airspace	4-15 4-16 4-17
4-4 Fixed Wing CAS Patterns	4-26
4-5 Helicopter Transit Routes	4-30
4-6 HOLF Ingress/Egress	4-38
4-7 AV-8 Facility Flight Tracks	4-43

CHAPTER FOUR

AIRSPACE AND AVIATION OPERATIONS

4000. GENERAL

1. General

a. This chapter describes airspace and aviation facilities at Marine Corps Base, Camp Pendleton. This chapter also addresses Marine Corps Air Station, Camp Pendleton; and Camp Pendleton Special Use Airspace (SUA). Also covered are Helicopter Landing Zones (LZs), Confined Area Landing Sites (CALSITEs), Terrain Flight (TERF) routes, Drop Zones (DZs), and the Helicopter Outlying Landing Field (HOLF).

b. The instructions in this chapter are based upon current Department of Defense (DoD), Department of the Navy (DON), and Federal Aviation Administration (FAA) policies and regulations.

c. Nothing in these instructions shall prevent the exercise of sound judgment to preserve lives and property, or to ensure the safety of personnel.

2. Air Safety Briefs

Air safety briefs are available for all aviation activities operating within Camp Pendleton Special Use Airspace (SUA). All aircrews that have not previously attended an Air Range Safety Brief for operations at Camp Pendleton shall attend a brief prior to operating here. Squadrons returning from six-month deployments shall have an Air Range Safety Brief prior to resuming operations within Camp Pendleton SUA. Contact the Airspace Manager [DSN 365-8183, commercial (760) 725-8183, FAX (760) 725-4090] to schedule an Air Range Safety Brief.

4001. SPECIAL USE AIRSPACE (SUA)

1. General

Restricted Area R-2503 has been authorized and established by the FAA to support hazardous training activities at Camp Pendleton. Marine Corps Base, Camp Pendleton has been designated as the using agency for this restricted area. Camp Pendleton maintains sole approval and scheduling authority for all users and activities to include ground, sea, and aviation operations taking place within this airspace.

2. R-2503A, R-2503B, R-2503C

R-2503 is subdivided into R-2503A, R-2503B, and R-2503C. R-2503A overlies Camp Pendleton's coastal area and extends offshore one nautical mile from the surface to 2,000' MSL. Its eastern boundary coincides with the western boundary of R-2503B. R-2503B is the airspace from the surface to 15,000' MSL, and overlies Camp Pendleton's impact areas. R-2503C overlies the northern two-thirds of R-2503B from 15,000' MSL to 27,000' MSL. R-2503C is an "on-call" section of R-2503 for use by artillery units during high angle, high altitude firing only. The FAA Controlling Agency for R-2503 is Los Angeles Air Route Traffic Control Center (LA ARTCC) located at Palmdale, California. Camp Pendleton restricted airspace is depicted in figure 4-1.

---

3. Hours

The authorized hours of operation for R-2503A and R-2503B are 0600 - 2400 (local) daily, seven (7) working days per week, and other times by NOTAM (Notice to Airmen). R-2503C is an "on-call" portion of R-2503 activated via NOTAM. Units desiring to conduct hazardous training activities from 2400 - 0600 must notify the Camp Pendleton Range Scheduling Office at least five (5) working days in advance to extend training operations past 2400 (local time).

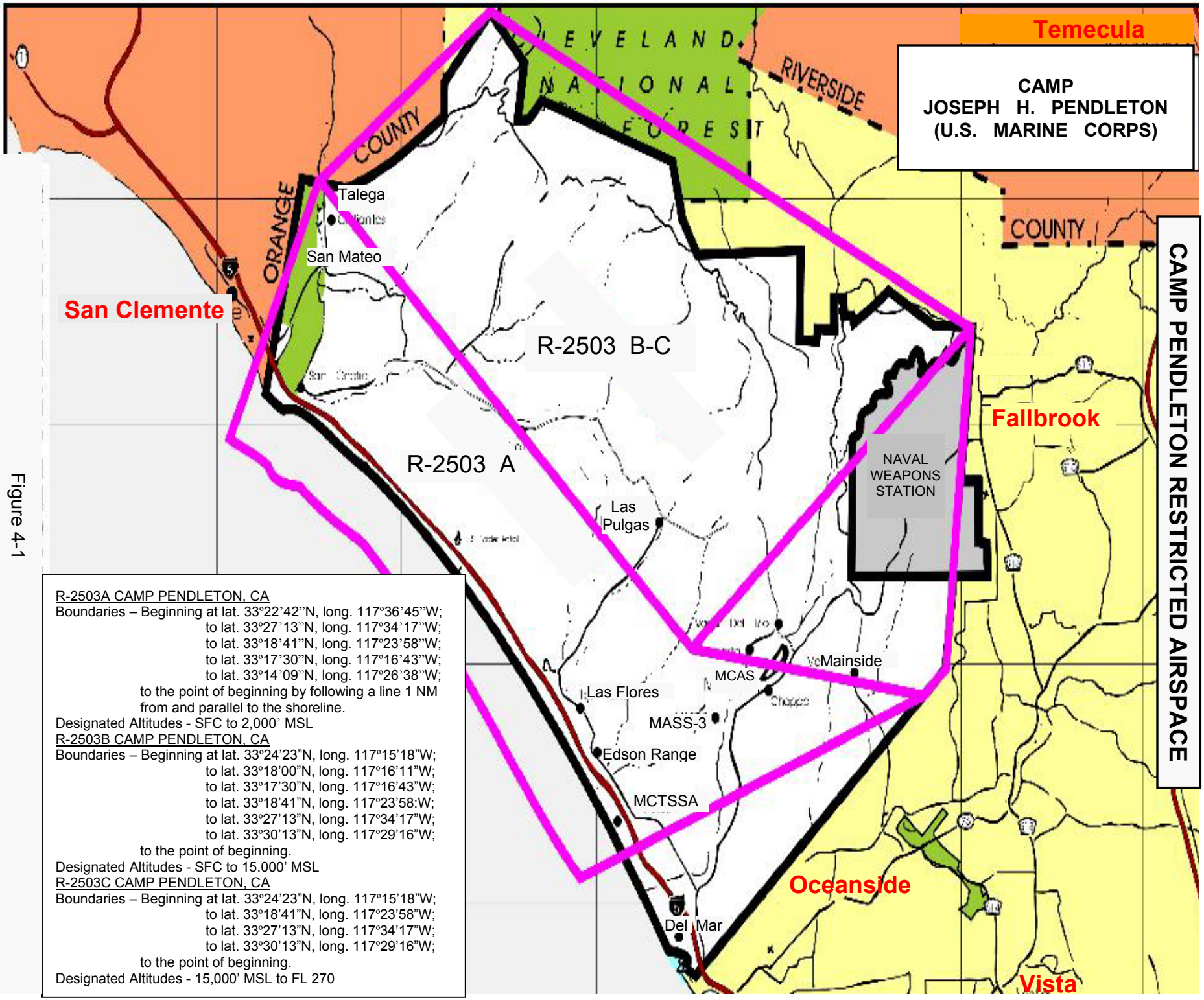
---

4. San Onofre High/Low MOAs, Area Alpha

a. Camp Pendleton has access to additional airspace to facilitate aviation operations during amphibious assault exercises.

b. The San Onofre Low MOA overlies R-2503A from 2,000 to, but not including, 4,000' MSL, extending three (3) NM offshore. The San Onofre High MOA overlies the San Onofre Low MOA from the I-5 Freeway east to the R-2503A/R-2503B boundary from 4,000 to, but not including, 8,000' MSL. Please refer to figures 4-2. Exercise planners shall notify the Range Scheduling Office forty (40) days in advance of extended MOA activation dates.

c. Area Alpha is a special military operations area established via a letter of agreement with the FAA in support of large-scale amphibious assault exercises. Area Alpha is a surface to 2,000-foot MSL "corridor" connecting a portion of W-291 and R-2503A established for fixed-wing operations. Area Alpha affords fixed-wing exercise participants a low altitude speed waiver. Activation of the area does not preclude other civilian or military participants from transiting through it. Exercise planners shall notify the Range Scheduling Office twenty (20) days in advance of planned Area Alpha activation dates. Area Alpha is depicted in figures 4-2.

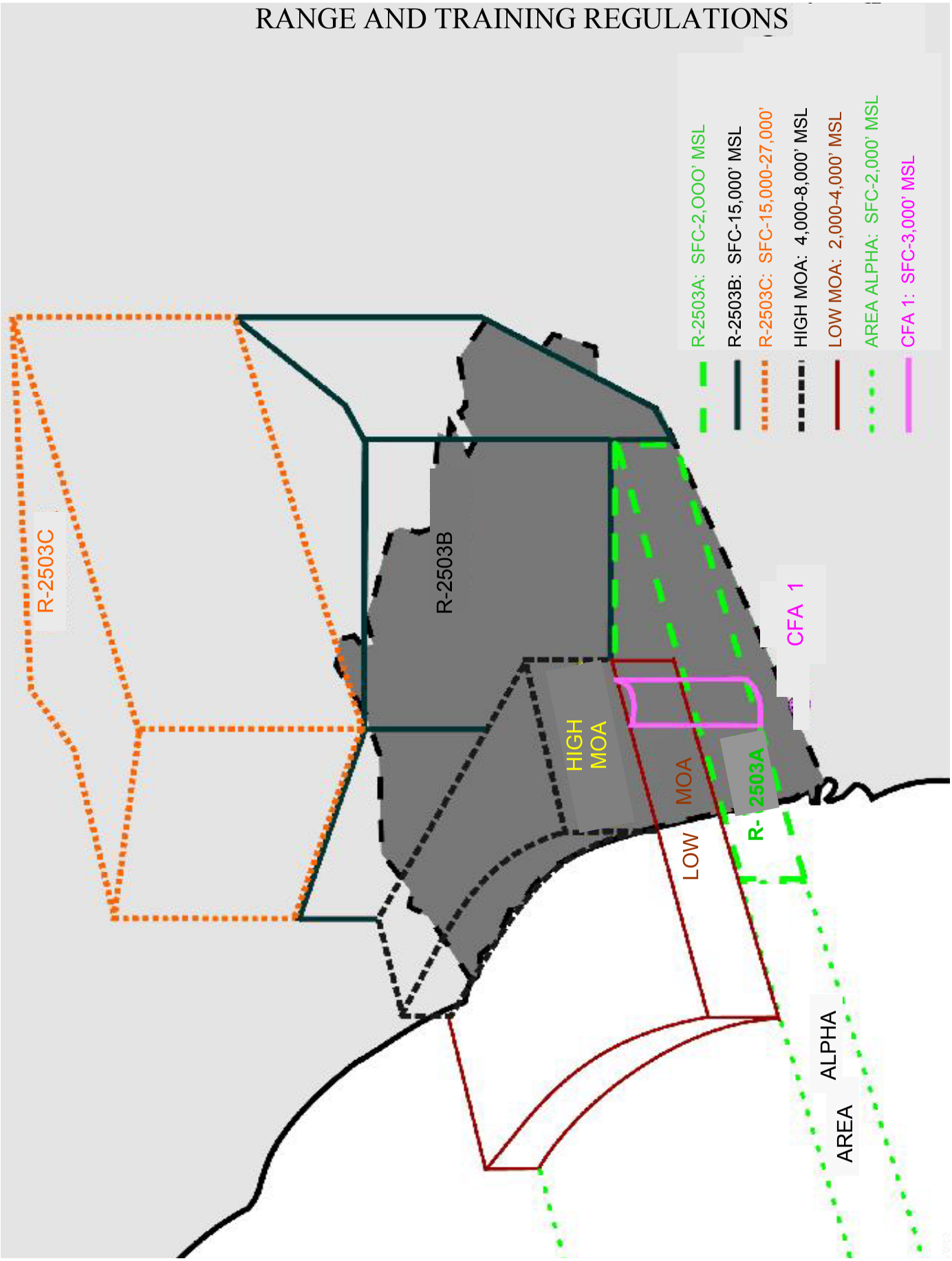


R-2503A CAMP PENDLETON, CA
Boundaries – Beginning at lat. 33º22'42"N, long. 117º36'45"W;
to lat. 33º27'13"N, long. 117º34'17"W;
to lat. 33º18'41"N, long. 117º23'58"W;
to lat. 33º17'30"N, long. 117º16'43"W;
to lat. 33º14'09"N, long. 117º26'38"W;
to the point of beginning by following a line 1 NM from and parallel to the shoreline.
Designated Altitudes - SFC to 2,000' MSL

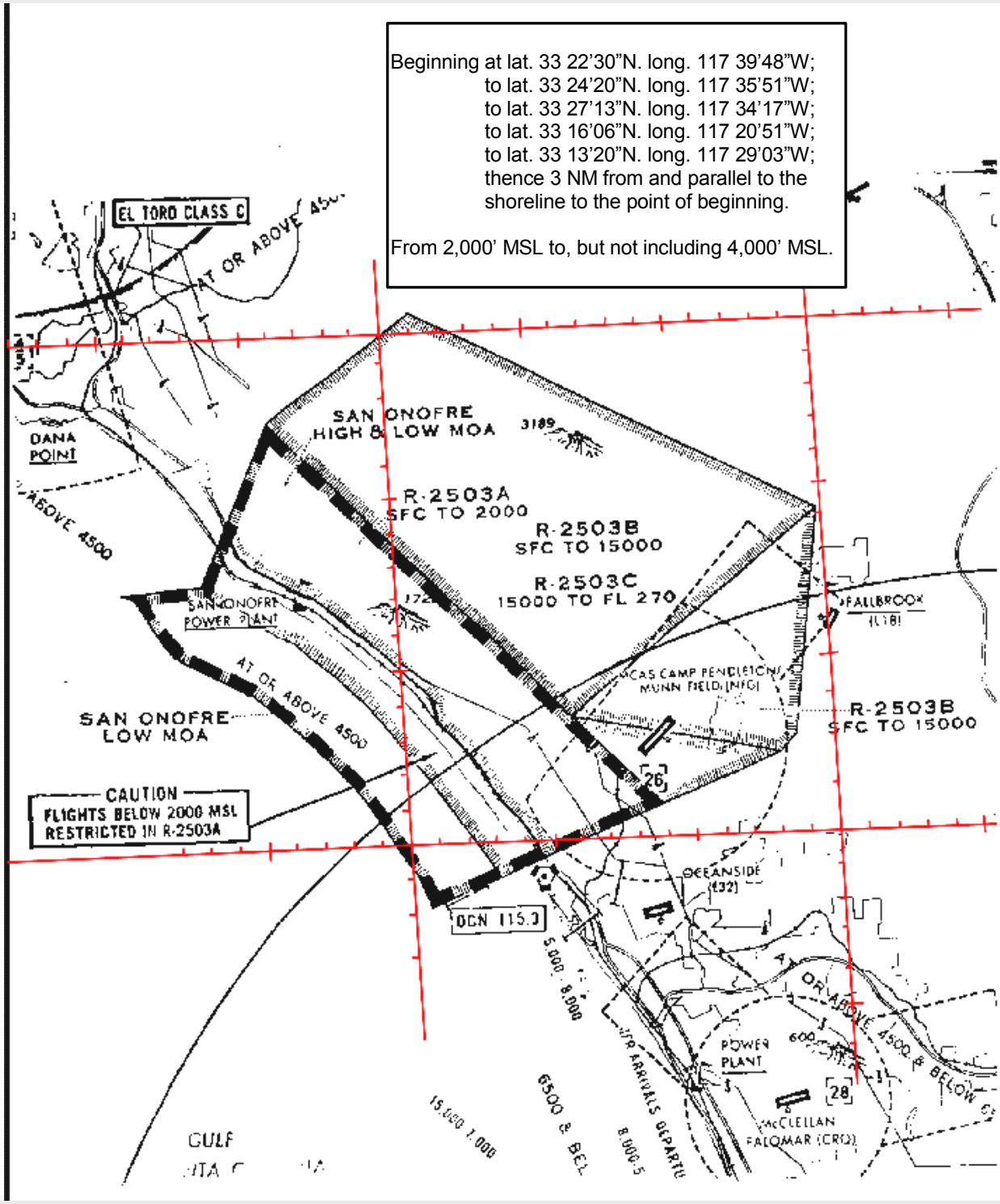
R-2503B CAMP PENDLETON, CA
Boundaries – Beginning at lat. 33º24'23"N, long. 117º15'18"W;
to lat. 33º18'00"N, long. 117º16'11"W;
to lat. 33º17'30"N, long. 117º16'43"W;
to lat. 33º18'41"N, long. 117º23'58:W;
to lat. 33º27'13"N, long. 117º34'17"W;
to lat. 33º30'13"N, long. 117º29'16"W;
to the point of beginning.
Designated Altitudes - SFC to 15.000' MSL

R-2503C CAMP PENDLETON, CA
Boundaries – Beginning at lat. 33º24'23"N, long. 117º15'18"W;
to lat. 33º18'41"N, long. 117º23'58"W;
to lat. 33º27'13"N, long. 117º34'17"W;
to lat. 33º30'13"N, long. 117º29'16"W;
to the point of beginning.
Designated Altitudes - 15,000' MSL to FL 270

Figure 4-1

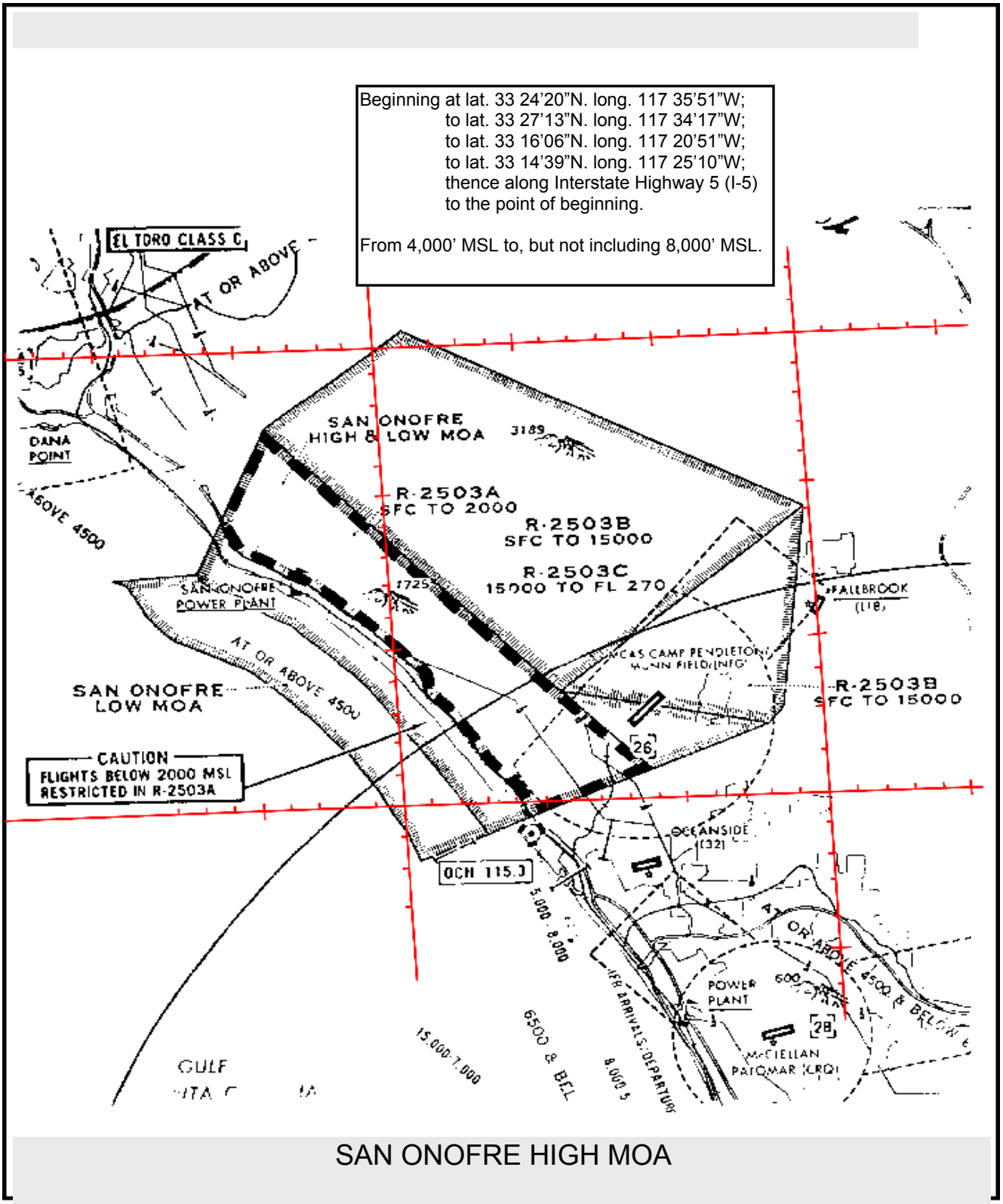


CAMP PENDLETON SPECIAL USE AIRSPACE
Figure 4-2



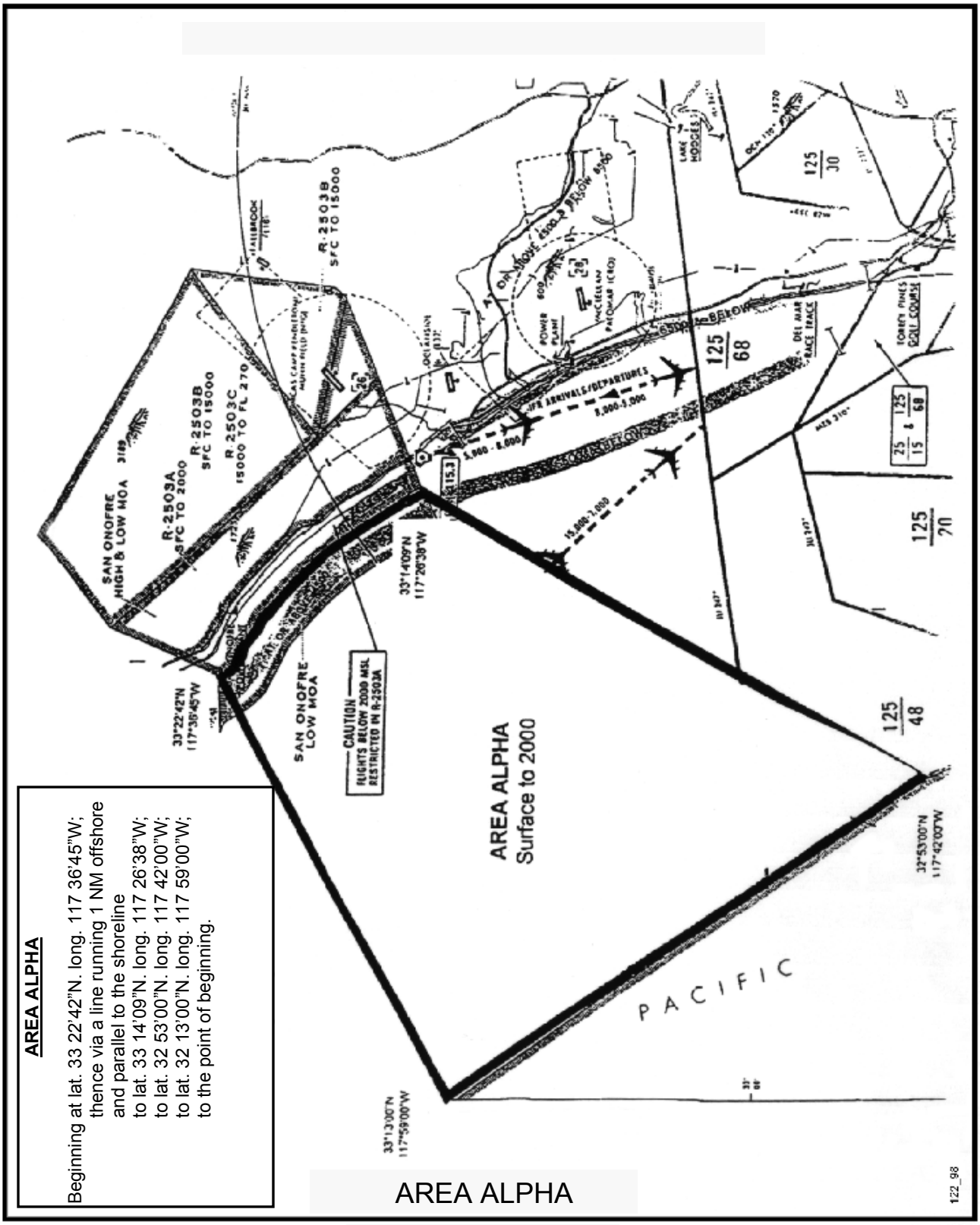
SAN ONOFRE LOW MOA

Figure 4-2



SAN ONOFRE HIGH MOA

Figure 4-2



AREA ALPHA

Figure 4-2

4002. FEDERAL AIRWAY STRUCTURE

a. Camp Pendleton's restricted airspace and training ranges are surrounded by highly congested airspace recognized by the FAA as the busiest and most complex in the country. Numerous Federal Airways surround Camp Pendleton, but are most predominant on the western border of the SUA. (Please refer to FLIP/L-3.)

b. The high volume of civil aviation traffic in the area creates a high potential for mid air collision. Military users of Camp Pendleton SUA should be extremely cautious and vigilant when operating in the vicinity of the federal airway structures surrounding the Base.

c. Unintentional intrusions by civil aircraft into Camp Pendleton SUA take place routinely. Due to these intrusions, and the high volume of traffic, both civil and military in the area, Camp Pendleton has been designated by the FAA as having a high potential for mid air collision. Unauthorized civil aircraft observed within Camp Pendleton's restricted airspace shall be reported to LONGRIFLE.

4003. NO OVER FLIGHT AREAS

1. San Onofre Nuclear Generating Station

The San Onofre Nuclear Generating Station (SONGS) is located at grid coordinate 482 925; latitude 33 22' 10"N, longitude 117 33' 20"W. All aircraft shall avoid flight within one (1) nautical mile of, and below 2,000 feet over SONGS.

2. Endangered Species Nesting Areas

Least Tern/Snowy Plover Nesting Areas. During the period from 1 March through 15 September, certain airspace within R-2503A is <u>off-limits</u> to <u>all</u> aircraft to protect the nesting and feeding habitat of endangered bird species. This <u>off-limits</u> airspace has been identified as surface - 300' AGL and 300 meters laterally from the following areas.

a. <u>Beach Section G</u>. Margarita or Blue Beach, inland to the I-5 Freeway, and from the bluffs north of the Santa Margarita River to the bluffs south of the river near the 21 Area.

b. <u>Beach Section E</u>. Aliso or White Beach, inland to the I-5 Freeway, between the bluffs enclosing the posted nesting area at 587 809.

c. <u>Riparian Areas</u>. During the period of 15 March through 15 September, aircraft will not fly below 300 feet over riverbeds and streams, other than established landing sites and TERF routes.

d. Estuaries/Lagoons. During the period of 15 March through 15 September, aircraft will not fly below 300 ft. AGL over river mouths.

3. Other Areas A minimum altitude of 500' AGL shall be maintained when flying over personnel, housing areas, camps, including San Onofre State Beach, Capistrano TRW Complex, MCB Golf Course, Range 401 (669 802), Naval Hospital (695 891), and Ammunition Supply Point (596 917).

4004. MARINE CORPS AIR STATION (MCAS), CAMP PENDLETON

1. General

a. MCAS, Camp Pendleton is under the command of the Commander, Marine Corps Air Bases, Western Area (COMCABWEST). Requests for use of this air station for any reason must be coordinated and approved by the Commanding Officer, MCAS, Camp Pendleton.

b. MCAS, Camp Pendleton facilities, aircraft, personnel, support capabilities, and hours of operation are listed in current FLIP Planning and enroute IFR Supplement Publications and StaO 3710.1.

2. MCAS, Camp Pendleton Airspace

a. Marine Corps Base, Camp Pendleton has, by Letter of Agreement, delegated certain airspace to MCAS, Camp Pendleton for its operation and control (refer to figure 4-3). The MCAS Air Traffic Control Facility controls operations within this delegated airspace when the air station is open. When the air station is closed, this airspace reverts back to the control of Camp Pendleton Range Control (LONGRIFLE) or the FAA, as appropriate.

b. Airspace has been delegated to MCAS, Camp Pendleton for their operational control.

(1) MCAS Class D Airspace. Airspace extending from the surface to 2,600' MSL extending from the airport reference point to the MCAS, Camp Pendleton (NFG) VORTAC 010R at 4NM arc clockwise to the NFG 227R at 4 NM direct to NFG 240R at 2.6 NM arc clockwise to NFG 335R at 2.6 NM direct to NFG 010R at 4 NM.

(2) MCAS Class E Airspace. Airspace extending from the surface up to and including 2,600 feet extending from the 010R at 4NM direct to 018R at 6.9NM direct to 050R at 4NM arc northwest to the 010R.

c. When the air station is open, all aircraft operating within these areas must contact the MCAS Air Traffic Control Tower for clearance.

3. Arrival and Departure Routes

The MCAS, Camp Pendleton VFR arrival/departure points listed below have been established within Camp Pendleton SUA.

a. VFR Runway (Rwy) 21 Departure Routes

(1) VORTAC Departure Route. Proceed direct to MASS-3. Pass south of MASS-3, proceed to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC at or below 800' MSL. Report OCN VORTAC clear.

(2) Intersection Departure Route. Depart from right downwind to Basilone Road. Turn left and fly along west side of Basilone Road to the Basilone/Roblar intersection. Report the intersection clear. Aircraft shall transit outbound the intersection at 800' MSL.

(3) Pt. Canyon Departure Route. Depart from right downwind direct to Pt. Canyon (Margarita/DeLuz Rivers). Report Pt. Canyon clear. Aircraft shall transit outbound Pt. Canyon at 800' MSL.

b. VFR Rwy 21 Arrival Routes

(1) LCAC Arrival Route. Report the LCAC Facility inbound at or above 1000' MSL, proceed to MASS-3. Pass south of Edson Range and north of MASS-3 to enter a right downwind for Rwy 21.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection inbound, fly along the east side of Basilone Road to enter a right base for Rwy 21. Aircraft shall transit inbound the intersection at 1,000' MSL.

(3) Pt. Canyon Arrival Route. Report Pt. Canyon inbound and proceed to Lake O'Neill passing to the north of O'Neill Base Housing. From Lake O'Neill make straight in to Rwy 21. Aircraft shall transit inbound Pt. Canyon at 1,200' MSL.

(4) North Initial Arrival Route. Report the North Initial inbound. Proceed direct to Lake O'Neill and make straight in to Rwy 21.

c. VFR Rwy 3 Departure Routes

(1) VORTAC Departure Route. Depart via the right downwind direct MASS-3. Pass south of MASS-3, proceed direct to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC at or below 800' MSL. Report OCN VORTAC clear.

(2) Intersection Departure Route. After departure, proceed direct Basilone Road. Turn left and fly along east side of Basilone Road to the Basilone/Roblar intersection. Report the intersection clear. Aircraft shall transit outbound the intersection at 800' MSL.

(3) North Initial Departure Route. Depart direct Lake O'Neill to North Initial. Report North Initial clear.

d. VFR Rwy 3 Arrival Routes

(1) LCAC Arrival Route. Remain 1 NM offshore until turning inbound to the LCAC Facility to avoid VORTAC departures. Report the LCAC Facility inbound at or above 1000' MSL, and proceed to MASS-3. Pass south of Edson Range and north of MASS-3, make straight in to Rwy 3.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection inbound, fly along the west side of Basilone Road to enter a left downwind for Rwy 3. Aircraft shall transit inbound the intersection at 1,000' MSL.

(3) Pt. Canyon Arrival Route. Report Pt. Canyon inbound, pass to the west of hospital for a left downwind entry to Rwy 3. Aircraft shall transit inbound Pt. Canyon at 1,200' MSL.

e. SVFR Arrival and Departure Routes. weather minimums for SVFR routes are listed below.

ROUTE	CEILING/VISIBILITY
LCAC Arrival Rte	800-1
VORTAC Departure Rte	800-1
Intersection Arrival/Departure Rte	800-1
Pt. Canyon Arrival/Departure Rte	800-1
North Initial Arrival Rte	500-1
Pattern	500-1

f. Arrival Routes

(1) LCAC Arrival Route. Arriving aircraft remain one (1) mile offshore until turning inbound for the LCAC Facility. Fly north of the LCAC Facility and contact tower prior to crossing the I-5 Freeway for SVFR clearance into Class D Surface Area. With clearance, fly south of Edson Range to MASS-3. (Rwy 3 - make straight in. Rwy 21 - enter right downwind.) Aircraft not in receipt of a SVFR clearance will remain outside of Class D surface area to the northwest of the LCAC Facility, until a clearance is received.

(2) Intersection Arrival Route. Report the Basilone/Roblar intersection for SVFR clearance into Class D Surface Area. With clearance, fly over Basilone Road for pattern entry. (Rwy 3 - enter a left downwind. Rwy 21 - enter right base).

(3) North Initial Arrival Route. Report North Initial for SVFR clearance into Class D Surface Area. With clearance, proceed direct Lake O'Neill. (Rwy 3 - enter a left downwind. Rwy 21 - make straight in).

g. Departure Routes

(1) VORTAC Departure Route. Pass south of MASS-3 direct to Stuart Mesa Housing. Pass south of the housing complex and proceed to OCN VORTAC. Report leaving Class D Surface Area.

(2) Intersection Departure Route. Proceed direct to Basilone Road. Turn left to Basilone /Roblar intersection. Report the intersection clear.

(3) Pt. Canyon Departure Route. Proceed to Pt. Canyon remain west of the hospital. Report Pt. Canyon clear.

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4. Temporary Alternate Landing Area

The Temporary Alternate Landing Area (TALA), established in the Ysidora Basin (657 797) for helicopter operations only, is active only when MCAS, Camp Pendleton is open. Use of the TALA shall be minimized between 0600 and 1100 during the endangered Least Bell's Vireo Nesting season (15 March to 15 September).

4005. LOCAL FLYING NOTICES

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1. General

A Local Flying Notice is used to notify all local military aviation units and users of Camp Pendleton SUA about the presence of any high volume or unusual aviation activities in this airspace. Local Flying Notices are published via message. They are disseminated for unusual or non-routine training evolutions requiring extra vigilance or precautions by all Camp Pendleton airspace users.

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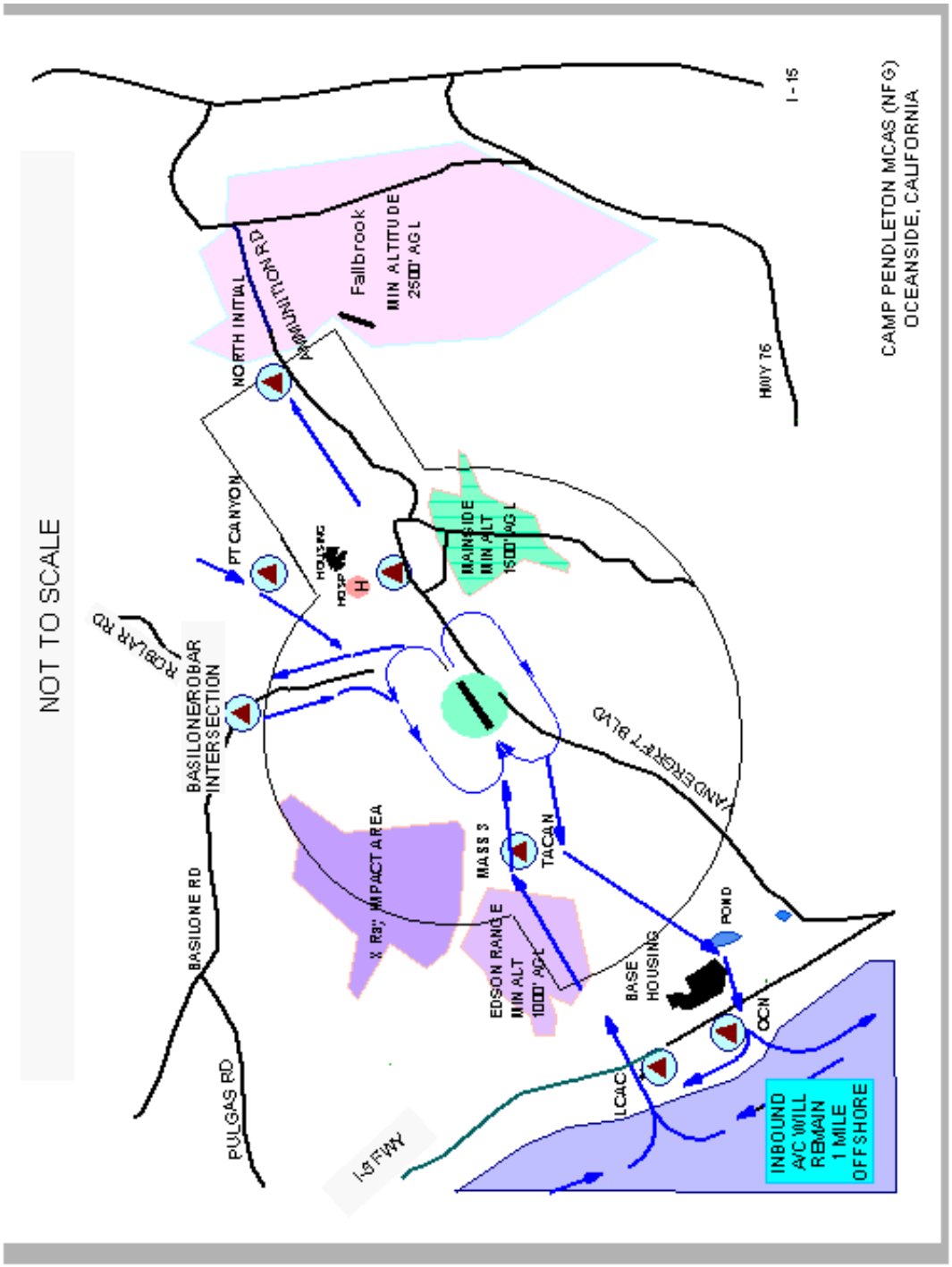
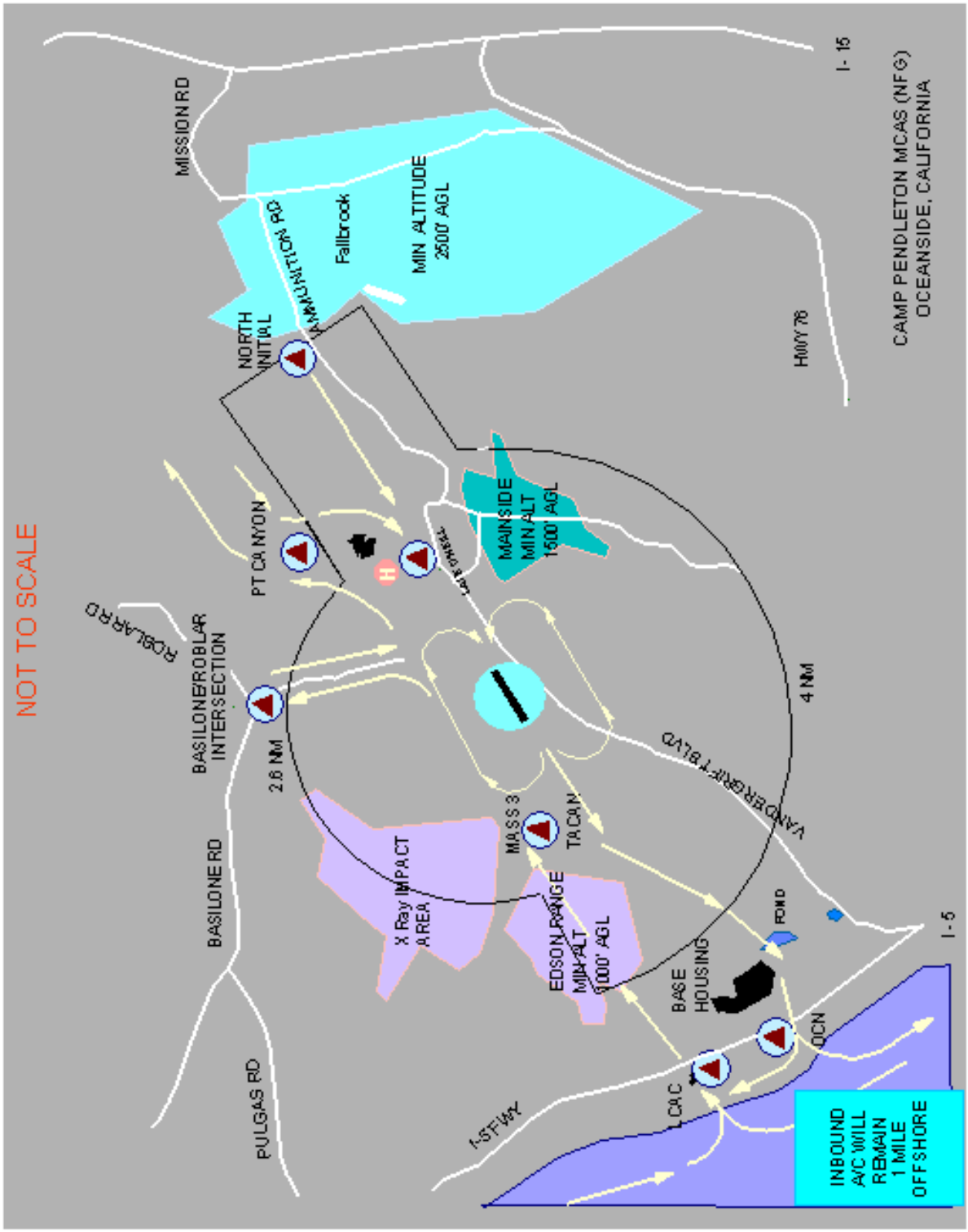
2. Dissemination

Local Flying Notices will be disseminated a minimum of 48 hours in advance of the particular activity or event that is being advertised. Any unit desiring to conduct high volume or unusual training activities within Camp Pendleton airspace shall schedule the airspace (and required ranges) as early as possible prior to the desired training period.



MCAS, CAMP PENDLETON
RUNWAY 3 VFR ARRIVAL/DEPARTURE ROUTES

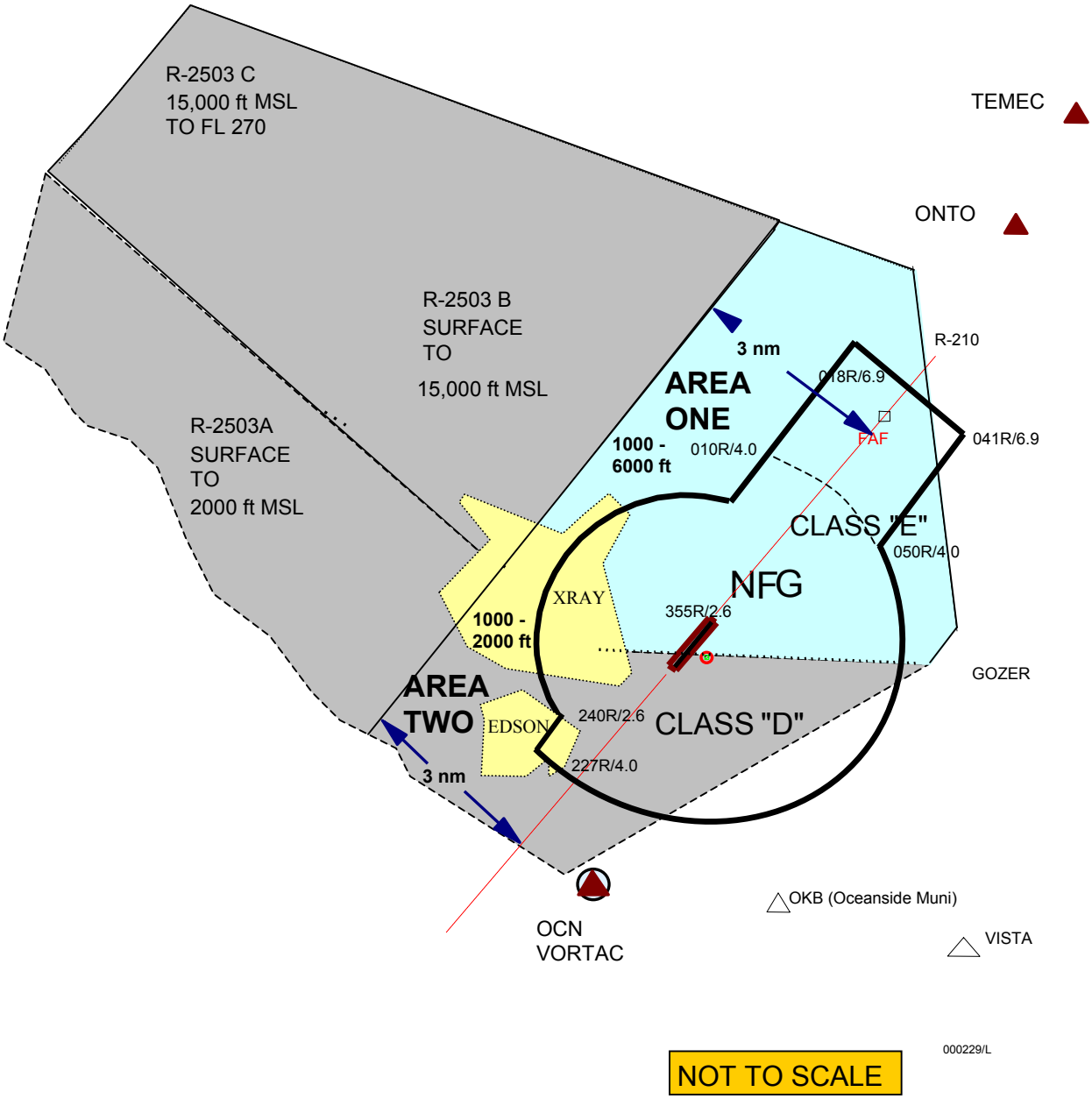
Figure 4-3



MCAS, CAMP PENDLETON
RUNWAY 21 VFR ARRIVAL/DEPARTURE ROUTES

Figure 4-3

MCAS, CAMP PENDLETON AIRSPACE



NOT TO SCALE

AREA ONE - THAT PORTION OF RESTRICTED AIRSPACE FROM 1000 ft TO 6000 ft MSL SOUTHEAST OF A LINE 3NM NORTHWEST AND PARALLEL TO THE EXTENDED RUNWAY CENTERLINE EXCLUDING AIRSPACE DEFINED AS CLASS D AND E.

AREA TWO - THAT PORTION OF RESTRICTED AIRSPACE R2503A, FROM 1000 ft TO 2000 ft MSL, SOUTHEAST OF A LINE 3NM NORTHWEST AND PARALLEL TO THE RUNWAY CENTERLINE EXCLUDING AIRSPACE DEFINED AS CLASS D.

CLASS "D" THE CIRCULAR AIRSPACE EXTENDING FROM THE SURFACE UP TO AND INCLUDING 2600 ft MSL. EXTENDING FROM THE AIRPORT REFERENCE POINT TO 4 NM FROM THE 010R ARC SOUTHEAST THE 227R AT 4NM DIRECT TO THE 240R AT 2.6NM ARC NORTHWEST TO THE 355 AT 2.6 DIRECT 010R AT 4 NM. AIRCRAFT WILL REMAIN AT OR ABOVE 1000 FT AGL WHEN OPERATING IN THE EDSON RANGE AND X-RAY IMPACT AREA.

CLASS "E" THE AIRSPACE EXTENDING FROM THE SURFACE UP TO AND INCLUDING 2600 ft MSL. EXTENDING FROM THE 010R AT 4NM DIRECT 018R AT 6.9 NM DIRECT 041R AT 6.9 NM DIRECT 050R AT 4NM ARC NORTHWEST TO THE 010R AT 4NM.

Figure 4-3

4006. AIRSPACE AND AVIATION FACILITY SCHEDULING

1. General

All users of Camp Pendleton airspace and training ranges, including inland training areas, amphibious beach training areas and aviation training facilities, must schedule the training area in advance. Scheduling requests for the use of any of these areas or other Base training facilities, including aviation training facilities, will be submitted to the Range Scheduling Office per the provisions contained in chapter 3 of this Manual.

2. Cancellation

Once ground ranges, training facilities, airspace, and/or sea space have been scheduled, it is the responsibility of the unit scheduled to use the facility to conduct its training during the allotted time period. Should there be a requirement to modify a scheduled range time, or a need to cancel a range request, the unit shall notify the Range Scheduling Office at the earliest opportunity via e-mail.

3. Close Air Support Requests

Close Air Support (CAS) scheduling requests shall include type/number of aircraft, ordnance, impact area, IP, mark type, and mark facility (e.g., MP, AFA, etc.).

4007. AIRSPACE CONTROL PROCEDURES

1. General

All aircraft operating within Camp Pendleton Special Use Airspace (SUA) shall check in and out with Range Control (LONGRIFLE) prior to entry/departure of the airspace. Aircraft must maintain communication with LONGRIFLE at all times while operating within Camp Pendleton airspace. Alternate discrete range safety frequencies may be requested and will be assigned to support individual training activities on an as available basis. (NOTE: Due to the mountainous terrain within Camp Pendleton, some low altitude communication blind spots exist in areas around the Base. Therefore, aircraft may have to climb to obtain positive communication with LONGRIFLE). Aircraft checking in with LONGRIFLE shall provide callsign, location, unit, number and type aircraft, planned activity, and ordnance (if applicable).

2. Check-In/Out

Once an aircraft has checked in with LONGRIFLE, and received clearance to enter, the aircraft/flights that will be working with another controlling agency [e.g., Tactical Air Control Party (TACP), Air Liaison Officer (ALO), etc.] to conduct CAS, Simulated CAS (SIMCAS), or paradrop operations will be switched to the appropriate controlling frequency. All aircraft shall check out with LONGRIFLE when departing restricted airspace. Aircraft checking out shall provide callsign, ordnance expended (if applicable), and departure direction/instructions.

3. Traffic Advisories

All aircraft operating in Camp Pendleton airspace shall remain alert to LONGRIFLE advisory calls. LONGRIFLE will provide traffic advisories to the maximum extent possible for the presence of other aircraft, the location of hot impact areas, or any other appropriate situational awareness advisories. All aircraft cleared into Camp Pendleton airspace must remain in Visual Meteorological Conditions (VMC). All aircraft must exercise extreme vigilance for unauthorized intrusions by civil aircraft. All aircraft must also be vigilant in their employment of VFR "see and avoid" criteria to ensure avoidance of other aircraft operating in Camp Pendleton SUA.

4. Airspace Control

Formal schools training activities receive priority for use of Camp Pendleton Special Use Airspace. Consequently, Camp Pendleton is unable to support exclusive use of our airspace. LONGRIFLE will therefore function as the primary airspace control agency during exercises, serving in a "host nation" capacity. Portions of Camp Pendleton airspace may be delegated to exercise control agencies, provided sufficient advance coordination is accomplished. Area Alpha and the San Onofre High/Low MOAs represent additional airspace adjacent to R-2503A/B/C that can be activated in support of exercises at Camp Pendleton. Refer to paragraph 4001 in this chapter for activation requirements.

5. Radio Frequencies

LONGRIFLE utilizes three (3) UHF, one (1) VHF, and two (2) FM frequencies for control of operations within Camp Pendleton airspace. These frequencies are listed below.

a. UHF - 301.9 (primary)/255.2/249.9

b. VHF - 123.2

c. FM - 49.00/30.35

4008. CLOSE AIR SUPPORT (CAS) OPERATIONS

1. General

No dropping of live or inert ordnance shall be allowed unless under the direct positive control of a Tactical Air Control Party (TACP) or a rotary-wing Forward Air Controller Airborne [FAC (A)], the target has been positively identified, and marked. Positive two-way communication must be established and maintained between the aircraft, the TACP/ FAC (A), and LONGRIFLE prior to conducting any CAS operations. In the event of communication failure, a red flare (or single red smoke grenade) fired from the TACP location will indicate "NO CAS ORDNANCE DROPS." Operations will be suspended until air-ground communication can be reestablished.

2. FAC (A)

Only rotary-wing FAC (A) operations are authorized at Camp Pendleton.

3. Designated Rotary CAS Operations

Designated rotary CAS positions for simultaneous rotary-wing CAS during periods of live ground-fire into the Zulu Impact Area are Ranges 227, 407, and 407A only. Aircraft shall fire between each range's firing line and the Zulu Impact Area boundaries as defined in appendix B of this Manual.

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4. Ordnance

CAS operations at Camp Pendleton are limited to strafing, air-to-ground rockets, and bombing. No live ordnance exceeding 500 pounds (MK82 series) may be dropped within Camp Pendleton impact areas without prior approval of the Assistant Chief of Staff, Operations and Training. Maximum ordnance authorized per each aircraft pass on the target is four bombs (up to 500 pounds each), using one-half-second or greater intervals between each bomb, ensuring all bombs and their effects impact within the aviation ordnance impact area. (Please note "No Fire Areas" within the aviation ordnance delivery impact area described in appendix B of this Manual.)

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5. Weather Minimums

Weather minimums required for fixed-wing CAS operations within Camp Pendleton Restricted Airspace are a 3,500 foot ceiling, and visibility three (3) NM or greater. Rotary-wing CAS weather minimums are a 1,000 foot ceiling, and positive visual identification of the target and surrounding impact area.

---

6. No Over Flight Areas

CAS/SIMCAS aircraft shall avoid over flying the Naval Hospital (695 891), the Ammunition Supply Point (596 917), all family housing areas, and environmentally sensitive areas per paragraph 4003 in this chapter. Aircraft with live ordnance should also avoid, to the maximum extent possible, the over flight of cantonment areas or large groups of assembled personnel.

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7. Safety Training

All FACs/FACs (A) shall attend the Camp Pendleton FAC/FAC (A) Safety Course prior to conducting CAS operations here. The FAC/FAC(A) Safety Course is held every Friday at 0800 in Bldg. 2399, first deck classroom. Unit briefs may also be scheduled by contacting the Airspace Manager at (760) 725-8183. FAC/FAC(A) certification cards, issued upon completion of the safety course, will remain in effect for 24 months. An experienced Camp Pendleton FAC shall accompany any first-time FACs controlling aircraft at Camp Pendleton.

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8. Target Marking

All targets shall be marked by laser, mortar, artillery, or helicopter, prior to conducting CAS operations. If laser marking is used, CAS aircraft shall not over fly TACP/ laser designator location. "Talk ons" are not authorized.

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9. Fixed-Wing Clearing Hot

FACs shall not call "cleared hot" until the FAC has the aircraft in sight, and the fixed-wing CAS aircraft has reported wings level and entered the aviation ordnance delivery impact area. The impact area for CAS missions is the defined area within the blue dashed line depicted on the Camp Pendleton Military Installation Map (as described

in appendix B of this Manual). Traffic barriers painted white and orange are in place in the Zulu Impact Area to mark this area.

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10. Headings CAS operations may be conducted in both the Whiskey and Zulu Impact Areas. Fixed-wing CAS operations may be conducted in the Zulu Impact Area only, unless otherwise approved by LONGRIFLE. Rotary-wing aircraft shall remain within the confines of Camp Pendleton Special Use Airspace at all times while conducting CAS operations. Within the Whiskey Impact Area (R-220), aircraft are authorized to release ordnance on a heading of 080-180 degrees only. In the Zulu Impact Area (R-440), aircraft are authorized to release ordnance on a heading of 305-030 degrees only. All ordnance expended must fall within the aviation ordnance delivery impact area (blue-dotted line on the Camp Pendleton Military Installation Map).

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11. CAS Routes Figure 4-4 depicts standard fixed-wing flight tracks and approach routes to the impact areas for CAS missions. Fixed-wing aircraft utilizing these typical routes shall avoid over flight of cantonment areas at less than 1,500' AGL for noise abatement purposes. Fixed-wing aircraft shall operate no lower than 1,000 feet at all times (or higher as assigned by LONGRIFLE) unless within the assigned impact area.

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12. SPINS FACs/TACPs shall provide LONGRIFLE with a copy of event Special Pilot Instructions (SPINS) no later than the day prior to conducting CAS operations at Camp Pendleton.

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13. Briefing The controlling FAC/TACP shall conduct a "hot brief" with LONGRIFLE via telephone [(760) 725-4604/3974] or radio (frequencies: UHF 301.9, 249.9, 255.2; VHF 123.2; FM 30.35, or 49.00) no less than one (1) hour prior to the scheduled CAS mission to provide LONGRIFLE with an overview of the planned CAS. This overview of planned mission requirements shall contain the aircraft time on station, ordnance to be dropped, method of marking the targets, number and type of aircraft to be used, aircraft callsign, ground unit supported, TACP/FAC(A) callsign, and any other pertinent information. The FAC shall also determine the occupancy status of Ranges 225, 227, 407, 407A, and MP1 during the "hot brief" from LONGRIFLE. The FAC-CAS Brief Sheet provided in appendix I of this Manual shall be completed and submitted to LONGRIFLE. SPINS shall also be submitted to LONGRIFLE no later than the day prior to the planned CAS operation. FAC Brief Sheets may be submitted via FAX [(760) 725-4090] or delivered to LONGRIFLE at Bldg. 2399, MCAS, Camp Pendleton, in advance of CAS operations.

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14. Procedures a. Following check-in with LONGRIFLE, fixed-wing aircraft arriving for CAS operations within Camp Pendleton Restricted Airspace will normally be directed to hold over the Case Springs area at an assigned altitude. LONGRIFLE will retain CAS aircraft in holding over Case Springs until the FAC/TACP is ready to accept

control of the aircraft, and all conflicting ground range operations have been put in a check-fire status.

b. The controller shall provide a mandatory Range Safety Brief (to include authorized ordnance drop headings) to all aircraft in the flight prior to commencing the first run-in to the target. Once all ground range activity and the necessary airspace blocks have been deconflicted, LONGRIFLE will then pass control of CAS aircraft to the appropriate controller. In addition, the TACP/FAC shall provide information on authorized ingress and egress routes, friendly troop locations, prohibited over flight areas, or any other special instructions prior to beginning the CAS operation. Finally, the FAC/TACP will provide the standard 9-line/6-line CAS Brief to all aircraft in the flight prior to commencement of the first run-in to the target. All fixed-wing aircraft must make at least one cold (no drop) pass on the target prior to clearance for an actual drop of either live or inert ordnance. Rotary-wing aircraft shall conduct a sweep of the impact area prior to conducting live-fire.

c. All fixed-wing aircraft shall return to IP at assigned altitude prior to conducting follow-on runs. No fixed-wing reattacks are authorized without prior approval from LONGRIFLE.

d. The TACP controlling the CAS aircraft will act as the Fire Support Coordinator for all ground firing units involved in the CAS mission. Using a Forward Observer (FO), the TACP will ensure that ground units provide supporting fire only when aircraft are safely out of the impact area or when the aircraft has reached an altitude that is above the maximum ordinate of the ground weapon fired.

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15. Routes for Zulu Impact Area

Listed below are the routes of flight authorized for CAS operations in the Zulu Impact Area.

a. Within R-2503B. Depart holding at IP Case Springs and proceed west as assigned, then turn northwest toward San Mateo Canyon, then east-southeast to the Zulu Impact Area. Aircraft shall remain at or above assigned altitude until passing the ridgeline between the Whiskey and Zulu Impact Areas. Aircraft shall remain within R-2503B throughout the route into Zulu. After pulling off target, aircraft should make a climbing left-hand turn over Horno Ridge and follow Roblar Road back to the Case Springs holding point. Aircraft shall climb to assigned altitude prior to passing the ridgeline between the Zulu and Whiskey Impact Areas. It is important to note when flying this CAS route that V-23 abuts the southern boundary of R-2503B. Recent reconfiguration of Camp Pendleton Restricted Airspace resulted in the reduction of the east side of V-23 from 4NM to 3NM. Consequently, spill-outs to the west of R-2503B at 4,000 feet and above at co-altitude with an IFR aircraft on the centerline of V-23 will in all likelihood result in a Pilot Deviation Report being generated by the FAA.

b. Within R-2503A. Ingress to the Zulu Impact Area may be made via four authorized routings through R-2503A. These routes shall be scheduled, coordinated,

and approved in advance with the Range Scheduling Office. The authorized routings are as follows.

(1) Via Jardine/Talega/San Mateo Canyons using IP SONGS *(a point on the coast one mile south of SONGS at 480 919)

(2) Via Horno Canyon using IP Horno (536 879)

(3) Via Las Pulgas Canyon using IP Bridge (567 845)

(4) Via Aliso Canyon using IP Aliso (593 812) - rotary wing only

c. Aircraft utilizing R-2503A airspace for ingress to Zulu Impact Area must remain within the designated airspace boundaries for this restricted area. Aircraft shall maintain an altitude between 1,000 and 2,000' MSL until crossing into R-2503B airspace, unless otherwise coordinated with LONGRIFLE. Exit from the target area may be made by egressing through a different canyon than the one used for ingress. Flights through any of the above listed canyons must be planned to ensure cantonment areas, administrative LZs, or ground training ranges are not over flown. Flights using the Aliso Canyon route must also be coordinated in advance with MCAS, Camp Pendleton, as this route lies within the air station's Class D airspace. Aircraft utilizing Talega/San Mateo/Jardine Canyon/IP SONGS shall avoid flight within one NM and below 2,000' MSL of SONGS. Aircraft shall not arm prior to entering impact areas.

---

16. Routes for Whiskey Impact Area

Listed below are the routes of flight authorized for rotary-wing CAS operations in the Whiskey Impact Area.

a. Within R-2503B. Use IP Case Springs (609 012) as the IP for Whiskey Impact Area within R-2503B. Proceed to Range 220. When working CAS missions in the Whiskey Impact Area, aircraft shall avoid over flight of the Zulu Impact Area unless pre-approved by LONGRIFLE.

b. Within R-2503A. Ingress to the Whiskey Impact Area through R-2503A airspace shall use established ingress and egress routes discussed in paragraph 4008.15.b in this chapter. The standard CAS/SIMCAS routes listed above may be modified when necessary to meet specific training scenarios. Change to the standard CAS routes may be made only after advanced coordination is made and approval obtained from the Director, Range Operations Division. An overlay tailored to the Camp Pendleton Military Installation Map shall be delivered to the Director, Range Operations Division a minimum of five (5) working days prior to the planned training depicting the requested non-standard CAS/SIMCAS operation areas.

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*Aircraft must pass IP SONGS at 2,000' MSL (refer to paragraph 4003 in this chapter). Aircraft ingressing or egressing via Jardine/Talega/San Mateo Canyons shall exit or enter one NM south of the power plant.

17. FAC (A) Firing Areas

Designated firing areas outside the Zulu Impact Area are available for FAC (A) marking activities if FAC (A) aircraft do not desire to fire within Zulu. These firing areas are Ranges 227, 407, and 407A and are available through the Range Scheduling Office. FAC (A) aircraft shall not enter these ranges without authorization from LONGRIFLE. FAC (A) aircraft shall also make a visual sweep of areas adjacent to these ranges to verify areas are clear of personnel and equipment.

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18. FAC(A) Lasing

Rotary-wing FAC (A) standoff lasing in support of CAS is authorized from OP A, and Ranges 227 and 407 only. Lasing shall be accomplished from the aircraft in a hover only. Lasing operations may be conducted from only one location at a time.

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19. Communication and Safety

Two-way radio communication must be established and maintained between the FAC(A) aircraft and the CAS/SIMCAS aircraft, the ground unit with which the operation is being conducted, and with LONGRIFLE. When air assets are using the Zulu Impact Area, LONGRIFLE will instruct ground units, on or near the range, to monitor the TAD net in use.

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20. Rotary-Wing Firing

Rotary-wing Close Air Support operations will be conducted to ensure that all ordnance and their effects are contained within designated aviation ordnance impact areas as described in appendix B of this Manual. (Please note "No Fire Areas" within the aviation ordnance delivery impact area described in appendix B.) The direction of fire shall comply with headings depicted on the Camp Pendleton Military Installation Map, and discussed in paragraph 4008.10. in this chapter.

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21. Road Guards

Ground units working with rotary-wing FAC (A) aircraft in training operations shall ensure no vehicular traffic enters into surface danger zone areas existing between firing sites and the Zulu Impact Area. Ground units are responsible for placing road guards at the intersection of Roblar and Basilone Roads, and on Roblar Road at R-408 to prevent inadvertent intrusions.

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22. SIMCAS

Any type aircraft, on any range or training area within Camp Pendleton, may conduct SIMCAS operations. Any delivery technique simulating live ordnance attacks for any type ordnance may be used during SIMCAS training operations. Units desiring SIMCAS support using routings/areas not described in the standard CAS routes above shall submit an overlay of intended SIMCAS routings to LONGRIFLE no later than seven (7) working days prior to the planned event. All SIMCAS aircraft shall be cleared with the report, "continue dry."

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23. SIMCAS Weather Minimums Weather minimums required for fixed-wing SIMCAS operations are identical to those required for CAS operations – a 3,500 foot ceiling and three (3) mile visibility. Weather minimums required for rotary-wing SIMCAS operations are a 1,000 foot ceiling and positive identification of the target and surrounding impact area.

24. Procedures All command and control procedures, including control by the TACP [or rotary-wing FAC(A)] and FAC/FAC(A) certification, as well as the requirement to establish and maintain two-way radio communication, are applicable to SIMCAS operations in the same manner as they are for CAS missions. The TACP/FAC(A) shall maintain two-way radio communication with the SIMCAS aircraft at all times, and shall also maintain two-way radio communication with LONGRIFLE at all times.

25. Communication In the event of a communication failure, a single red smoke grenade fired from the TACP location will indicate "NO SIMULATED AIR STRIKE," and will be used to suspend the operation until air-ground communication can be reestablished.

4009. HELICOPTER OPERATIONS

1. General Helicopters shall not over fly or land within any designated impact area without approval by LONGRIFLE, except in the case of an actual emergency. In cases of bona-fide emergencies, pilots are expected to exercise sound judgment and advise LONGRIFLE of their intentions at the earliest opportunity.

2. Prohibitions Helicopters are prohibited from operating and/or landing within 100 meters of any range, firing line, artillery position, or mortar position when firing is in progress, or whenever troops or ammunition occupy the position. Coordination should be made with LONGRIFLE by helicopters transporting VIPs who wish to land within or near ranges or AFAs/mortar positions. LONGRIFLE will, in turn, coordinate with the unit's Range Safety Officer (RSO) to accommodate the helicopter's landing request as quickly as possible.

3. Altitudes Unless otherwise specified in chapter 2 or paragraph 4003 in this chapter, helicopters operating outside established TERF routes shall maintain an altitude at or above 200' AGL. Helicopters traveling with "high birds" may fly at or above 100' AGL. All flights conducting TERF route operations shall have a "high bird."

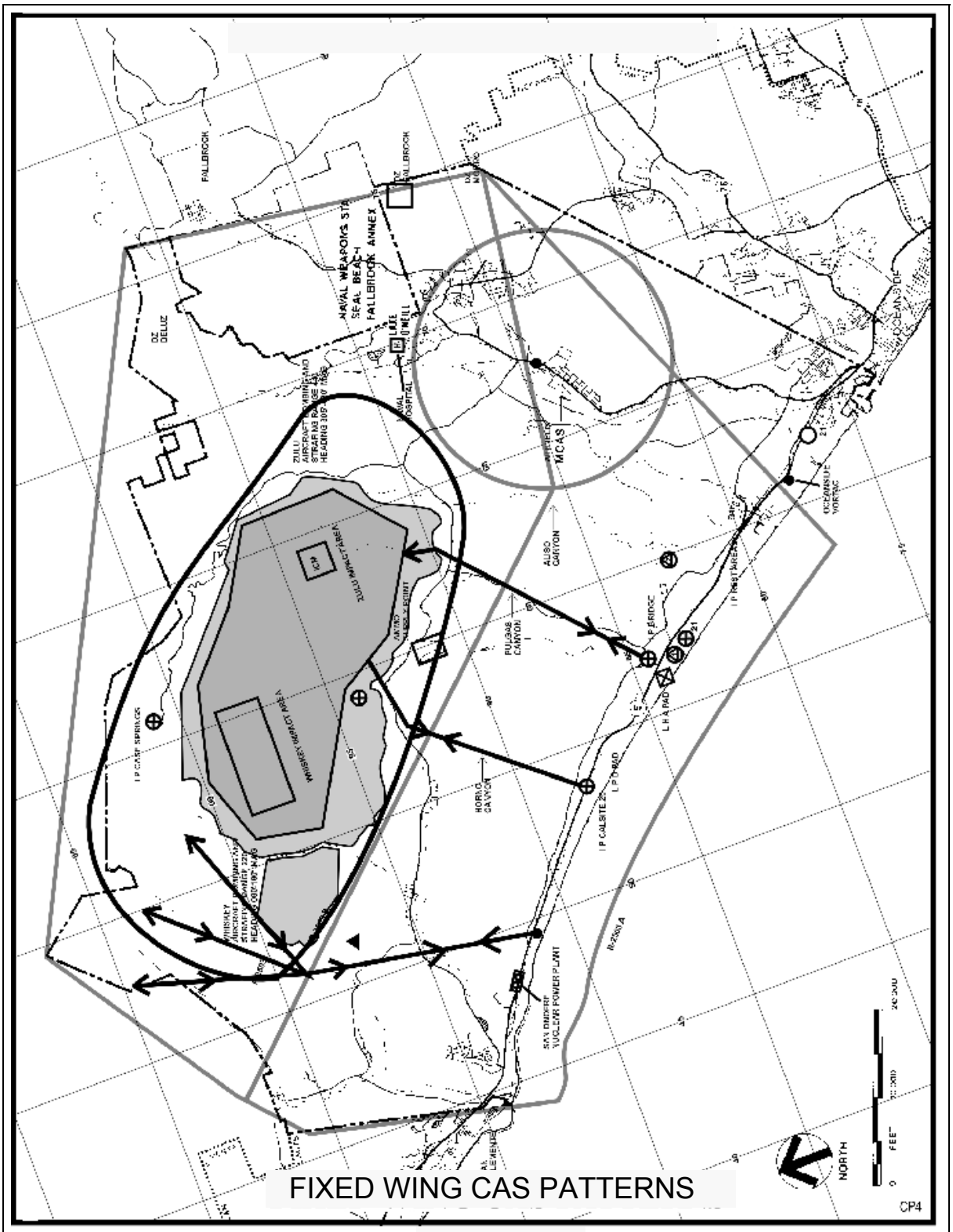
FIXED WING CAS PATTERNS
NAVAL WEAPONS STA
SEAL BEACH
FALLBROOK ANNEX
FALLBROOK
DE DELUZ
ZULU
AIRCRAFT MINIMUM
STRAIGHT IN RANGE
HEADING 300 TO 180
ZULU MAX CLEARANCE
ZULU MAX CLEARANCE
CP3
CP4
MCAS
AUSO CANYON
PULGAS CANYON
HORNO CANYON
I P CAMP SPRINGS
I P CALSITE
I P 7-800
L H A PAD
F BRIDGE
OCEANSIDE
OCEANSIDE VORTAC
SAN ONOFRE NUCLEAR POWER PLANT
NORTH
FEET
0
20,000

Figure 4-4

4. Weather Minimums

Weather minimums required for helicopter aircraft operations (except rotary-wing CAS) within Camp Pendleton's Restricted Airspace are as follows.

a. Ceiling. 500 feet or greater

b. Visibility. One (1) nautical mile (NM) or greater

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5. MEDEVAC

Any helicopter engaged in an actual MEDEVAC mission shall immediately contact LONGRIFLE giving its callsign, and stating, "This is an actual MEDEVAC mission." LONGRIFLE will immediately place all applicable ranges, artillery firing areas, or mortar positions in a check-fire status and allow the helicopter to proceed via the most direct route to the scene. This suspension of operations will remain in effect until the MEDEVAC aircraft commander informs LONGRIFLE that the MEDEVAC mission is completed and the aircraft is clear of all ranges and impact areas.

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6. External Operations

Helicopters shall not conduct external operations, to include SPIE rigging, across the I-5 Freeway without authorization from the Assistant Chief of Staff, Operations and Training. Helicopters conducting external operations over Base public roads shall coordinate operations, in advance, with the Base Airspace Manager at (760) 725-8183.

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7. LAMPS

Aircrews desiring to conduct LAMPS (i.e., visual reconnaissance) operations may construct a LAMPS route by connecting CALSITEs. LAMPS routes shall be scheduled at least seven (7) working days in advance with the Range Scheduling Office by listing the CALSITEs in order of desired route of flight, and planned flight altitudes. Aircrews shall report departing from and arriving at each CALSITE.

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8. Cold Sky Targets

Cold Sky targets have been placed in non-impact areas throughout the Camp Pendleton Range Complex. Life-size Cold Sky target silhouettes of threat vehicles with No Power Thermal targeting material (NPT or Cold Sky) affixed have been placed on the targets in areas where vehicle hot spots would be present (engine packs, road wheels, engine exhaust, etc.). Viewing the target using an aircraft FLIR will show an inverse image of what a pilot would expect to see when viewing an actual vehicle with hot spots. In the FLIR image, a pilot would see sharply contrasted cold spots, hence the name Cold Sky, simulating those hot spots. Cold Sky targets are currently in place in the areas listed below.

AREA	GRID	TYPE/RUN-IN
Case Spring	6149 0223 6136 0239	BMP Flank w/2km at 350 Mag BMP Flank w/2km at 050 Mag
DeLuz TERF	7164 9531 6978 9646	BMD Front w/2km at 030 Mag BMD Front w/2km at 345 Mag
Pulgas TERF	5783 9207 5798 9223	T-72 Flank w/2km at 035 Mag ZSU Front w/1km at 010 Mag
Talega Canyon	5414 0638	ZSU Front w/2km at 033 Mag

4010. HELICOPTER TRANSIT ROUTES

1. General Unless otherwise coordinated with LONGRIFLE, helicopters not engaged in specific training activities shall transit using the routes listed below. Grid coordinates based on the Camp Pendleton Military Installation Map are provided for each point. Helicopter transit routes are depicted in figure 4-5.

2. Offshore

a. Recommended altitude. At or below 500' MSL (right side right of way)

b. Route of flight. One (1) NM offshore

c. Checkpoints. (Abeam) State Beach 439 932

Power Plant 469 912

CALSITE 20 519 862

OCN VORTAC 589 772

d. Aircraft transiting the beach, which for some reason cannot transit via the Offshore Route, shall be directed to transit the coast or I-5 Freeway at/or above 1,500' AGL whenever beach aviation facilities are in use.

(1) Call LONGRIFLE for transit to beach training facilities, deviations from route, etc. Landing lights should be on.

(2) All fixed-wing feet wet operations will be conducted between 1000 and 2000' MSL, unless otherwise coordinated with LONGRIFLE.

3. Basilone Route

a. Recommended altitude. At or below 500' AGL (right side right of way)

b. Route of flight. Follow Basilone Road from the LORAN Station to the intersection of Basilone and Roblar Roads. Due to the large number of ranges located along Basilone Road, remain as close to the road as possible.

c. Checkpoints.

LORAN Site	449 952
Ammo Supply Point	604 917
Basilone/Roblar Roads	662 902

4. Case Springs Route

a. Recommended altitude. At or below 500' AGL (right side right of way)

b. Route of flight. Follow Talega Canyon power lines to Pt. Devil (540 038), turn right to parallel power lines, proceed southeast to CALSITE 10, direct to CALSITE 8, direct to CALSITE 5.

c. Checkpoints.

LZ 64	472 015
Devil	539 040
CALSITE 10	594 019
CALSITE 8	632 987
CALSITE 5	724 967

4011. NIGHT VISION GOGGLE (NVG) OPERATIONS

1. General

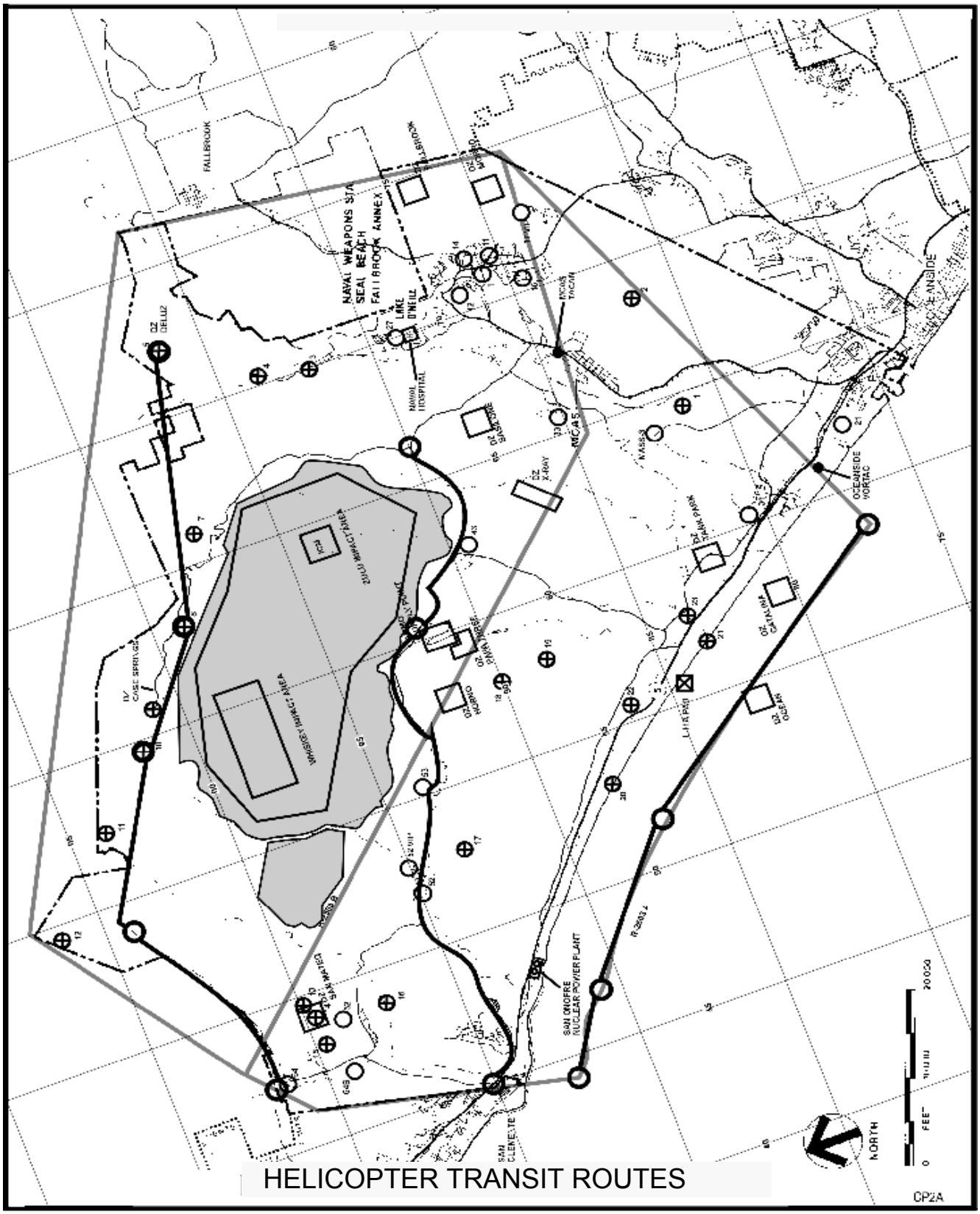
Aircraft operating within Camp Pendleton airspace on night vision devices shall be lighted as described below.

2. Single Aircraft Operations

Anti-collision lights shall be on; navigation lights shall be on at the highest intensity consistent with NVG compatibility.

3. Multiple Aircraft Operations

All aircraft in the flight shall have navigation, anti-collision, formation and blade tip lights on at intensity levels in keeping with safe flight. Aircraft in the flight, except the last aircraft, may turn off the anti-collision light if deemed in the best interests of safety by the pilot in command/flight leader. Separation between the lead aircraft and last aircraft in the flight shall not exceed 1 NM.



HELICOPTER TRANSIT ROUTES

Figure 4-5

4. See and Avoid The requirement to "see and avoid" shall take priority over NVG tactical training. Modification, taping, and/or cat eyeing of external lighting are not authorized.

5. NITEX Designated nights each month are set aside to conduct MAG-39 and MAG-16 NVG block training. MCAS, Camp Pendleton is "NOTAM'd" open during scheduled training periods to participating aircraft only.

4012. HELICOPTER TERRAIN FLIGHT (TERF) ROUTES

1. General Camp Pendleton airspace includes several TERF routes for helicopter low altitude navigation and pilot training proficiency. Helicopters conducting TERF route operations shall have a "high bird."

2. Scheduling TERF routes must be scheduled through the Range Scheduling Office prior to their use. Upon completion of TERF operations, flight leaders shall contact LONGRIFLE and report, "mission complete" prior to departing Camp Pendleton Restricted Airspace. When a non-scheduled aircraft checks in to use a TERF route, LONGRIFLE will advise the aircraft it must relinquish the route when the scheduled unit checks in.

NOTE: Use of the MIKE TERF route requires coordination and approval from MCAS, Camp Pendleton's Air Traffic Control Tower when the air station is open. This route lies within the air station's delegated airspace. Contact the MCAS, Camp Pendleton Tower on 382.2, 340.2 UHF or 128.775 VHF for clearance onto the MIKE TERF route.

3. TERF Routes The following list of available TERF routes on Camp Pendleton are depicted on the Camp Pendleton Military Installation Map.

TERF ROUTES	
DeLuz Canyon	Devil's Canyon
Case Springs	212 Tow
Pulgas (Bugs)	Mike

4. Caution The Case Springs and DeLuz TERF routes appear continuous on the Camp Pendleton Military Installation Map. When both TERF routes are in use, aircraft operating on the Case Springs TERF route shall transit no further east than

CALSITE 7. Aircraft on the DeLuz TERF route shall transit no farther west than the eastern boundary of Range 409A.

5. Altitudes Aircraft requesting transit of a TERF route in use must transit the area at or above 500' AGL, unless otherwise instructed by LONGRIFLE.

4013. HELICOPTER OUTLYING LANDING FIELD (HOLF) OPERATIONS

1. General The Camp Pendleton HOLF is located in San Mateo Canyon, in the vicinity of 504 994/OCN R360/13.0 DME. The HOLF provides one 3,000-foot grass runway (Rwy 22L/04R) and one 3,000-foot dirt runway (Rwy 22R/04L). The dirt runway will be converted to a concrete runway in the future**.** The HOLF field elevation is approximately 350' MSL. The HOLF is uncontrolled and unlit.

2. Scheduling 3rd MAW aircraft shall have priority use of the HOLF. 3rd MAW/MAG-39 shall provide a monthly HOLF operations plan to the Range Scheduling Office no later than the 10th day of the previous month. Individual squadrons may also submit scheduling requests for the HOLF per procedures outlined in chapter 3 of this Manual. The HOLF schedule will be finalized by the Range Scheduling Office per the priorities established in this Manual. HOLF operations will not be authorized unless the HOLF has been scheduled

3. General Operations The HOLF can support right and left patterns at both parallel runways as follows.

a. Rwy 22L/R

(1) Single runway operations. Aircraft operating Rwy 22L or Rwy 22R may fly a left or right pattern. The first aircraft arriving in the pattern shall establish pattern direction. Aircraft flying left patterns shall remain north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at one runway at the same time. Aircraft shall operate at or below 1,400' MSL (1,000' AGL), unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 22L and 1,000'MSL when operating on Rwy 22R.

(2) Parallel runway operations. When operations are in progress at both right and left runways, aircraft at Rwy 22L shall fly a left pattern, and aircraft at Rwy 22R shall fly a right pattern. Rwy 22L aircraft shall fly north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area

is active. No more than three (3) aircraft may operate at a time, for a maximum of six (6) aircraft (3 at Rwy 22L; 3 at Rwy 22R) operating at the HOLF at one time. Aircraft shall operate at or below 1,400' MSL, unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 22L, and 1,000' MSL when operating on Rwy 22R.

(3) Runway change procedures. When prevailing conditions (wind, moon, etc.) require a runway change, the following procedures will be affected.

(a) All aircraft will land on the runway or depart the HOLF operating area.

(b) All aircraft will transmit, "Ready for runway change."

(c) The aircraft closest to the new departure threshold will call for take off on the new runway. As an example, when a change from runway 22 left to runway 04 right has occurred: "Atlas 06, take off (new) runway 04 right."

(4) Procedures for transitioning from one parallel runway to another parallel runway. Aircraft wishing to transition from one parallel to the other runway may do so if they are the only aircraft in the pattern. Aircraft desiring to transition from one parallel runway to the other while other aircraft are operating at the HOLF shall depart the pattern and reenter via established reporting points (52 Area Crossroads/Pt. Yankee).

(5) Departure procedures. Aircraft departing the HOLF shall broadcast intentions and ensure they give way to pattern aircraft as they effect transition to the designated departure point (52 Area Crossroads/Pt. Yankee).

b. Rwy 04R/L

(1) Single runway operations. Aircraft operating Rwy 04L or Rwy 04R shall fly a left or right pattern. The first aircraft arriving in the pattern shall establish pattern direction. Aircraft flying right patterns shall remain north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at one runway at the same time. Aircraft shall operate at or below 1,400' MSL (1,000' AGL), unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 04R and 1,000' MSL when operating on Rwy 04L.

(2) Parallel runway operations. When operations are in progress at both right and left runways, aircraft at Rwy 04R shall fly a right pattern and aircraft at Rwy 04L shall fly a left pattern. Rwy 04R aircraft shall fly north of the riverbed to remain clear of live-fire operations in the Quebec Impact Area when the Quebec Impact Area is active. No more than three (3) aircraft may operate at a time for a maximum of six (6) aircraft (3 at Rwy 04L; 3 at Rwy 04R) operating at the HOLF at one time. Aircraft shall operate at or below 1,400' MSL, unless otherwise instructed by or coordinated with LONGRIFLE. Nominal pattern altitude will normally be 800' MSL when operating on Rwy 04R and 1,000' MSL when operating on Rwy 04L.

(3) Runway change procedures. When prevailing conditions (wind, moon, etc.) require a runway change, the following procedures will be affected:

(a) All aircraft will land on the runway or depart the HOLF operating area.

(b) All aircraft will report, "Ready for runway change."

(c) The aircraft closest to the new departure threshold will call for take off on the new runway. As an example, when a change from runway 04 left to runway 22 right has occurred: "Atlas 06, take off (new) runway 22 right."

(4) Procedures for transitioning from one parallel runway to another parallel runway. Aircraft wishing to transition from one parallel to the other runway may do so if they are the only aircraft in the pattern. Aircraft desiring to transition from one parallel runway to the other while other aircraft are operating at the HOLF shall depart the pattern and reenter via established reporting points (52 Area Crossroads/ Pt. Yankee).

(5) Departure procedures. Aircraft departing the HOLF shall broadcast intentions and ensure they give way to pattern aircraft as they effect transition to the designated departure point (52 Area Crossroads/Pt. Yankee). Aircraft departing from Rwy 04L at night for 52 Area will transit downwind, south of Camp San Mateo, and clear of the pattern before turning toward 52 Area Crossroads.

---

4. Night Operations

Night operations are authorized at the HOLF. Patterns shall be flown as described above; however, no more than two (2) aircraft may operate at one runway at a time between sunset and sunrise. No more than four (4) aircraft may operate at HOLF parallel runways (2 at Rwy 22L/04R; 2 at Rwy 22R/04L) at a time. Night Vision Goggle (NVG) operations at the HOLF are authorized. However, simultaneous night aided and unaided operations are not authorized. Aided operations will have priority use. Aircraft shall be lighted per paragraph 4011 in this chapter.

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5. HOLF Transitions

HOLF transitions have been developed to facilitate transit from established transit routes (Offshore, Basilone, and Case Springs as described in paragraph 4010 and figure 4-5 in this chapter) to the HOLF. The following transitions, as described below and depicted in figure 4-6, shall be flown by all aircraft transiting to the HOLF.

a. Ocean HOLF Transition. Transit from the Offshore Route to a point on the shoreline one (1) NM south of the San Onofre Nuclear Generating Station (vicinity of 495 915), north to Basilone Road, east along Basilone Road to San Mateo Road (52 Area Crossroads), and north along San Mateo Road to the HOLF. Aircraft shall transit from 52 Area Crossroads, which is the established communication switch point to HOLF common (249.9), inbound to the HOLF at 1,400' MSL. Aircraft departing the HOLF shall depart at or below 900' MSL via 52 Area Crossroads.

Caution: Cross R-207A at or above 1,000' AGL.

b. Basilone HOLF Transition. Transit from the Basilone Route to LZ 53 (vicinity of 559 932), west to San Mateo Road (52 Area Crossroads), and north along San Mateo Road to HOLF. Aircraft shall transit from 52 Area Crossroads, which is the established communication switch point to HOLF common, inbound to the HOLF at 1,400' MSL. Aircraft departing the HOLF shall depart at or below 900 ft MSL via 52 Area Crossroads.

Caution: Cross R-207A at or above 1,000' AGL.

c. Case Springs HOLF Transition. Transit from the Case Springs Route to Pt. Yankee at the intersection of the Charlie, Delta, and Yankee Training Areas (vicinity of 557 035), then southwest via San Mateo Canyon to HOLF. Aircraft shall transit from Pt. Yankee, which is the established communication switch point to HOLF common (249.9). After crossing Pt. Yankee, transit at 1,400' MSL inbound to the HOLF. Aircraft departing the HOLF shall depart at or below 900' MSL via Pt. Yankee.

NOTE: Unless otherwise instructed by LONGRIFLE, aircraft shall fly right side right-of-way while flying the HOLF transitions (i.e., left to left aircraft pass).

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6. Communications Procedures

Aircraft shall employ the following communication procedures when operating at the HOLF.

a. Aircraft shall report the following points to LONGRIFLE for communication switch to HOLF common frequency of UHF 249.9.

(1) 52 Area Crossroads is defined as the intersection of Basilone Road and San Mateo Road (vicinity of 508 955).

(2) Pt. Yankee is located at 557 035.

b. HOLF pattern position calls shall be made as required, dependent upon the numbers, types, and operations being conducted. However, a mandatory call shall be made on HOLF common under the conditions listed below.

(1) When entering from an entry point, report position and intentions. For example, "HOLF traffic, Atlas 06, at 52 Area Crossroads inbound for HOLF Rwy 22L."

(2) When departing the HOLF for an exit point, report intentions and direction of departure. For example, "HOLF traffic, Atlas 06 is departing via the Rwy 22L downwind for Pt. Yankee."

(3) When abeam for landing, report abeam and intended runway. For example, "Atlas 06 is abeam for an autorotation to Rwy 22L."

---

7. Concurrent HOLF/HLZ/ CALSITE/ TERF Route Operations

When simultaneous operations are in progress at the HOLF and the HLZ, the following deconfliction procedures will be effected.

a. Runway 22 L/R. Aircraft flying a right pattern shall remain clear of, and give way to aircraft operating at the HLZ.

b. Runway 04R/L. Aircraft flying a left pattern shall remain clear of, and give way to aircraft operating at the HLZ.

c. HLZ. Aircraft shall monitor HOLF common (UHF 249.9) when HOLF operations are in progress. HOLF and HLZ position calls shall be made as required. Expect HLZ aircraft to fly a northwest pattern to remain within Base boundaries. Non-participating aircraft are restricted from operating at CALSITES 13 and 14, LZs 62 and 63, DZ San Mateo, and in the Bravo One and Two Training Areas, unless scheduled through LONGRIFLE.

d. Night simultaneous HLZ/HOLF operations are not authorized.

e. LONGRIFLE will inform HOLF traffic when the Case Springs TERF Route is in use.

---

8. Aircraft Transit Routes

Helicopters transiting or operating in the vicinity of the HOLF, when HOLF operations are in progress, shall transit via Talega Canyon, or remain at or above 1,900' MSL when transiting San Mateo Canyon. LONGRIFLE will provide advisories to HOLF aircraft for all conflicting traffic.

---

9. Concurrent HOLF/ Fixed-wing Operations

HOLF helicopter operations will be restricted to, at or below 1,400' MSL when fixed-wing aircraft are operating in the vicinity of San Mateo Canyon. Fixed-wing aircraft will operate at or above 2,500' MSL. HOLF operations are not authorized when the IP Bridge fixed-wing CAS route is in effect.

---

10. Weather Minimums

The following weather minimums are in effect during HOLF operations. Using these guidelines, aircraft commanders will determine acceptable weather.

a. Day/unaided. 800/2

b. Simultaneous operations at HOLF and HLZ. 800/2

c. Night/Aided. 1000/3

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11. Visual Reference Points

For visual reference, the points listed below may be used to help determine weather conditions.

a. The lighted Northern Area Impact Control (NAIC) Tower at 513 975 is one (1) mile from the HOLF.

b. The 62 Area is two (2) miles from the HOLF.

c. The power lines in San Mateo Creek, grid 4696, are three (3) miles from the HOLF.

4014. HELICOPTER LANDING ZONES

1. Administrative Landing Zones

Each cantonment and major command area on Camp Pendleton will maintain a standard administrative helicopter Landing Zone (LZ) for use by MEDEVAC, VIPs, command, or routine administrative flights. Specific LZ descriptions and instructions can be found in BO P3700.1. Please note that certain LZs can support UH-1 operations only.

2. Administrative Landing Zone Marking

Each LZ shall be marked by an equilateral segmented triangle with 58" sides, and the letter "H" which will point to magnetic north. The area number will be centered on or below the base. The triangle, letter "H", and numbers shall be composed of white painted concrete or of white paint on permanent concrete, asphalt, or grass surface at least 100 feet in diameter, if possible.

3. Administrative Landing Zone Maintenance

Area commanders are responsible for the marking and maintenance of helicopter LZs in their areas. Special attention should be directed toward keeping the concrete painted white, the numbers clearly visible, and the surrounding vegetation well trimmed.

4. Obstructions

Tall poles, wires, or other elevated obstructions will not be erected in the vicinity of Camp Pendleton's helicopter LZs without prior approval of the Camp Pendleton Airspace Manager at (760) 725-8183. LZs should also be kept clear of tents, vehicles, or other objects easily moved or damaged by rotor wash.

5. Restrictions

Helicopters are authorized to land in training areas, as required, to support tactical operations and exercises; however, the using unit shall comply with the restrictions depicted on the Camp Pendleton Military Installation Map, and per chapters 1 and 2 of this Manual.

HOLF
Ingress/Egress

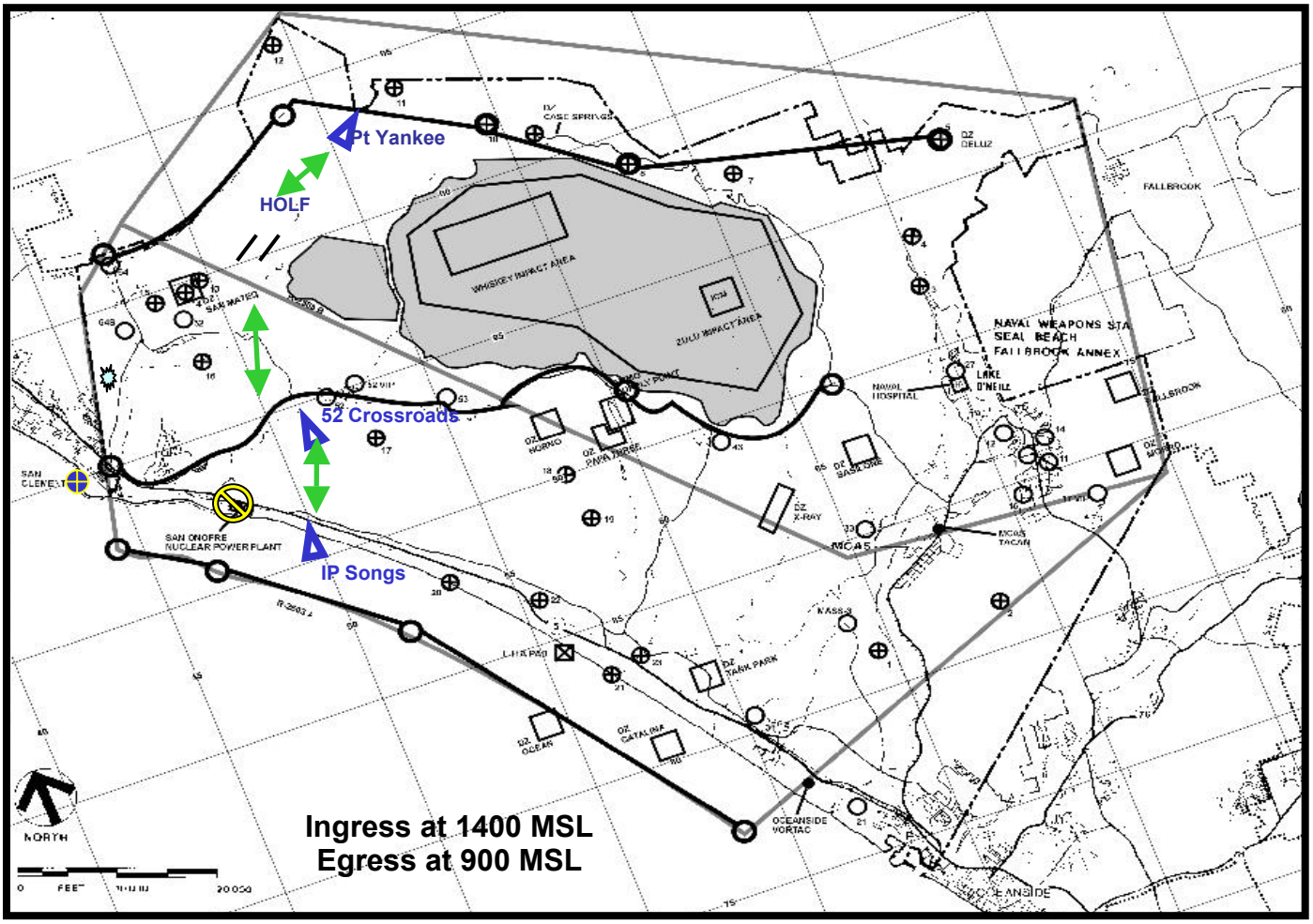

Figure 4-6

6. Landing Zones The routine use of any Camp Pendleton helicopter LZ shall be scheduled in advance through the Range Scheduling Office, just as any other range or training asset. Listed below are the current helicopter LZs located on Camp Pendleton. Camp Pendleton LZs are depicted on the Camp Pendleton Military Installation Map.

LANDING ZONE	LOCATION	DESCRIPTION
LZ-1 VIP	710 855	Northwest corner of 11 Area Parade Field adjacent to MCB HQ (Bldg. 1160); limited to UH-1 VIP flights only; unmarked
LZ-11	710 853	East side of 11 Area Parade Field adjacent to 1st MarDiv HQ (Bldg. 1133); unmarked
LZ-12	705 864	Knoll east of Bldg. 1244 adjacent to tennis court; limited to UH-1 only; unmarked
LZ-14	715 863	Located near Bldg. 1491 in front of 1st FSSG HQ; limited to UH-1 only
LZ-16	700 847	H&S (MCB) Motor Pool parking lot, south of the 13 Area BOQ (Bldg. 1341); unit requesting use shall coordinate with PMO and provide security to ensure the area is clear of POVs prior to operations
LZ-17 VIP	721 839	North of San Luis Rey VIP Quarters; limited to VIP use only
LZ-21 VIP	626 765	Located on 21 Area Parade Deck; limited to UH-1 and CH-46 only
LZ-21	623 767	North end of football field; over flight below 300' AGL of Least Tern/Snowy Plover nesting area (north of football field) is prohibited during nesting season, 1 March - 15 September; unmarked
LZ-22	678 839	Northeast side of Bldg. 22172; across from chapel
LZ-27	697 893	East side of Naval Hospital
LZ-31	605 806	Blacktop in front of Edson Range Receiving Barracks; west of Alpha Range
LZ-33	654 857	Camp Margarita Football Field; east side of Bldg. 33458
LZ-41	590 832	South of football field; next to Stuart Mesa Road

LANDING ZONE	LOCATION	DESCRIPTION
LZ-43	620 896	¼ mile northeast of gas station on east side of Las Pulgas Road; limited to UH-1s only
LZ-52	519 950	Lower parade grounds, west side of Basilone RD; unmarked
LZ-53	554 938	Blacktop ¼ mile north of "E" Club
LZ-62	485 985	Eastern-most parade deck
HLZ Heavy Lift Pad	487 998	Hilltop adjacent to San Mateo Water Tank, lighted pad (with windsock), LHA (lighted) and LPD markings, marked external weight return areas. Keys to open building to operate lights are maintained by MAG-16 and MAG-39 Operations. The master keys are maintained at Range Operations, MCB, Camp Pendleton. After completion of training, lights shall be switched off and the building door secured. NOTE: Aircraft shall return weights to the designated external weight area.
LZ-63	469 992	Located near gas station; unmarked
LZ-64	472 015	North side of hardtop road; near Camp Talega main entrance
LZ Red Beach	563 845	Beach area between LHA Pad and VSTOL Pad #1; unmarked
LZ Viewpoint	5454867	Concrete pad in vicinity of Horno Canyon; west of I-5 Freeway

4015. CONFINED AREA LANDING SITES (CALSITES)

1. General Camp Pendleton maintains a variety of CALSITES for helicopter pilot training and landing practice. Units exercising in the vicinity of any CALSITE will ensure sites are not disturbed, no obstruction is left in the area, and no foxholes or other entrenchments are constructed at these locations. Pilots are requested to report CALSITE maintenance conditions to LONGRIFLE.

2. Reference Specific descriptions and CALSITE depictions are provided in BO P3700.1.

3. Scheduling Helicopter use of CALSITES shall be scheduled in advance with the Range Scheduling Office, and will be strictly controlled by LONGRIFLE. Clearance will be granted by LONGRIFLE to use available CALSITES. Helicopters flying frag missions in support of ground units will be cleared to contact their supported unit after initial call-up and check-in with LONGRIFLE. Upon completion of mission frag requirements (or pilot landing practice) at CALSITE locations, the helicopter flight leader shall report, "mission complete" to LONGRIFLE (prior to departing Camp Pendleton Restricted Airspace).

4. Location Camp Pendleton CALSITE locations and descriptions are provided below.

SITE	COORDINATES	LAT/LONG
1	644 811	33 16'01"N; 117 22'51"W
2	676 814	33 16'09"N; 117 20'45"W
3	697 929	33 22'25"N; 117 19'24"W
4	698 926	33 22'15"N; 117 19'21"W
5	725 967	33 24'15"N; 117 17'24"W
6	closed	Closed
7	664 980	33 25'09"N; 117 21'34"W
8	634 988	33 25'39"N; 117 23'39"W
9	608 009	33 26'40"N; 117 25'13"W
10	596 018	33 27'11"N;117 26'01"W
11	577 035	33 25'15"N; 117 25'25"W
12	544 071	33 30'03"N; 117 29'21"W
13	495 003	33 26'19"N; 117 32'27"W
14	486 999	33 25'15"N; 117 33'04"W
15	477 996	33 25'58"N; 117 33'40"W
16	486 967	33 24'25"N; 117 33'03"W

SITE	COORDINATES	LAT/LONG
17	521 928	33 22’20”N; 117 30’49”W
18	571 904	33 21’00”N; 117 27’34”W
19	582 887	33 20’00”N; 117 26’48”W
20	534 880	33 19’43”N; 117 29’54”W
21	574 827	33 16’51”N; 117 27’16”W
22	557 864	33 18’52”N; 117 28’25”W
23	580 841	33 17’39”N 117 26’57”W

4016. AV8-VERTICAL SHORT TAKEOFF AND LANDING (VSTOL) SITES

1. General Camp Pendleton AV-8/VSTOL pads for VSTOL operations are listed below. Both are constructed of AM-2 matting. BO P3700.1 provides specific descriptions and depictions.

SITE	COORDINATES	LAT/LONG
AV-8 VSTOL Pad 1	572 835	33 17’20”W; 117 27’30”N
AV-8 VSTOL Pad 2	601 821	33 16’30”W; 117 25’50”N

2. Scheduling Training operations on these VSTOL pads by either AV-8 Harriers or rotary wing aircraft shall be scheduled in advance with the Range Scheduling Office.

3. Patterns AV-8 patterns associated with operations at these sites are depicted in figure 4-7.

4017. AV-8 ROAD OPERATIONS

A designated section of old Highway 101 is available for AV-8 and helicopter road operations. The Highway 101 AV-8 roadway operation area is located at midpoint 564 852.

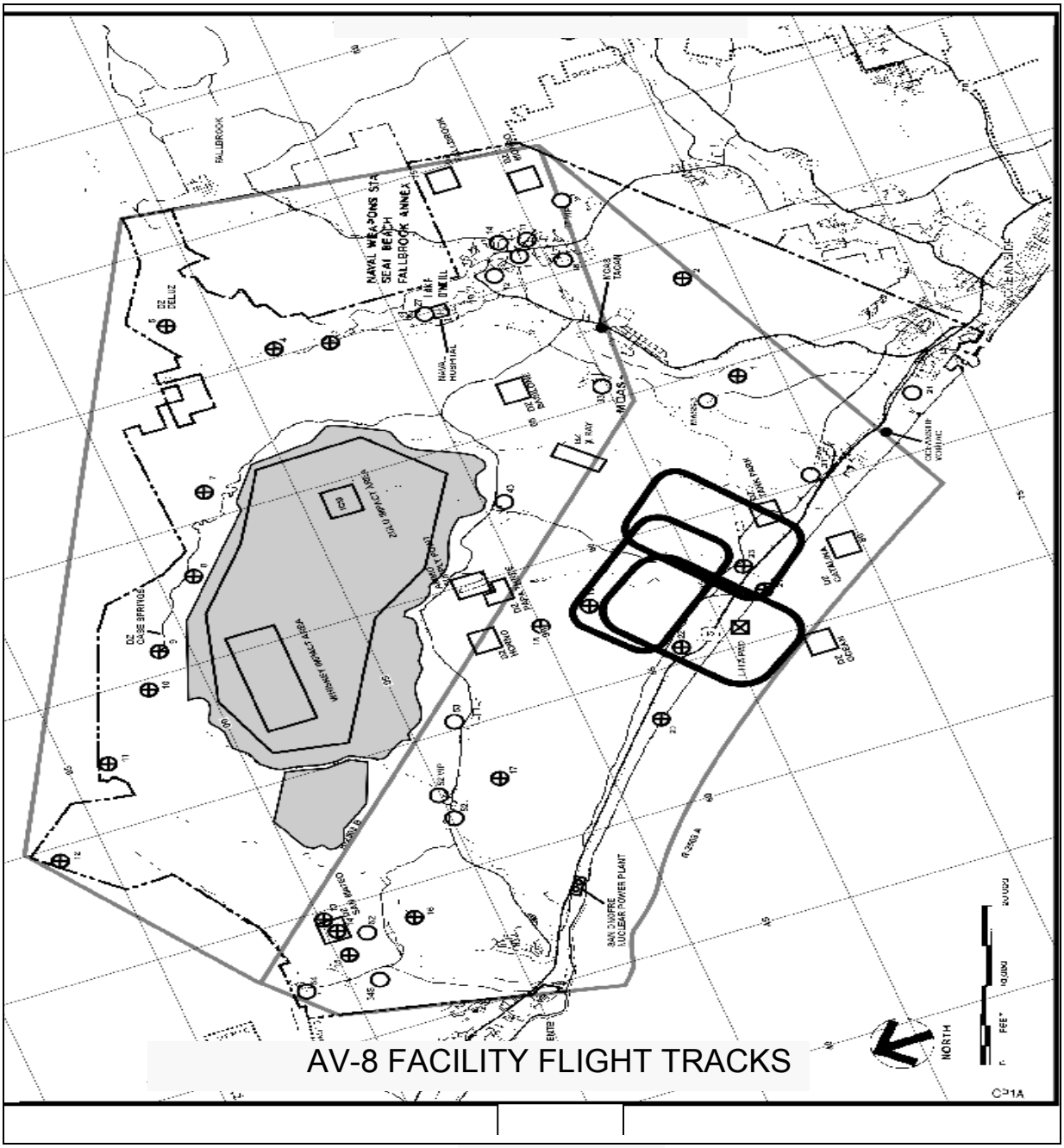

Figure 4-7

4018. SIMULATED FLIGHT DECKS

FLIGHT DECKS	DESCRIPTION	COORDINATES
Extended LPD	Marked on HLZ	479 996
LHA spots (3)	Marked	479 996

4019. DROP ZONES

1. General Parachute and paradrop operations include dropping or releasing personnel, cargo, vehicles, illumination, or any item from an aircraft for descent to the ground.

2. Scheduling Prior to conducting any parachute or paradrop operations, the unit desiring to conduct such training shall coordinate and schedule (in advance) the airspace and the appropriate Drop Zone (DZ) requirements needed to support the operation. Advance scheduling of airspace and DZ requirements shall be done through the Range Scheduling Office.

3. Restrictions The following restrictions and safety precautions apply to all parachute and paradrop operations at Camp Pendleton.

a. The Drop Zone Safety Officer (DZSO)/Drop Zone Safety Team Leader (DZSTL) shall perform duties per MCWP 3-1.5.7. The DZ Commander will have the final approval authority for drops based on the wind condition. The DZ Commander will suspend or cancel drop operations if, in his judgment, wind direction or wind gusts in combination with aircraft position make the drop unsafe.

b. During static-line parachute operations, the winds on the surface will not exceed 13 knots, or 30 knots through the jump altitude. When utilizing Ram-Air parachutes, either static-line deployed or manually deployed, the winds on the surface will not exceed 18 knots; the winds through the jump altitude are unlimited.

c. The DZ Commander must maintain two-way radio communication with the drop aircraft, and with LONGRIFLE. In the event of radio communication failure, a single red smoke grenade, or other established visual signal, will be used to indicate “NO DROP,” and operations shall be suspended until air-ground communication is reestablished.

d. No drops will be made from altitudes exceeding the height restrictions of Camp Pendleton Restricted Airspace, unless coordinated in advance with the Base Airspace Manager at (760) 725-8183. Within R-2503B, the maximum drop altitude is 15,000' MSL; in R-2503A, the maximum drop altitude is 2,000' MSL. If a training requirement exists for parachute/ paradrop operations above these altitudes, advanced coordination and approval authority will be required from the Federal Aviation Administration (FAA). In this case, notification and coordination with the Camp Pendleton Airspace Manager shall be made at least ten (10) working days prior to the desired paradrop operation.

e. All High Altitude High/Low Opening paradrops shall be conducted in VFR conditions to include aircraft transit/pattern and jumper descent to DZ.

f. Cargo drops will not be made at an altitude above 3,000' AGL in R-2503B or 2,000' MSL in R-2503A, unless coordinated with the Base Airspace Manager at (760) 725-8183. A cold pass is required prior to dropping cargo.

g. Units dropping cargo into DZ Basilone or DZ Tank Park shall also coordinate with PMO at least three (3) working days prior to the drop to coordinate road closings. The Range Operations Division shall coordinate with PMO on the day of the event to request PMO presence 15 minutes prior to time on target (TOT). PMO shall dispatch MPs to the rally point coordinates (Grid 674 866 for Basilone and 592 820 for Tank Park), with a Range Inspector, and await a request from LONGRIFLE to establish the road blocks (approximately 5 minutes prior to TOT). In the event an aircraft is not on schedule, and will be more than 15 minutes late, PMO will be released pending recall when a revised TOT is established.

h. Parachute and paradrop operations will be conducted in designated DZ areas only as established by the Director, Range Operations Division. Requests for parachute/paradrop operations in areas other than established DZs will require advance approval from the Director, Range Operations Division; and shall be coordinated in advance with the Range Scheduling Office, and Airspace Manager.

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4. Near Water Operations

Near water is defined as any parachute operation taking place where a body of water is located. A water obstacle is any body of water (for example, a lake, pond, river, stream or canal) that has a depth of four feet or more, is forty feet wide or wider, and is located within one thousand meters from any edge of the surveyed or tactically assessed drop zone.

a. A safety boat shall be available in the water, with the motor running during all near water operations. At a minimum, there shall be a two (2)-man crew operating each boat, which will be equipped with a radio monitoring the drop zone control frequency. At least one (1) man in the safety boat shall be a qualified parachutist and both shall be, at minimum, CWS-1 swimmers. The safety boat and its crew fall under the direct control of the drop zone commander.

b. All parachutists will wear B-7 or UDT vest life preservers whenever the aircraft is required to pass over a large body of water enroute to the drop zone, or near water parachute operations as defined above.

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5. Procedures The following control procedures will apply to all parachute and paradrop operations conducted on this Base.

a. The DZ Commander shall be physically located in the DZ. Prior to positioning within the DZ, the DZ Commander shall contact LONGRIFLE to receive a DZ Safety Brief. At this time, the DZ Commander will also provide LONGRIFLE with a brief summary of the training scenario to be used, to include type aircraft, proposed start and stop times, and the type of personnel and equipment to be dropped.

b. All aircraft entering Camp Pendleton Restricted Airspace for participation in parachute/paradrop operations shall first check-in with LONGRIFLE. After clearance into the airspace, LONGRIFLE will pass control of the aircraft to the DZ Commander.

c. Because DZs Basilone, Fallbrook, and Morro Hill are located within MCAS, Camp Pendleton Class D Airspace, a different control procedure will be used for parachute/paradrop operations scheduled within DZ Basilone. All aircraft conducting drop operations at this site will be directed by LONGRIFLE to contact the MCAS Air Traffic Control Tower, when the MCAS is open, for clearance and positive control prior to beginning DZ operations. The MCAS Air Traffic Control Tower will provide clearance authority for the aircraft to begin drop operations, and pass control of the aircraft to the DZ Commander. When the MCAS is closed, LONGRIFLE will pass control of the aircraft to the DZ Commander. An alternate pattern is available for large aircraft (i.e., C-141) conducting paradrops at DZ Basilone designed to avoid over flight of Camp Pendleton impact areas. If this pattern is desired, coordinate with LONGRIFLE in advance.

d. Assignment of a qualified military medical support person is mandatory as part of the DZ crew.

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5. Drop Zones A listing of all DZs within the Camp Pendleton area is provided below.

PARACHUTE DROP ZONES

DROP ZONE	TRAINING AREA	ELEV	GRID	HAZARDS
Aliso	AFA 21	460	6509 9081	Zulu Impact Area
Basilone	Kilo One	350	6642 8770	Water

DROP ZONE	TRAINING AREA	ELEV	GRID	HAZARDS
Case Springs	Echo	2,100	6177 0072	Water
Catalina	Ocean		5742 8070	Water
DeLuz	Hotel	730	7202 9619	Large rocks, tree line
Fallbrook	Juliett	510	7463 8685	Tree, gorge
Horno	Papa Three	625	5758 9158	
Ocean (4-day notice)	Ocean	N/A	5442 8270	Water
Papa Three	Papa Three	420	5940 9065	Water, dry wash w/trees, power line
Tank Park (Helos only)	Oscar Two	250	5942 8270	Power line
Wild Eagle	Adjacent to Zulu Impact Area	460	6509 9081	Impact area, trees
X-Ray	X-Ray Impact Area	730	6322 8640	X-Ray Impact Area

4020. AIRCRAFT REFUELING SITES

1. Sites The sites at established training facilities and/or within training areas, approved aviation refueling sites, are listed below and on the following page.

SITE	LOCATION	ENVIRONMENTAL CONSTRAINTS	REMARKS
LHA	561 847	Stay on the LHA Pad; vernal pools in close proximity	

SITE	LOCATION	ENVIRONMENTAL CONSTRAINTS	REMARKS
LZ-21	624 765	Stay in the landing zone; near a rare plant area	
PAD-1	574 834	Stay in the landing zone; vernal pool in close proximity	
PAD-2	601 822	The site is near riparian habitat and rare plant area	Rearm approved
STOL-101	564 852	No special concerns	
LZ Viewpoint	548 869	Gnatcatcher habitat nearby; no brush removal/disturbance around site	
AFA-41	629 993	No disturbance to north; archaeological site	
AFA-40	638 989	No special concerns	
AFA-31	667 917	No special concerns	
AFA-22	668 880	No special concerns	
LZ-53	555 937	Stay on landing site; rare plant area in close proximity	

2. Constraints for all Refueling Sites

a. Use existing access roads to all sites.

b. Use only the existing disturbed areas/hard-stand at each site. No brush cutting or disturbance outside of the existing footprint is allowed.

c. No digging/grading is allowed at any site without approval from the Assistant Chief of Staff, Environmental Security.

d. Secondary containment for refueling operations will be constructed using sand bags or some other implement over which impermeable material is draped and secured.

e. No dirt piles or loose soil will be left at any site for any reason. This could present an "attractive nuisance" to the endangered Arroyo Southwestern Toad and/or Pacific Pocket Mouse.

f. All sites are to be left in their original condition after each refueling operation (no permanent tanks, containment berms, etc.).

g. Units choosing to use the designated sites will not be required to seek additional environmental approval.

h. Units shall obtain approval from the Assistant Chief of Staff, Environmental Security when refueling sites, not listed above, is requested.

4021. UNMANNED AERIAL VEHICLE (UAV) OPERATIONS

UAVs operating at Camp Pendleton shall remain within R-2503A and/or R-2503B unless accompanied by a chase plane. UAVs require operable transponders to operate within Camp Pendleton SUA. UAV operations shall not be conducted at Camp Pendleton unless positive two-way communication is established and maintained between the UAV operator and LONGRIFLE, and the UAV operations are conducted in VMC during the periods when LONGRIFLE is augmented by surveillance radar. All UAV operations at Camp Pendleton shall be coordinated with the Airspace Manager [(760) 725-8183], and scheduled per procedures outlined in chapter 3 of this Manual.

4022. CHAFF AND FLARES

Flares and chaff may be dropped within impact areas at or below 500' AGL; and no less than one nautical mile offshore at or below 500' AGL. Flares and chaff may not be dropped without approval from LONGRIFLE. Flares may not be dropped when the FDR is RED, during high wind conditions, or when directed by LONGRIFLE. Fixed-wing aircraft operating within the confines of Camp Pendleton airspace (and the assigned impact area) may not expend flares at an altitude greater than 500' AGL, unless previously coordinated with the Airspace Manager at (760) 725-8183.

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CHAPTER FIVE

MARITIME OPERATIONS

Overview

This chapter provides a general overview of maritime facilities and operations at Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
5000. Camp Pendleton Amphibious Assault Area (CPAAA)	5-3
5001. Camp Pendleton Amphibious Vehicle Training Area (CPAVA)	5-4
5002. Landing Craft Air Cushion (LCAC) Transit Lane	5-4
5003. Landing Craft Air Cushion (LCAC) Operations	5-5
5004. Del Mar Boat Basin	5-5

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CHAPTER FIVE

MARITIME OPERATIONS

5000. CAMP PENDLETON AMPHIBIOUS ASSAULT AREA (CPAAA)

1. General The CPAAA is an ocean area used for amphibious operations, simulated dive, glide, parachute operations, and simulated low-level bombing, simulated rocket fire and strafing, and free balloon operations.

a. No live ordnance may be expended in this area.

b. CPAAA is not an exclusive military use area.

2. Boundaries CPAAA is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 30’ 00”	117 degrees 45’ 00”
Along coastline to	117 degrees 35’ 30”
33 degrees 23’ 00”	117 degrees 40’ 20”
33 degrees 20’ 00”	
33 degrees 09’ 20”	117 degrees 28’ 30”
33 degrees 12’ 00”	117 degrees 24’ 30”
Along coastline to	
33 degrees 05’ 00”	117 degrees 19’ 00”
33 degrees 05’ 00”	117 degrees 45’ 00”
to point of origin	

3. Scheduling Guidelines for requesting CPAAA use are contained in FACSFACINST 3210.1. Units anticipating use of CPAAA shall forward requests to the Fleet Area Control & Surveillance Facility (FACSFAC, San Diego).

5001. CAMP PENDLETON AMPHIBIOUS VEHICLE TRAINING AREA (CPAVA)

1. General The CPAVA is an ocean area adjacent to the shoreline used for amphibious operations, simulated dive, glide, and low level bombing. It includes the LCAC Transit Lane. No live or inert ordnance may be expended in this area.

2. Boundaries CPAVA is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 23’ 00”	117 degrees 35’ 30”
33 degrees 12’ 00”	117 degrees 24’ 30”
33 degrees 09’ 20”	117 degrees 28’ 30”
33 degrees 20’ 00”	117 degrees 40’ 20”

3. Scheduling Submit requests for use of the CPAVA to the Range Scheduling Office up to ninety (90) days prior to the date the area is desired.

4. Cancellation The Range Scheduling Office shall be notified in writing upon cancellation of training. Verbal cancellations will not be accepted.

5002. LANDING CRAFT AIR CUSHION (LCAC) TRANSIT LANE

The LCAC Transit Lane is contained within the boundaries listed below.

LATITUDE NORTH	LONGITUDE WEST
33 degrees 15’ 40”	117 degrees 26’ 20”
33 degrees 12’ 50”	117 degrees 31’ 10”
33 degrees 12’ 30”	117 degrees 30’ 50”
33 degrees 15’ 20”	117 degrees 26’ 10”
to point of origin	

5003. LANDING CRAFT AIR CUSHION (LCAC) OPERATIONS

1. General LCACs are restricted in their ability to maneuver when departing from and returning to the ACU-5 ramp. This LCAC maneuverability restriction equates to plus or minus ten degrees from a line perpendicular to the surf zone.

2. Transit Lane Due to the LCACs high speed of advance, a clear LCAC Transit Lane extending a minimum of 4,000 yards seaward from the ACU-5 ramp (33-15.5N/117-26.3W) has been designated for LCAC line-up purposes. This exclusion area (in effect, an LCAC "driveway") is the only safe access for LCACs departing from and returning to the ACU-5 ramp.

3. Anchoring For LCAC safety purposes, it is imperative ships do not anchor within the LCAC Transit Lane. This exclusion extends seaward 4,000 yards, bearing 210 to 160 degrees true, from L33-15.5N/117-26.3W.

4. Environmental LCAC operations ashore and land operations shall be conducted per chapter 2 of this Manual. LCAC operations shall maintain a 1,000-foot seaward buffer zone from the Blue Beach/White Beach least tern/snowy plover nesting areas between 1 March and 15 September. Direct ingress from the LCAC ramp/facility is not affected by this buffer zone.

5004. DEL MAR BOAT BASIN

1. General

a. The Commanding General, MCB exercises command in all matters pertaining to the Del Mar Boat Basin, the government-owned beaches adjacent to it, the channel and channel entrance, and the restricted sea areas off the Del Mar outer breakwater.

b. The Assistant Chief of Staff, Operations and Training exercises general staff cognizance over the Del Mar Boat Basin Complex. The Assistant Chief of Staff, Operations and Training shall resolve "Priority Use" conflicts. All requests for use of the Del Mar Boat Basin will be addressed to the Range Scheduling Office.

c. The Assistant Chief of Staff, Operations and Training is designated as the authority for administrative control of, and in normal operations, is delegated the prime coordination responsibility for the Del Mar Boat Basin.

d. The 21 Area Commander is designated as the authority to oversee the operations of the Del Mar Boat Basin, and to ensure users adhere to the instructions contained in this chapter.

e. The normal hours of operation of the Del Mar Boat Basin are from 0730 to 1630, Monday through Friday, unless otherwise directed.

f. The maximum speed of a craft operating within the Del Mar Basin and channel waters shall not exceed 5 mph or safe wake speed.

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2. Normal Operating Area

The area for normal training operations, outside the Del Mar Boat Basin, where boats may be employed is limited to the area bounded by the harbor entrance to the south and from the northern boundary of Camp Pendleton land on the north, and three miles out to sea from the Camp Pendleton beaches. Justification to exceed the prescribed limits shall be included in the request for services.

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3. Training

Requests for use of the operations area, Del Mar Boat Basin, docks, or any other Del Mar Boat Basin facilities will be submitted in writing to the Range Scheduling Office at least seven (7) working days prior to the planned event.

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4. Fishing

a. No lobster traps, commercial or otherwise, will be set within the Del Mar Boat Basin or channel; nor within 750 feet of the jetty or groyne. Violations of this restriction will be reported to the Base Game Warden at (760) 725-3360.

b. Fishing boats will not be permitted within the Del Mar Boat Basin area.

c. Fishing is permitted on the north jetty during daylight hours only, except when precluded by military commitments.

d. State of California fishing regulations apply to all users. Both a state fishing license and a Base fishing permit are required for fishing.

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5. Restricted Sea Areas

a. Access to the area west of Bldg. 210536 is restricted to authorized personnel only. This includes the south groyne, the north boundary of the Oceanside Harbor, and Staging Area #2. Staging Area #2 may be used, upon written request to the Commanding General (Assistant Chief of Staff, Operations and Training), for training, and staging cargo and vehicles for exercises.

b. Children under 16 years of age are prohibited from traversing the north jetty unless accompanied by, and under the immediate supervision, of a responsible adult.

c. All navigational aids are off-limits to all personnel, except those personnel authorized to service, inspect, and maintain them.

d. Restricted sea areas include all of the water of the Del Mar Boat Basin entrance channel lying northerly of a line between a light on the north Del Mar jetty at latitude 33 degrees 12’ 20”, longitude 117 degrees 24’ 0”, and a light on the north Oceanside

Harbor groyne at latitude 33 degrees 12’ 30”, longitude 117 degrees 23’ 0”. Restricted sea areas are off-limits to all unauthorized personnel.

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6. Port of Refuge

a. Use of the Del Mar Boat Basin and channel as a port of refuge by small craft is authorized.

b. A vessel in distress will be provided all necessary assistance, within the capability of the Base, to prevent loss of life or property.

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7. Privately-Owned Boats and Small Craft

All authorized personnel operating a privately-owned boat within the Del Mar Boat Basin and channel waters will ensure boats or craft are properly outfitted and registered per applicable U.S. documentation regulations or state registration procedures, and BO P5000.2J.

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CHAPTER SIX

RANGE OPERATIONS

Overview

This chapter provides the responsibilities, safety requirements, and the policies and procedures associated with ground training operations at MCB, Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
6000. Range Operations	6-3
6001. Range Control Features	6-4
6002. Procedures for Range Check In/Out	6-6
6003. Authorization to Fire	6-7
6004. Contractor Operation and Maintenance of Training Systems	6-7
6005. Automated Target and Simulator Support	6-8
6006. Bivouacking on Ranges	6-8
6007. Medical Requirements	6-9
6008. Training Areas	6-10
6009. Conduct of Training	6-11
6010. Live-Firing in Training Areas	6-13
6011. Impact Areas	6-13
6012. Leased Areas	6-13
6013. Beaches	6-14
6014. Training Tanks (Swimming Pools)	6-14
6015. Rappel Towers/Dry Net Platforms	6-15
6016. Combat Towns	6-16
6017. Fortified Areas/Emplacements	6-17
6018. Gas Chambers	6-18
6019. Obstacle Courses	6-18
6020. Aircraft Mock-Ups/Hulks	6-19
6021. Heavy Equipment Training Area	6-19
6022. Fleet Hospital Operations and Training Command (FHOTC) Training Facility	6-20
6023. Field Medical Service School (FMSS) Training Facility	6-20
6024. Infantry Weapons	6-20
6025. Mines, Booby Traps, and Pyrotechnics	6-22
6026. Demolitions	6-23
6027. Non-Lethal Weapons	6-25
6028. Artillery and Tanks/AAV/LAV/Armored HMMWV	6-26
6029. Police of Tank/LAV/AAV, and Other Vehicle Crossings	6-27
6030. Training Area Roads	6-28
6031. Experimental Weapons Ordnance	6-30

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CHAPTER SIX

RANGE OPERATIONS

6000. RANGE OPERATIONS

1. Establishment

Ranges are established by the Commanding General, MCB, Camp Pendleton. This does not prohibit placing approved targets on certain existing ranges after observing all safety precautions and regulations, and coordinating with the Range Control Officer. Targets will never be placed in any dud-producing impact area without approval from the Range Control Officer, and escort by EOD personnel. Recommendations to improve ranges and facilities shall be submitted to the Assistant Chief of Staff, Operations and Training.

2. Maintenance

The Range Operations and Facilities Maintenance Divisions maintain ranges.

3. Operations

a. Operations and Training (O&T) range personnel or COMTS contractors are required to operate electrical targets or simulators on ranges equipped for that purpose. Times must be included on the request when operators are required. When electrical targets or simulators are not used, the ranges may be scheduled without operator support.

b. All ranges belong to the Commanding General, MCB, Camp Pendleton. When units are the primary users of a particular range, they do not inherit title to those ranges, and possess no authority to modify the nomenclature, purpose, or design of any range.

c. Range Operations Division (ROD) personnel are authorized access to all ranges and training facilities for the purpose of inspection, operation, or maintenance at all times. These personnel will not disrupt unit training unless necessary to perform their duties. Training units will not interfere with these personnel in the performance of their duties, even if the range or facility is in use.

4. Targets

a. The Automated Support Branch (ASB), Range Operations Division will furnish target material used for electrically operated targets (refer to paragraph 6005 in this chapter).

b. Targets for artillery and aircraft will be provided by, and positioned in the impact areas, by the Range Operations Division.

c. Using units will provide targets for machine gun qualification firing. Organizations will submit target plans, including mounting materials to the Range Scheduling Office with their range requests. Organizations will be responsible for picking up and returning all targets.

d. Engineer stakes or other hard material shall not be used to support targets.

6001. RANGE CONTROL FEATURES

1. Range Signs and Markers

Range signs and markers are placed on all ranges, mortar positions, and artillery firing areas (AFAs) to indicate firing lines, lateral limits, range number, and other information. Firing lines and lateral limits are not indicated at mortar or artillery firing areas. The signs and markers are described below.

a. Surveyed Monuments. A white concrete monument placed near the center of firing lines and AFAs.

b. Firing Line Markers

(1) Left. Small, white concrete monument

(2) Right. Small, red concrete monument

c. Fan Markers

(1) Left. 4’ x 4’ to 12’ x 12’, white and black checkerboard, square wood sign.

(2) Right. 4’ x 4’ to 12’ x 12’, orange and black checkerboard, square wood sign.

d. Range Number Signs. A sign and/or a flagpole bearing the range number, and the correct range regulations with special instructions listing data for each range.

e. Hearing Loss Signs. A sign warning users hearing protection devices are required.

f. Off Limits Signs. A sign warning the area is off-limits by order of the Commanding General, MCB, unless scheduled through the Range Scheduling Office.

g. Additional signs, self-explanatory in nature, announcing specific instructions or precautionary measures, will be posted on certain ranges, as deemed necessary by the Assistant Chief of Staff, Operations and Training.

2. Barricades and Range Guards

Either barricades or range guards shall block normal approaches to danger areas created by firing. Barricades, combined with appropriate warning signs, are adequate and range guards are not required except in special cases. Check for specific requirements in appendix C of this Manual.

a. Barricades. Barricades, when required, shall be provided by the Range Operations Division for all roads and trails leading into range areas. 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. A sign with letters three inches high stating, "Live-Firing in Progress, Keep Out" shall be attached to the cross member. The sign shall be clearly visible to anyone attempting to enter the range area.

(2) Permanent barricades consisting of heavy posts embedded on both sides of the road or trail, with a chain, or rope stretched between the posts. The lowest point shall be at least two feet above the ground. The sign [described in (1) above] shall be attached to the chain. Chains or cables shall be locked in place.

(3) Firing units shall ensure barricades are in place prior to firing. Specific requirements for each range are listed in appendix C of this Manual.

b. Range Guards

(1) Range guards shall be posted to prevent entry into the danger areas that cannot be observed, or which do not lie within the established impact areas. Normally, range access roads are not within this category and do not require a range guard, except as described in appendix C of this Manual.

(2) Artillery firing units shall post range guards on established roads when the area "E" of the surface danger zone diagram (refer to directives in the MCO 3570 series) actually covers the road involved. Traffic on these roads shall be halted during actual firing. Delays must not exceed 10 minutes at any one time.

(3) OICs/RSOs may post additional range guards, as necessary, to ensure safety. The arbitrary blocking of roads or the denial of access to other than a danger area is not permitted.

(4) Range guards shall be provided with a means of communication by the unit posting them.

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3. Warning Flags and Warning Lights

During daylight hours, the warning flag shall be raised whenever firing is in progress. During hours of darkness, a blinking red light, facing to the rear of the range, shall be in place. LONGRIFLE will place the unit in check-fire until lights are in place during night fire. The flag is in an ammo can, along with the specific facility regulations, attached to a pole at each training facility. The light will be issued by LONGRIFLE to the RSO or unit representative prior to range use. Contact LONGRIFLE at (760) 725-4604/3974 to coordinate light checkout. Units on ranges adjacent to the Zulu Impact Area; including Ranges 227, 407, 407A/B, 408 and MP4; shall mark their forward position, during night operations, with an Infrared (IR) Strobe, IR chem-

light, or a visible light source. Once air assets know of, and have positively identified the forward position, LONGRIFLE may contact the unit to secure the IR light source.

6002. PROCEDURES FOR RANGE CHECK-IN/OUT

1. Briefs

The RSO (including FACs) must participate in a "Hot Brief" with LONGRIFLE via radio on frequencies: UHF 301.9, 249.9, 255.2; VHF 123.2; FM 30.35 or 49.00. Only the Director, Range Operations Division may approve alternate communication methods. The RSO shall identify him/herself as the RSO (which will be verified in LONGRIFLE's database), then confirm numbers of participating personnel, types of weapons to be fired, types of ammunition to be fired, and presence of safety vehicle, etc.

2. RSO Box

A 60mm ammunition can, which reads, "Range Regs RSOs Only," has been attached to a pole at each range, drop zone, rappel tower, mortar position, and artillery firing area. In the ammunition can, the RSO will find a red flag and a copy of the regulations for that range/facility.

3. SDZ Diagrams

Required SDZ diagrams must be submitted by FAX [(760) 725-4090] or delivered to the Range Scheduling Office at Bldg. 2399, MCAS, Camp Pendleton, at least seven (7) working days in advance of events.

4. Clearance

Once all regulations and safety requirements have been satisfied, LONGRIFLE will authorize the unit to go hot.

5. Securing from Firing

a. The unit will notify LONGRIFLE thirty (30) minutes prior to going cold. LONGRIFLE shall dispatch a Range Inspector to the range to ensure proper policing of the range is accomplished. The RSO is not released from his responsibilities until cleared by the Range Inspector.

b. Ranges will be inspected the morning following night firing exercises (FIREXs). The RSO is not released from his responsibilities until cleared by the Range Inspector.

c. The RSO and OIC of Firing shall be physically present at the range or firing position whenever training is in progress. If it becomes necessary to change RSOs, both old and new RSOs must be physically present at the range or firing position to conduct a face-to-face relief, and the new RSO must follow the procedures described in paragraph 6002.1 in this chapter.

d. The RSO shall ensure all ammunition found on a range, prior to beginning an evolution or at any time during training, is reported to LONGRIFLE immediately.

6003. AUTHORIZATION TO FIRE

Firing shall not be conducted unless it has been scheduled with the Range Scheduling, Office, and authorized by LONGRIFLE.

6004. CONTRACTOR OPERATION AND MAINTENANCE OF TRAINING SYSTEMS (COMTS) RANGES

1. Background

The USMC Contractor Operation and Maintenance of Training Systems (COMTS) Program supports five ranges (Ranges 117A, 215A, 218A, 223B, 409A) aboard Camp Pendleton. Under this program, civilian contractors operate and maintain live-fire ranges. The Commander, Marine Corps System Command (ComMarCorSysCom) funds COMTS contracts after tasking by the CG, Marine Corps Combat Development Command (MCCDC). ComMarCorSysCom has authorized the Naval Air Warfare Center Training System Division (NAWCTSD) to enter into contracts with civilian contractors to provide COMTS support at Marine Corps installations.

2. COMTS Range Scheduling

Units desiring to train on COMTS ranges shall schedule their training through the Range Scheduling Office. After a unit's scheduling request is approved, the unit must contact the Automated Support Branch (ASB) at (760) 725-4446/4805 at LEAST FOURTEEN (14) WORKING DAYS prior to the planned training to coordinate their training scenarios and arrange contractor time for training scenario development. The Range Control Officer will approve all scenarios. The ASB will reconfirm support requirements with the unit a minimum of two (2) working days prior to the unit actually using the range. The range contractor will provide range operators for the number of hours requested on the scheduling request, up to a total of 18 hours a day. Units should list the times they desire to go hot and cold on the start and stop boxes of the TAR, and annotate range occupation times in the comment section of the TAR. Requests to extend training time on a COMTS range, received by the Range Control Scheduling Office, less than 48 hours prior to actual range usage cannot be approved due to contractual limitations.

3. Range NCOs

Range NCOs from the ASB have been assigned to the COMTS ranges and the MOUT Facility (R-131) to assist RSOs. The Range NCO shall check the RSO <u>in and out</u> of the supported ranges, provide a range safety brief and ensure the civilian range contractor (if applicable) provides training support per the using unit's original scheduling request and scenarios. The presence of a Range NCO DOES NOT relieve the RSO of his assigned responsibilities in this Manual. The Range NCO is not authorized to extend the using unit's training time on any range. Requests for training time extensions shall be forwarded to the OIC, ASB via the Range Scheduling Office, per paragraph 6004.2 in this chapter. Questions regarding the scheduling of and training at COMTS ranges should be referred to the Range Scheduling Office.

Questions and comments relative to the COMTS contractor performance or ASB Range NCOs should be referred to the OIC, ASB at (760) 725-5105.

6005. AUTOMATED TARGET AND SIMULATOR SUPPORT

1. Scheduling Units desiring automated target and simulator support on non-COMTS ranges shall submit a TAR to the Range Scheduling Office. When the scheduling request is approved, the unit shall contact the Automated Support Branch (ASB) at (760) 725-4446/4805 at LEAST FOURTEEN (14) WORKING DAYS prior to the planned training event to coordinate training scenarios. The ASB SNCOIC will reconfirm support requirements with the using unit a minimum of two (2) working days prior to the planned training event.

2. Operators When the unit has properly scheduled its requirements through the Range Scheduling Office, the ASB shall provide operators to use the Portable Infantry Target System (PITS), and artillery or machine gun noise simulators. PITS operators are not normally provided to units who have a PITS through a Combat Visual Information Center-Supply account. However, the ASB may provide PITS operators to these units when their operator requirements exceed their internal capability. Additionally, the ASB will provide PITS operator instruction through a civilian contractor at the unit's request. Requests for PITS operator instruction may be coordinated directly with the SNCOIC, ASB at (760) 725-4446.

6006. BIVOUACKING ON RANGES

1. Observation Post Towers Bivouacking is <u>not</u> allowed on observation post (OP) towers.

2. Permitted Areas Bivouacking is allowed on ranges, training areas, and in artillery firing areas (AFAs) subject to the following conditions:

a. Ranges shall not be scheduled for the purpose of bivouacking only.

b. Units may arrive the night before firing. The RSO shall check out the range or AFA prior to occupation by the bivouacking unit.

c. Units may bivouac after firing, provided they are clear of the range or AFA before the arrival of the next scheduled using unit.

d. Bivouacking shall take place <u>only</u> behind the firing line or start point, and <u>only</u> behind the range that has been checked out.

e. Bivouacking in training areas shall not impede training at specific facilities unless those facilities have also been scheduled to support the bivouac.

f. Bivouac sites shall remain a minimum of 500 meters clear of all aviation facilities.

g. Bivouac sites in locations with the potential for inadvertent interlopers shall be marked at night.

3. Environmental

Bivouacking shall comply with the provisions of chapter 2 of this Manual.

6007. MEDICAL REQUIREMENTS

1. Corpsman and Safety Vehicle

A Corpsman with first aid equipment shall be present on all ranges, unless specifically excluded in appendix C of this Manual. He/she shall not be assigned any additional duties when live-firing is in progress. The term "live-firing" includes any caliber of ammunition, hand or rifle grenades, demolitions, rockets, or any other ordnance capable of producing an explosion or high rate of burning. Additionally, a vehicle designated as a safety vehicle shall be located at all ranges during live-firing. Whenever possible, this vehicle should be an ambulance. The presence of one hospital corpsman and one safety vehicle is the minimum requirement.

2. Training Areas

A corpsman and safety vehicle shall be present during unit training activities conducted within training areas and beaches.

3. Gas Chambers and Obstacle Courses

A corpsman or safety vehicle is not required to be present during training at gas chambers and obstacle courses; however, at least one individual who has basic first aid training, and the communication capability to request an ambulance, shall be on site at all times during gas chamber activities.

4. Range Series/ Complexes

When the 210 and 314 range series (210B, 210C, 210D, 210E; and 314, 314A, 314B, 314C), Ranges D-707/210B, and known distance rifle and pistol ranges [Ranges 102/103 (Wilcox Range Complex), Ranges 116A, 116B, 116C, and 116D (SEAL Complex), and Ranges 213/214 (Horno Range Complex)] are used by the same organization, the minimum medical personnel and safety vehicle requirements are listed below.

a. One corpsman and safety vehicle, provided two-way radio communication is maintained at all times.

b. Unimpeded vehicular access, provided two-way radio communication is maintained at all times.

6008. TRAINING AREAS

1. Training Areas

Field training and tactical exercises are conducted in the training areas, shown on the Camp Pendleton Military Installation Map, are delineated below.

Alpha One	Echo	Lima	Romeo One
Alpha Two	Foxtrot	Mike	Romeo Two
Alpha Three	Golf	November	Romeo Three
Bravo One	Hotel	Oscar One	Tango
Bravo Two	India	Oscar Two	Uniform
Bravo Three	Juliett	Papa One	Victor
Charlie	Kilo One	Papa Two	Yankee
Delta	Kilo Two	Papa Three	No Name

2. Scheduling

All training areas are assigned to the Commanding General, MCB, and will be scheduled through the Range Scheduling Office.

3. Training Area Provisions

Units scheduled to use training areas shall have a Camp Pendleton-certified RSO, a safety vehicle, and a corpsman; and will check in and out by radio with LONGRIFLE upon commencing and terminating training in their assigned area. In the initial contact, the following information shall be provided: unit identification, RSO's information, type of training, number of troops, type of ordnance by DODIC, and unit's location using a six digit grid coordinate. Maintain and monitor the appropriate LONGRIFLE safety net at all times and make hourly radio checks.

4. Unit Hikes

A corpsman and safety vehicle must accompany all hikes. Submission of TARs for unit hikes shall be accompanied by a route overlay no less than seven (7) working days before the planned hike. Overlays shall be submitted by FAX [(760) 725-4090] or hand-delivered to the Range Scheduling Office. The area commander shall approve any hikes passing through a cantonment area. Monitor the appropriate LONGRIFLE safety net at all times and make hourly radio checks. All changes to the hike route, while on the march, shall be approved by LONGRIFLE.

5. Environmental

Individual training exercises and events conducted in Camp Pendleton Training Areas shall comply with the provisions of chapter 2 of this Manual. Training areas containing sensitive environmental resources that must be protected are identified in figure 2-1. In many cases, the sensitive environmental resources are found in a very small portion of the training area. Refer to the Camp Pendleton Military Installation Map and the most current Environmental and Natural Resource GIS Data Map for specific locations of these resources; and refer to chapter 2 of this Manual for specific environmental restrictions when operating near these sensitive areas.

6009. CONDUCT OF TRAINING

1. General

Assignment to a training area does not include any range, AFA, OP, CALSITE, LZ, DZ, airspace, or other training facility (including combat towns) located within that area unless specifically requested and approved by the Range Scheduling Office. Therefore, personnel are not authorized access to these areas.

a. Training shall be conducted and supervised in a manner that avoids damage to facilities and utilities located within the training areas. Units exercising in the vicinity of any aviation training facility shall ensure sites are not disturbed, no obstruction is left in the area, and no foxholes or other entrenchments are constructed at these locations.

b. Training shall be conducted in a manner that avoids unnecessary damage to or destruction of natural resources (refer to chapter 2 of this Manual).

2. Housing Areas

Units using the Bravo Three, Hotel, India, Juliett, and Oscar One Training Areas will remain clear of Base housing areas at all times. Entry into the Juliett Training Area will not be made via any 17 Area housing access roads.

3. VSTOL Pads

Units training in the vicinity of Red Beach and Aliso Canyon shall remain clear of VSTOL pads in the areas. Vehicle traffic on these pads is prohibited.

4. Fighting Holes

Per chapter 2 of this Manual, fighting holes will be filled in upon the completion of each training exercise.

5. Trash

Trash will not be buried in any training area. The practice of stockpiling refuse for removal later is not permitted. Police, including trash removal, of training areas is the responsibility of the using unit.

6. Exclusive Use

Training areas are not exclusive use areas unless an LFAM exercise has been scheduled or special coordination with LONGRIFLE has been accomplished. Training areas are assigned based upon the number of personnel, equipment, environmental impact, and type of training conducted.

7. Training Near an ASP

A prohibited area, marked by signs, exists in the Papa Three Training Area surrounding the Ammunition Supply Point magazine area. It extends 500 meters out from the perimeter fence. Although troops are permitted in this prohibited area, the use of pyrotechnics of any type is prohibited.

8. Communication Wire

Any wire strung across ravines, between poles or trees, or at an altitude higher than 15 feet above ground level shall be clearly marked with white engineer tape or other highly visible materials. All communication wire laid by using units in training areas must be retrieved prior to departure.

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9. Livestock

If livestock (e.g., sheep, bison, etc.) are grazing in a location where they interfere with training, or are a hazard to troops, notify LONGRIFLE as soon as possible.

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10. Cantonment/ Built- up Areas

Use of cantonment, built-up, or cultivated areas for live-fire training (e.g., small arms fire, blanks, pyro, smoke, etc.), shall be approved by the Commanding General (Assistant Chief of Staff, Operations and Training), as well as the appropriate area commander.

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11. I-5 Freeway and Railroad Tracks

The I-5 Freeway, the rights-of-way immediately adjacent to highways (I-5 Freeway, old Highway 101, and El Camino Real), and the North County Transit District railroad tracks are off-limits to pedestrians, troop training, and all vehicular traffic. Underpasses and overpasses will be used when crossing railroad tracks or the I-5 Freeway. If it is necessary to cross the railroad tracks at ground level, the unit shall make prior arrangements to have a certified flagman at the railroad tracks by contacting the Marine Corps Base Transportation Management Office at (760) 725-8164. Units shall inform the Range Scheduling Office when all coordination has been made. Any fees incurred are the responsibility of the training unit. TMO's notification requirement is 48 hours.

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12. River Bottoms and Creek Drainage Areas

The entire length of the Santa Margarita River, from the Pacific Ocean to the Camp Pendleton boundary at grid 761 960, and the portion of the DeLuz Creek south of the 945-northing grid line is designated a restricted area. This area may be used for training only with special authorization from the Range Scheduling Office. Training in this area will be subject to the conditions listed below.

a. Troop movement on foot is authorized year round on established roads, trails, and crossings. Foot traffic off existing roads, trails, and crossings is authorized between 1 September and 14 March.

b. Tracked or wheeled vehicle movement in creek/river bottom areas is restricted to established road crossings.

c. Bivouacking in any riverbed is not authorized.

d. Personnel will not dig or fill in the riverbed, or disturb plants or wildlife in any manner.

e. These restrictions are necessary to prevent pollution of Camp Pendleton's main water source, and to protect endangered species that live in the riverbed (refer to chapter 2 of this Manual).

13. Road Crossings

Regulations pertaining to the use of tank/AAV and other vehicle crossings are contained in paragraph 6029 in this chapter. Personnel formations and troop movements, of any type, on hard-surface roads are prohibited unless coordinated in advance with LONGRIFLE and PMO. PMO's notification requirement is 48 hours [(760) 763-1219].

6010. LIVE-FIRING IN TRAINING AREAS

Live-firing in training areas is limited to established ranges, AFAs, LFAMs; and hunting approved per BO P5000.2. LFAM exercises shall be conducted per BO P3500.2 and this Manual.

6011. IMPACT AREAS

Detailed descriptions of the Zulu, Whiskey, Quebec, Edson Range, and X-Ray Impact Areas are provided in appendix B of this Manual.

6012. LEASED AREAS

1. Long-Term Lease Areas

Most of the long-term lease areas, located at the northwestern and southwestern edges of the Base, are available for military training. The long-term lease areas supporting agriculture should be avoided during periods of pesticide/herbicide application for health and safety reasons. The only portion of leased land not available for training is the southeastern portion of the agricultural area at the northern end of the Base. The dirt road around the perimeter of the agricultural area may be used for motorized or foot marches as long as the vehicle speed limit does not exceed 10 MPH. The purpose of this speed limit is to prevent dust clouds, which may cause damage to crops. This road is off-limits to tracked vehicles. Requests for use of this area shall be made in writing to the AC/S, Operations and Training (O&T) at least thirty (30) days in advance of the desired date (copy to AC/S, ES) in order to coordinate with the tenant.

2. San Onofre State Beach Lease Area San Onofre State Beach is a long-term lease area. It is available for military training and its use is encouraged. Requests for the use of San Onofre State Beach shall be made in writing to the Assistant Chief of Staff Operations and Training at least thirty (30) days in advance (copy to the Range Scheduling Office).

6013. BEACHES

Camp Pendleton beach locations are listed below.

BEACH	TRAINING AREA	NORTH LIMIT	SOUTH LIMIT	GEOGRAPHIC CENTER
Section A (Green)	N/A	460 938	468 933	463 936
Section B (Gold)	Uniform	530 883	561 845	546 864
Section C (Red)	N/A	561 845	570 831	564 840
Section D	Victor	570 831	585 811	578 821
Section E (White)	Victor	585 811	593 798	588 806
Section F	Victor	593 798	609 775	601 787
Section G (Blue)	N/A	609 775	619 762	614 767
Section H (Del Mar Rec)	N/A	619 762	624 753	624 752

NOTE: The authorized use of Uniform, Victor, and Oscar One Training Areas does not include beaches.

6014. TRAINING TANKS (SWIMMING POOLS)

TANK/POOL NUMBER	ASSIGNED TO/ SCHEDULED BY	DESCRIPTION
14116	MCCS Recreation Div.	50 Meters
33581	33 Area Commander	Non-standard

(Continued on next page)

TANK/POOL NUMBER	ASSIGNED TO/ SCHEDULED BY	DESCRIPTION
41305	41 Area Commander	Non-standard
43317	43 Area Commander	Tower, 50 Meters
53417	53 Area Commander	Tower, 50 Meters
62517	62 Area Commander	Tower, 50 Meters

6015. RAPPEL TOWERS/DRY NET PLATFORMS

1. General

a. Requirements for rappel towers and dry net platforms are listed below.

(1) A Rappel/HRST Master shall be present for all rappelling training.

(2) Helmets shall be worn at all times while training, including while climbing ladders, and on/in the towers.

b. Towers and platforms are listed below.

LOCATION	SCHEDULED BY	DESCRIPTION
666 859 (33 Area)	Range Scheduling	2 cliff rappelling positions; 1 simulated MOUT window entry; 1 inclined rappelling position, fast-rope capable
542 942 (53 Area)	Range Scheduling	1 cliff rappelling position; 1 inclined rappelling position; 2 helicopter rappelling positions; 1 inclined rappelling position, fast-rope capable
487 981 (62 Area)	Range Scheduling	1 cliff rappelling position; 1 inclined rappelling position; 2 helicopter rappelling positions; 1 inclined rappelling position, fast-rope capable

6016. COMBAT TOWNS (MOUT AREAS)

LOCATION	SCHEDULED BY	DESCRIPTION
678 879 (25 Area)	Range Scheduling	Village; provides for instruction in MOUT fighting techniques; ideal objective during field training exercises
510 949 (52 Area)	Range Scheduling	Unsophisticated; small village for instruction in basic MOUT fighting techniques; 2 machine gun simulators. Due to structural integrity shortcomings, requests will be approved as an objective in field training exercises on a case-by-case basis only.
621 850 (Range 131, MOUT Facility)	Range Scheduling	Sophisticated city; provides for instruction in MOUT fighting techniques; ideal objective during field training exercises; refer to BO P3500.3 for detailed description, and procedures

NOTE: Listed below are the special instructions for the combat towns listed above.

1. Combat towns are out of bounds to all personnel except those scheduled at these facilities.

2. Combat towns will not normally be available for command post exercises.

3. Electrical wiring and other facilities shall not be altered without prior approval of the Assistant Chief of Staff, Operations and Training.

4. When using pyrotechnics, refer to the FDR. Use extreme care to prevent fires. Ground signals (launcher-type) shall be aimed away from all buildings, and shall not be fired within 300 feet of personnel, buildings, or equipment. Burning-type, or smoke-producing grenades, shall be fired at least 20 feet away from personnel. Smoke grenades shall not be ignited within five feet of dry grass or other flammable materials. Refer to the FDR, and use extreme care to prevent fires.

5. Care shall be taken to ensure all demolition charges are placed in the center of pits provided for this purpose. Where no pits are provided, demolition charges shall not be placed within 10 meters of any building, or on the concrete sidewalks or streets of the

MOUT (Range 131). Charges exceeding ¼ pound net explosive weight [(NEW) C4, TNT or det cord] shall not be used. RSOs shall inspect all charges before firing to ensure they are correctly positioned so they do not cause any building or equipment damage, or personnel injury.

6. All booby traps that have been set shall be cleared upon completion of training.

7. All wire laid by the using unit shall be retrieved prior to departure from these facilities.

8. Upon completion of the training exercise, the using unit shall conduct a proper police of the facility.

9. Combat towns shall be checked out by the RSO at least 30 minutes prior to the scheduled time of the exercise.

10. Furniture, vehicles, etc., at the Range 131 MOUT Facility are in place to lend realism to the training environment and shall not be removed by training units. Units shall not add anything without approval from the Range Control Officer.

11. MEDEVAC vehicles and corpsmen are not required at the 52 Area Combat Town.

12. No HC smoke shall be used without informing LONGRIFLE. Gas masks will also be used when using HC smoke. All smoke shall be used in a well-ventilated and cleared area, not inside buildings.

13. The Range 131 MOUT Facility, is designed and organized to support advanced training in war fighting skills required for operations in an urban environment. The facility consists of a live-fire training area, the MOUT Assault Course (MAC), and blank-fire training areas, the MOUT Town. Additional information is found in the MOUT SOP (BO P3500.3).

6017. FORTIFIED AREAS/EMPLACEMENTS

LOCATION	SCHEDULED BY	DESCRIPTION
496 966	Range Scheduling	Fortified (52 Area) emplacements
682 874 (Hill 100)	Range Scheduling	Fortified emplacements
592 922 (Northern portion of Papa Three)	Range Scheduling	Mock company-size Soviet (Northern anti-mechanized defensive position)

(Continued on next page)

LOCATION	SCHEDULED BY	DESCRIPTION
473 976 (62 Area)	Range Scheduling	Fortified emplacements

6018. GAS CHAMBERS

LOCATION	SCHEDULED BY	DESCRIPTION
737 859 (14 Area)	Range Scheduling	Concrete structure
658 851 (33 Area)	Range Scheduling	Concrete block structure
595 828 (41 Area)	Range Scheduling	Concrete block structure
546 936 (53 Area)	Range Scheduling	Concrete block structure
487 990 (62 Area)	Range Scheduling	Concrete block structure

6019. OBSTACLE COURSES

LOCATION	ASSIGNED TO/ SCHEDULED BY
624 766 (21 Area)	Area Commander
610 803 (31 Area-WFTB)	Area Commander
655 858 (33 Area)	Area Commander
655 858 (41 Area)	Area Commander
615 899 (43 Area)	Area Commander
514 954 (52 Area)	Area Commander
560 928 (53 Area)	Area Commander
488 986 (62 Area)	Area Commander

NOTE: Refer to paragraph 6007.2 in this chapter for safety requirements.

6020. AIRCRAFT MOCK-UPS/HULKS

LOCATION	SCHEDULED BY	DESCRIPTION
637 809 (31 Area)	Range Scheduling	2 CH-46
664 856 (33 Area)	Range Scheduling	1 CH-53
486 981 (62 Area)	Range Scheduling	LCU
592 904 (Papa 3)	Range Scheduling	1 F-4

6021. HEAVY EQUIPMENT TRAINING AREA

LOCATION	SCHEDULED BY	DESCRIPTION
Area enclosed by a line 475 980 to 479 981 to 479 979 to 466 979 to 475 980	Range Scheduling	An area to be used to train heavy equipment operators consistent, to the maximum extent possible, with the recognized programs of controlling soil erosion (62 Area)
Area enclosed by a line 720 866 to 725 866 to 725 862 to 720 866	Range Scheduling	An area to be used to train heavy equipment operators, consistent to the maximum extent possible, with the recognized programs of controlling soil erosion (14 Area)
LOCATION	**SCHEDULED BY**	**DESCRIPTION**
593 837 Center Point	Range Scheduling	41 Area

6022. FLEET HOSPITAL OPERATIONS AND TRAINING COMMAND (FHOTC) TRAINING FACILITY

LOCATION	SCHEDULED BY	DESCRIPTION
474 008	CO, FHOTC	Field training facility for combat zone fleet hospital personnel

NOTE: This facility is limited to Fleet Hospital, Operations and Training Command personnel and students, unless approved by the Commanding Officer, FHOTC.

6023. FIELD MEDICAL SERVICE SCHOOL (FMSS) TRAINING FACILITY

LOCATION	SCHEDULED BY	DESCRIPTION
651 782	Range Scheduling	Field training facility for training U.S. Navy medical personnel and students

NOTE: Use of this facility is limited to Field Medical Service School, unless approved by the Commanding Officer, FMSS.

6024. INFANTRY WEAPONS

1. Small Arms

a. Safety precautions will be strictly adhered to as prescribed by appropriate field manuals, directives in the MCO 3570 series, and this Manual.

b. Overhead or flanking-fire is authorized only as prescribed by directives in the MCO 3570 series, appropriate firing tables and field manuals, and approved by the Range Control Officer.

2. Machine Guns

a. Safety precautions shall be strictly adhered to as prescribed in directives in the MCO 3570 series, and this Manual.

b. Machine guns shall remain in Condition 4 while in a cold status.

c. After machine guns are fired, the RSO shall ensure all weapons are clear, and in a Condition 4 status.

d. The RSO shall ensure proper settings of headspace and timing on all guns prior to shooting.

e. No one is allowed forward of any gun emplacement, for any purpose, until authorized by the RSO. This does not apply to tactical exercises involving overhead or flanking-fire.

f. Machine guns may be fired over unprotected individuals in firing exercises, provided the provisions of directives in the MCO 3570 series, appropriate firing tables, and field manuals are followed and approved by the Range Control Officer.

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3. Mortars (60mm and 81mm)

a. Units using the ranges shall determine the surface danger zone area, per directives in the MCO 3570 series.

b. Firing over the heads of unprotected troops is not authorized.

c. Safety precautions will be strictly adhered to as prescribed in appropriate field and technical manuals, directives in the MCO 3570 series, and this Manual.

d. The RSO shall ensure safety diagrams have been submitted to the Range Scheduling Office at least seven (7) working days prior to firing.

e. The highest maximum ordinate of the ammunition being used shall be reported to LONGRIFLE, in feet, prior to firing.

f. All personnel engaged in mortar firing are required to wear hearing protection, helmets, and flak jackets at all times during firing.

g. Refer to paragraph 1010.4.f. in chapter 1 of this Manual for guidance on burning excess powder increments.

h. Mortar positions are described in appendix E of this Manual.

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4. Rockets and Missiles

Safety precautions as prescribed in field and training manuals, directives in the MCO 3570 series, and this Manual shall apply. All ground personnel engaged in the firing of rockets and missiles are required to wear helmets, flak jackets, and hearing protection at all times during firing.

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5. Grenades

Field-firing of grenades include the firing of all types of rifle grenades, to include the 40mm grenade family (MK19, M79, and M203), and thrown hand grenades. (Refer to FM 23-30 and directives in the MCO 3570 series).

a. Fragmentation, offensive, and WP hand grenade duds shall be rendered safe or destroyed by qualified EOD personnel. If a dud occurs, the RSO shall order, "cease fire," record the time the dud occurred, keep all troops under cover, and notify LONGRIFLE, who will contact EOD for assistance. EOD will observe a minimum 30-minute waiting period. After the waiting period, the EOD Team will clear the dud and inform the RSO when the range is clear.

b. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

c. Only one high explosive (HE) hand grenade will be thrown at a time. Multiple throwing of HE hand grenades is prohibited. When training on a range with divided walls, and a dud occurs on one side of the wall, notify LONGRIFLE, who will contact EOD for assistance. LONGRIFLE may authorize training to continue on the wall-side opposite of the dud.

d. All personnel engaged in any type of HE hand grenade, rifle, or 40mm grenade training are required to wear helmets, flak jackets, and hearing protection at all times during firing.

e. Safety precautions prescribed in appropriate field and technical manuals, directives in the MCO 3570 series, and this Manual apply.

f. Live grenades shall not be thrown into standing water. If there is standing water in any grenade pit, notify LONGRIFLE prior to throwing any grenades.

6025. MINES, BOOBY TRAPS, AND PYROTECHNICS

1. General

The use of live mines and booby traps will be confined to demonstrations of their effectiveness. Demonstrations shall be conducted in an impact area, or on a demolition range of approved size for the quantity of explosives. All personnel within the danger area, as defined by the SDZ, shall wear helmets, flak jackets, and hearing protection. All personnel shall be clear of the SDZ, and located in a safe area during detonation/functioning of mines and booby traps.

a. Demonstrations in impact areas shall have approval from the Range Control Officer, and shall be coordinated with EOD. Live mines shall not be placed under or near any metal object, which could become a missile hazard (e.g., jeeps, 55-gallon drums, etc.).

b. Practice mines and booby traps may be used in all training areas and on all demolition ranges. Their use shall be governed by the FDR (refer to paragraph 1011 of this Manual).

c. No live or practice mines or booby traps with any type of explosive devices shall be left on any range or in any maneuver area. Trip flares shall be counted before issue to ensure all items issued have been retrieved on completion of the demonstration or exercise.

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2. Pyrotechnics Pyrotechnics may be used in all impact areas, training areas, and field firing ranges provided the FDR does not prohibit their use. Units shall request permission from LONGRIFLE prior to using any pyrotechnic device.

NOTE: M203 illum smoke is NOT authorized in training areas.

a. Pyrotechnics shall be stored in small amounts, away from any firing points, either right or left of, but not directly behind the firing point. They shall be placed to minimize the possibility of ignition or explosion in case of an accident during firing.

b. Use extreme care when handling pyrotechnics so they do not fall onto shooters or other personnel, into boxes of pyrotechnics, or other ammunition. Extreme care shall be exercised when firing through trees or other obstructions.

c. Trip flares shall be fenced or guarded to prevent personnel from approaching within five (5) feet of each installed flare.

d. Trip flares shall be positioned so the hazard pattern or the impacting flare does not endanger personnel.

e. Trip flares shall not be left on any range or in any area. Trip flares shall be counted before issue to ensure all items issued are retrieved on completion of the demonstration or exercise.

6026. DEMOLITIONS

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1. General These regulations apply to the use of all types of explosives and demolition equipment used during training. Instructions in directives in the MCO 3570 series will be observed.

a. Explosives equivalent to1/4 pound TNT (1/4 pound blocks of TNT and C4 equivalent) net explosive weight (NEW) may be used on all ranges and training areas. Larger charges may be used only on demolition ranges when approved by the Range Control Officer.

b. Line charges are authorized on Range 600. Proposals to employ line charges in locations other than Range 600 shall be forwarded to the Range Control Officer AT LEAST THIRTY (30) WORKING DAYS prior to planned use.

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2. Demonstrations

Request approval to use demolitions larger than ¼ pound NEW (or equivalent) for demonstrations in training areas from the Range Control Officer.

a. Requests for approval of demonstrations shall contain the following information.

(1) Date, time, and location of demonstration

(2) Exact placement, quantity, and composition of charges

(3) Measures for control and safety of spectators

b. Be aware of critical Base utility points that may be located throughout training areas and could be subject to damage. Contact the Director, Facilities Maintenance Division [(760) 725-4820/4743] for more information to coordinate.

c. The Assistant Chief of Staff, Environmental Security shall be consulted in planning for underwater demolitions to address potential environmental permit requirements.

d. The following safety measures shall be observed when using demolitions in conjunction with maneuvering troops during training exercises and demonstrations.

(1) An officer or staff non-commissioned officer will be appointed as the Demolition Control Officer.

(2) The Demolition Control Officer shall have a functional means of communication and signal flares to halt the exercise in the event of a malfunction or misfire without referral to the OIC of the exercise.

(3) A single centralized controlling position, with a clear view of the demolition area, shall be used and controlled by the Demolition Control Officer.

(4) All demolition pits shall be clearly marked with engineer tape or barbed wire. Charges shall not exceed ¼ pound NEW explosives.

(5) Troops shall not maneuver in, through, or within the established SDZ (for the particular exercise) of demolition pits during the hours of darkness. Use of demolitions at night are severely limited, and subject to the approval of the Range Control Officer. The RSO shall have an unobstructed view of the demolition pit area(s) at all times, and ensure a means of protecting the surface danger zone of each pit.

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3. Engineer Demolition

a. Engineer units are authorized to use demolition charges during the performance of engineering work. The size and type of charge shall be dictated by engineering safety requirements, provisions delineated in this Manual, and directives in the MCO 3570 series.

b. Units desiring to use demolitions shall submit a request to the Range Scheduling Office at least thirty (30) days prior to the first day of firing. It shall contain the location, nature of work, type and size of charge, times and dates, and the name and telephone number of the OIC of Firing.

6027. NON-LETHAL WEAPONS

1. General

a. The term, "non-lethal" should be understood as a function of intent. It is a goal, not a guarantee for these weapons. The Range Control Officer must approve the concept of employment of any non-lethal weapons not previously addressed in this Manual.

b. The non-lethal munitions (NLM) authorized at combat towns are listed below.

DODIC	TYPE	DESCRIPTION
AO12	CTG 12 GAUGE	INERT
AA29	CTG 12 GAUGE	BEANBAG
AA30	CTG 12 GAUGE	BLANK LAUNCHING
AA31	CTG 12 GAUGE	FIN STAB RUBBER
BA07	CTG 40MM	FOAM RUBBER BATON
BA08	CTG 40MM	RUBBER BALL
BA09	CTG 40MM	WOOD BATON
DWBS	CHG	DIVERSIONARY/FLASHBANG
G878	FUSE	FUSE, DELAY, F/G811 PRAC GREEN
GN04	GRENADE	RUBBER BALL

6028. ARTILLERY AND TANKS/AAV/LAV/ARMORED HMMWV

1. Field Artillery

Instructions contained in directives in the MCO 3570 series are applicable to the firing of all field artillery cannons. Specifics concerning artillery training are addressed in appendix D of this Manual.

a. Surface danger zone diagrams shall be submitted to the Range Scheduling Office, as illustrated in directives in the MCO 3570 series.

b. The maximum ordinate shall not exceed 2,000' MSL within R-2503A; 15,000' MSL within R-2503B; or 27,000' MSL within R-2503C (activated on request only).

c. Refer to chapter 1 of this Manual for guidance on burning excess powder increments.

2. Tanks/AAVs LAVs

a. Firing over the heads of personnel from moving vehicles is prohibited.

b. Individual vehicles shall display a red range flag while firing. While on the firing line, each vehicle shall display a green range flag when all weapons have been cleared. A yellow flag shall be displayed when there is a weapon malfunction.

(1) The relationship between firing points and targets must meet the requirements listed in directives in the MCO 3570 series.

(2) Prior to firing, the safety limits for each firing point will be physically marked on the ground only when moving into those positions to fire; ground marks are not required for static fire.

(3) Live rounds shall not be chambered until the firing vehicle has reached the specified point on the range designated as a firing area. LAVs in an uploaded status shall have systems in both manual and electric-safe.

3. Vehicle Crews

No weapons system shall be elevated above the line of sight to target, unless that weapons system has been determined to be clear of ammunition, or is required to be elevated above that line in order to be safely cleared.

a. The clearing of any weapon shall be accomplished per the appropriate operator's manual.

b. Vehicle crews shall use range flags. It is the responsibility of the OIC and RSO to ensure compliance of proper range flag use.

c. Prior to movement of any vehicle from designated firing areas, the RSO shall ensure all weapons systems are clear.

d. The OIC and RSO shall ensure all personnel are thoroughly briefed in the correct procedures, listed below, for immediate action in case a round exits the authorized impact area (refer to chapter 7 of this Manual for more details).

(1) All weapons systems shall cease-fire immediately.

(2) The Tank/LAV Commander shall not disturb the lay of the gun in either elevation or deflection, unless immediate danger exists to personnel onboard the vehicle.

(3) The OIC and RSO shall determine the magnetic azimuth at which the round was fired, and shall determine the existing elevation on the weapon. These procedures shall be followed so that an approximation of where the round would land can be achieved.

(4) The RSO is required to notify LONGRIFLE immediately when an incident occurs. An approximation of how far the round traveled, and at what azimuth the round was fired, shall be included in the report.

(5) A cease-fire will remain in effect until LONGRIFLE authorizes firing to resume.

6029. POLICE OF TANK/LAV/AAV, AND OTHER VEHICLE CROSSINGS

1. General

Commanding Officers, OICs, or NCOICs of vehicles using authorized tank crossings, or making an emergency crossing of hard-surfaced roads shall ensure crossings are properly policed immediately after use. Proper police includes removing soil, rocks, debris, and dunnage from the paved surface of the road, leveling the shoulders of the road, and cleaning drainage ditches paralleling shoulders of the road. When it is necessary for tracked vehicles to cross wheeled vehicle access roads in training areas, crossings shall be made at right angles to the road, at low speed, without turns. If it is necessary for tracked vehicles to operate on these roads, the approach shall be made at the minimum angle possible to avoid sharp turns on the road surface. Speeds shall not exceed five miles per hour. Do not hold up traffic for more than ten minutes. Where applicable, units shall use the tire stations available to cross roads.

2. Road Guards

Road guards shall be posted a safe distance on either side of crossings to stop traffic while vehicles are crossing, and when police is conducted. Road guards shall wear high-visibility safety vests for all crossings, day and night. For all crossings made during periods of darkness or limited visibility, road guards shall carry flashlights with plastic signal wands.

3. Road Use Tracked vehicles are prohibited from using asphalt and macadam roads, and operating on the shoulders of all roads. Old concrete Highway 101 (569 852 to 489 925) may be used, observing speed restrictions, minimum angle turns on road surfaces, and conditions of entrance and exit. Permission to use paved roads under unusual or emergency conditions shall be requested from LONGRIFLE.

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4. Road Crossing Tanks, LAVs and AAVs are authorized to cross roads at grids 595 930, 640 893, 613 887, 491 984, and 670 880. A proper police shall be conducted after crossing. Units shall contact LONGRIFLE prior to crossing. AAVs are authorized to cross Vandergrift BLVD at grid 654 816 with MP support. PMO's notification requirement is 48 hours [(760) 763-1219].

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5. Cement Road Crossings Cement track vehicle crossings are located at grids 593 823, 596 814, 597 811, 625 899, 575 849, 527 948, and 579 833. Units shall coordinate with PMO at least three (3) working days prior to the planned crossing to coordinate closing Vandergrift BLVD. LONGRIFLE will coordinate with PMO on the day of the event to request PMO presence 15 minutes prior to planned crossings.

6030. TRAINING AREA ROADS

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1. General The speed limit on all training roads throughout Camp Pendleton is 25 mph unless otherwise posted, or conditions dictate a lower speed to ensure safe transit.

2. Road Use in Victor and Uniform Training Areas

a. Use of the unimproved roads within the Victor and Uniform Training Areas, paralleling the I-5 Freeway, is not authorized unless those specific training areas have been scheduled and approved by the Range Scheduling Office.

b. LONGRIFLE may restrict the use of unimproved roads during dry weather months. This restriction is necessary to reduce dust clouds causing traffic hazards on the I-5 Freeway. Tactical movement may be impacted during dry season, when dust will be a problem.

c. Trenching adjacent to the I-5 Freeway is prohibited due to the underground telephone cable/fiber seven (7) feet west of the freeway fence.

d. Be aware of critical Base utility points that may be located throughout training areas and could be subject to damage. Contact the Director, Facilities Maintenance Division [(760) 725-4820/4743] for more information to coordinate.

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3. Road Blocks Temporary roadblocks, fortifications, etc., constructed during training exercises, shall be immediately removed upon completion of the exercise. Roadblocks will be manned at all times and non-exercise traffic will be permitted to pass through roadblocks at all times, unless coordinated with LONGRIFLE. Obstacle plans shall be

submitted to the Range Scheduling Office at least fifteen (15) working days prior to planned training.

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4. Roblar Road

a. Safe transit of Roblar Road requires a thorough ORM, and compliance with all road sign instructions and speed limits.

b. Access

(1) Unscheduled vehicular traffic transiting along Roblar Road adjacent to Range 409A has a negative impact on Range 409A training evolutions due to check fires to allow passage of vehicles. In order to reduce Range 409A down time, the following Roblar Road access schedule for transiting Range 409A is in effect.

TIMES	SCHEDULE
0001-1000	Open for transit (Real time coordination with RSO as required)
1000-1800	Closed to all through traffic except emergency vehicles (Real time coordination with RSO as required)
1800-1900	Open for transit
1900-2359	Closed to all through traffic except emergency vehicles (Real time coordination with RSO as required)

(2) Access times other than those listed above may be coordinated through LONGRIFLE on a case-by-case basis.

c. Hiking on Roblar Road

(1) Units should follow all scheduling, communication, and safety procedures required for all other hikes; but when on the paved portion of Roblar Road the rules listed below should apply.

(2) Daylight

(a) The unit shall have at least one lead and one trail vehicle. The uphill vehicle must be at least 100 meters from the nearest Marine on foot and the down hill vehicle must be at least 50 meters. These vehicles will stop ALL traffic before traffic reaches the column.

(b) In addition to communication with LONGRIFLE, communications must be established and maintained between both road guard vehicles and the column.

(c) Vehicle traffic movement through the column will be allowed only after communication and coordination is made between the vehicle driver and the OIC or SNCOIC of the unit on foot.

(d) No vehicles will be allowed to pass any troops that are moving.

(3) Dark

(a) There will be no tactical night movements on Roblar Road.

(b) All the rules above will be followed, additionally:

1 All vehicles will use headlights.

2 Flashlights will be on and spaced throughout the column (at least one for every 10 men).

3 Lead and trail men will each have BOTH a flashlight and a reflective vest.

6031. EXPERIMENTAL WEAPONS AND ORDNANCE

Experimental weapons or ordnance shall not be fired on ranges or AFAs at Camp Pendleton without prior approval from the Assistant Chief of Staff, Operations and Training.

CHAPTER SEVEN

AMMUNITION AND EXPLOSIVES

Overview

This chapter provides a general overview of the procedures to be used while handling or using ammunition and explosives at MCB, Camp Pendleton

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
7000. Transportation of Ammunition and Explosives	7-3
7001. Ammunition Handling and Storage	7-3
7002. Defective Ammunition	7-6
7003. Malfunction Reports	7-6
7004. Explosive Ordnance Disposal (EOD)	7-6
7005. Duds	7-7
7006. Misfires and Hang Fires	7-7
7007. Improved Conventional Munitions (ICM)	7-8
7008. Chemical Munitions	7-8
7009. Riot Agents, Smoke, and Other Obscuration Materials	7-8
7010. Rounds Fired Off-Range	7-8
7011. Overhead-Fire	7-9

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CHAPTER SEVEN

AMMUNITION AND EXPLOSIVES

7000. TRANSPORTATION OF AMMUNITION AND EXPLOSIVES

1. General MCO P8020.10 and BO P8000.2B govern polices and procedures associated with the use, storage, and accountability of ammunition and explosives.

2. Qualified Drivers Drivers of any vehicle transporting ammunition or explosives aboard MCB, Camp Pendleton shall meet specific administrative and medical criteria. Drivers shall also complete the Explosives Driver Course. Additional information is contained in the BBul 1550 Series, and BO P8000.2B.

3. Privately Owned Vehicles Using POVs aboard MCB, Camp Pendleton to load, store, or transport ammunition, pyrotechnics, or explosives of any kind, for military training is absolutely prohibited. Authorized users of ranges dedicated to recreational firing, and individuals authorized to hunt aboard Camp Pendleton, are permitted to transport a reasonable amount of small arms ammunition when enroute to and from those activities.

4. Ammunition Handling Facilities Operations at ammunition handling facilities (e.g., Del Mar Boat Basin, LZ Red Beach, VSTOL Pad 1, CALSITE 21, VSTOL Pad 2 Aliso Canyon, and LZ View-point) shall be conducted in the same manner as any other range during ammunition operations. It shall be scheduled, checked in and out by a qualified RSO, and communication shall be established and maintained with LONGRIFLE. All operations are subject to BO P8000.2B and MCO directives in the 3570 series.

7001. AMMUNITION HANDLING AND STORAGE

1. General Ammunition will be supplied as indicated below. Detailed information is contained in MCO P8020.10 and BO P8000.2B.

2. Ammunition Supply

a. The Marksmanship Training Branch will supply ammunition for requalification firing, required by MCO 3574.2J, for Ranges 102, 103, 213, and 214 (Wilcox and Horno Range Complexes).

b. The firing unit shall supply ammunition for field firing and other training.

c. The firing unit shall supply ammunition for organizational, intramural, and recreational firing.

d. The Marksmanship Training Branch will supply ammunition for semiannual Base and Division intramural tournaments.

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3. Firing Sites

a. Ammunition at firing sites shall be positioned to minimize the possibility of accidental ignition, explosion, or detonation. Ammunition shall be staged in a dry place, and protected from the direct rays of the sun.

b. Matches, cigarette lighters, or other spark-producing items shall not be in or near an explosive area.

c. Precautions shall be taken to prevent ammunition from contacting the ground or spark-producing substances.

d. Ammunition may be pre-positioned at firing sites if approved by the Range Control Officer and in compliance with the provisions of MCO P8020.10, and BO P8000.2B.

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4. Ammunition Control

The following ammunition control procedures shall be observed.

a. Supervisory personnel shall be present with the vehicle/convoy designated to pick up or return ammunition from or to the Ammunition Supply Point (ASP).

b. All ammunition shall be delivered to the RSO of the range/firing site. The RSO shall conduct a joint inventory of the ammunition received with the designated personnel delivering the ammunition. The RSO shall compare this against what is reflected on the ASP issue document (DD Form 1348-1A). The RSO shall verify the lot number on every container of ammunition to ensure it matches the lot number on the issue document (DD Form 1348-1A). The RSO shall open all containers which are not factory-sealed, and physically/visually inspect the ammunition to ensure it corresponds with the ammunition type on the issue document.

c. The RSO shall receipt for the ammunition by signing the DD Form 1348-1A; and entering the quantity received by DODIC, document number, and lot number on the Expenditure Report (NAVMC 11381) to ensure the quantity matches the corresponding DD Form 1348-1A.

d. The RSO is ultimately responsible for the accountability of ammunition and shall supervise the issue and control of the ammunition for the duration of the exercise. The RSO shall ensure ammunition is not removed from the original packing until just prior to firing. Ammunition not containing a factory seal shall be expended first.

e. The RSO shall take measures to prevent ammunition from being rendered unserviceable, in the event the exercise is terminated prematurely, by not removing excessive quantities of ammunition from its original packaging, losing lot number

identity, burning, or otherwise destroying containers, or exposing items to the weather, etc. Ammunition shall not be removed from the confines of the range except as authorized by proper authorities.

f. The RSO shall account for all ammunition as it is expended on the firing range. Upon completion of the exercise, the RSO shall ensure all unexpended ammunition is inventoried, verified, and annotated on the turn-in document (DD Form 1348-1) and the Expenditure Report with the RSO's signature. If any ammunition is found missing during the inventory, the using unit shall submit a Missing, Lost, Stolen, or Recovered (MLSR) Report per BO P8000.2.

g. The RSO shall complete the Expenditure Report (NAVMC 11381) prior to securing from the range, per MCO P4400.150E (chapter 7).

h. Ammunition shall never be abandoned, destroyed, fired indiscriminately, buried, treated, or otherwise disposed of in order to circumvent the inconvenience of returning the items to a storage area. Units discovering abandoned, buried, or treated ammunition shall notify LONGRIFLE immediately.

i. Ammunition may be staged day or night with two armed guards. The guards shall maintain hourly radio checks with LONGRIFLE.

j. A check list for handling and storing ammunition and explosives on ranges is provided in appendix I of this Manual. Use of the Ammunition and Explosives Range Check List for Range Safety Officers is recommended during ammunition handling and storing activities.

k. All Security Code 1 (or "Category 1") items (e.g., AT-4, DRAGONS, Stingers) shall be positively controlled by a SSgt (or above), from ammunition supply point pick-up to expenditure/return of unused ammunition. The SSgt (or above) signs for, escorts, and observes use while maintaining control at all times. Any unused Category 1 item shall be returned to the Ammunition Supply Point by a SSgt (or above). Per appendix F of OPNAV INST 5530.13B, Category 1 item control may be turned over to another SSgt (or above) utilizing the DD Form 1907 (Signature Tally Record) which is included with every Category 1 item.

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5. Modifications

a. Modification or "fixing" ammunition charges before shooting is not authorized. If the charges are not fully ready to fire, return them to the local ASP, and a contact team from Fallbrook (Naval Weapons Detachment) or Crane will make the repairs.

b. Mixing or combining two or more separate DODICs into a single munition is prohibited, unless the DODICs were designed to be integrated (e.g., CS capsules or loose CS powder will not be introduced into smoke grenades in order to generate a smoke/CS cloud).

7002. DEFECTIVE AMMUNITION

Defective ammunition shall not be expended. Every round of ammunition which malfunctions, or doesn't fire as it is designed shall be reported. MCO 8025.1D establishes reporting requirements and time frames. The CG, I MEF (G-4 Ammo) and CG, MCB [AC/S, Logistics/Base Ordnance (MCB Explosive Safety Officer)] shall receive copies of all reports, through the appropriate chain of command, per BO P8000.2B.

7003. MALFUNCTION REPORTS

Detailed malfunction reporting requirements and exceptions are contained in MCO 8025.1D. Duds, hang fires and misfires should be considered malfunctions for the purpose of reporting. In the event of a malfunction, training units shall submit a malfunction report by Naval message, within 24 hours of the malfunction if an injury occurs. Report malfunctions within 72 hours if no injury has occurred. Additionally, the malfunction shall be reported to the MCB Explosive Safety Officer [(760) 725-9065], with a copy of the report FAX'd to the Explosive Safety Office as soon as possible [(760) 725-9655]. A copy of the malfunction report form is contained in appendix I of this Manual.

7004. EXPLOSIVE ORDNANCE DISPOSAL (EOD)

1. General

The mission of EOD is to remove explosive ordnance hazards posing a threat to personnel, equipment, material, and the installation, which are beyond the capability of other MOSs in the Marine Corps. EOD will provide appropriate technical assistance to units requesting assistance. EOD is not available or responsible for the routine transportation of ammunition and explosives. EOD assistance is available on a 24-hour basis. The EOD office is located in the 13 Area, Bldg. 1361; and can be contacted during normal hours at (760) 725-5498/6325. Contact LONGRIFLE after working hours for EOD assistance at (760) 725-4604/3974.

2. Hand Grenades

The MCB EOD Team must be informed when HE hand grenades are thrown on any grenade range to provide "on call" support for the disposal of duds occurring during training. Units are responsible for contacting EOD at least <u>five (5) working days</u> prior to the scheduled training date when the event occurs on a weekend/holiday. The RSO shall contact LONGRIFLE to place the EOD Team on alert prior to calling the range in hot.

3. Impact Areas EOD personnel are required to escort any unit or individual entering a dedicated impact area. The only exception is ranges where this Manual authorizes limited troop penetration beyond the firing line.

7005. DUDS

A dud is ammunition, of any caliber or weight, that has been fired, placed, dropped, thrown or launched, but which fails to function as designed. Duds, (with the exception of hand grenade ranges) occurring within a dedicated impact area do not normally require an EOD response, but shall be reported to LONGRIFLE with the approximate location. Exceptions to this are short rounds, which place the firing unit within the fragmentation range of the fired munitions. Duds found outside an impact area, or in a training area, shall be reported to LONGRIFLE immediately. An exact, clearly marked location of the dud is required, a guide made available, and all personnel cleared of the immediate area. Do not disturb a dud in any manner.

NOTE: Line charges and demolition material like C4 or TNT which fail to function are misfires.

7006. MISFIRES AND HANG FIRES

1. General A misfire is defined as the failure of a primer or the projectile propelling charge to function, a line charge or demolition material which fails to function, a DRAGON or TOW that fails to launch and that no internal components have initiated, or a failure of a man-portable rocket such as the SMAW, to launch. Misfires will be handled as follows.

a. The firing unit will immediately advise LONGRIFLE of the situation and request EOD support when misfire procedures are unsuccessful. Misfires will be removed per the provisions of the appropriate weapons technical manual.

b. In the interest of safety, all misfire procedures shall be completed on the range.

2. Unserviceable Ammunition Unserviceable ammunition removed from the range, as a result of misfires, including small arms ammunition, will be returned to the ASP and processed similarly to other Condition Code H material.

3. Hang Fire A hang fire occurs when a DRAGON or TOW fails to launch, but internal components of the missile, such as batteries and gyros, are initiated. If a DRAGON or TOW hang fires, contact LONGRIFLE to request EOD assistance. A DRAGON or TOW hang fire will not be transported off the range.

7007. IMPROVED CONVENTIONAL MUNITIONS (ICM)

Please refer to appendix C of this Manual (Ranges) for instructions regarding air-delivered ICM; refer to appendix D of this Manual (Artillery Firing Areas) for instructions regarding the use of artillery-delivered ICM.

7008. CHEMICAL MUNITIONS

1. General Chemical munitions are defined as an agent or munitions, which, through its chemical properties, produces lethal or other damaging effects on human beings. The term does not include riot agents, chemical herbicides, smoke, and other obscuration materials.

2. Approval Live chemical munitions shall not be used for training purposes, unless the Commanding General, MCB grants special approval.

7009. RIOT AGENTS, SMOKE, AND OTHER OBSCURATION MATERIALS

1. General Riot agents, smoke, and other obscuration materials shall be used only during scheduled training, per the provisions in applicable technical manuals and directives. Since improper use may result in serious injury, fatalities, or fires, units shall use appropriate caution.

2. CS When Chlorobenzylamalonitrile (CS) is used in conjunction with scheduled training, ensure non-toxic vapors are not employed under conditions, which are dangerous to personnel, wildlife, or property in adjacent training areas, or outside the boundaries of MCB, Camp Pendleton. The intent to use CS shall be specified when scheduling maneuver areas. Refer to appendix F of this Manual for specifics concerning the use of CS.

7010. ROUNDS FIRED OFF-RANGE

Rounds fired off-range shall be immediately reported to LONGRIFLE. This requirement complies with the 1997 Military Munitions Rule amendments to the Resource Conservation and Recovery Act. If a munition lands off-range, and is not

promptly rendered safe or retrieved, the munition becomes a solid and hazardous waste, and any imminent and substantial threats shall be addressed. If remedial action is not feasible, the Range Control Officer will maintain a record of the event for as long as any threat remains. The record shall include the munition type (DODIC and nomenclature) and location (to the extent the location is known).

7011. OVERHEAD-FIRE

Firing shall not be permitted to pass over magazine areas or field ammunition storage areas FASPs from any position.

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CHAPTER EIGHT

LASER OPERATIONS

Overview

This chapter details the procedures concerning the use of airborne and ground-based lasers on board MCB, Camp Pendleton.

In This Chapter

The following topics are covered in this chapter.

Topic	See Page
8000. General	8-3
8001. Requesting Ranges/Observation Posts for Laser Use	8-3
8002. Laser Range Safety Officer (LRSO)	8-3
8003. Laser Safety Procedures	8-4
8004. Allowable Laser Systems	8-5
8005. Allowable Locations for Lasers	8-6
8006. Typical Reflective Surfaces	8-9
8007. Required Eye Protection	8-10
8008. Nominal Ocular Hazard Distances (NOHD) and Range Safety Data for Military Laser Systems	8-12

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CHAPTER EIGHT

LASER OPERATIONS

8000. GENERAL

This chapter applies to the use of the laser systems listed in paragraph 8004 in this chapter, or any other system approved for use by the Navy Laser Safety Review Board (LSRB). Questions concerning the use of Multiple Integrated Laser Engagement System (MILES), or any other Class I or II systems used aboard Camp Pendleton shall be submitted to the Base Laser System Safety Officer (LSSO) at (760) 725-0355.

NOTE: Units using ranges or training areas adjacent to a hot laser range are strongly encouraged to use laser-safe eye protection.

8001. REQUESTING RANGES/OBSERVATION POSTS FOR LASER USE

Units planning to use lasers at Camp Pendleton shall schedule laser training events per chapter 3. Scheduling requests shall list type of laser and associated buffer angle.

8002. LASER RANGE SAFETY OFFICER (LRSO)

Any unit using lasers at Camp Pendleton shall assign a LRSO. All LRSOs shall be Camp Pendleton-certified by the Base Laser Systems Safety Officer (LSSO). To receive certification, LRSOs shall be a current Camp Pendleton RSO, and validated for training received on the laser system to be used. The training verification may be a Division LRSO Card, laser operator card, copy of training record, etc. The unit LRSO shall also be familiar with directives in the MCO 3570 series and SPAWARINST 5100.12B. Sergeants who meet the above requirements may be certified as a LRSO with a written request to the Base Laser Systems Safety Officer, from their Commanding Officer, company-level.

8003. LASER SAFETY PROCEDURES

1. General

Only personnel authorized by the unit LRSO shall operate ground lasers; and only on approved ranges and observation posts established per SPAWARINST 5100.12B, and those listed in this chapter.

2. Operators

All operators shall receive training prior to operating any laser on the following aspects of laser operations.

a. Operation of the laser system

b. Hazards and safety precautions relative to laser operations in general

c. All provisions in this chapter

3. LRSO Firing Logs

The LRSO will provide a copy of the laser-firing log to LONGRIFLE. The log will contain the date, time, type of lasers, name of the operators, direction, and distance.

4. Laser Restrictions

a. Positive two-way communication shall be maintained, at all times, between the laser system operator and LONGRIFLE.

b. There shall be no laser firing during rain, fog, or any other inclement conditions.

c. Lasing will cease when the LRSO, LSSO, operator, or LONGRIFLE has concerns about target designation or tracking.

d. LRSO responsibilities shall not be delegated.

e. Only authorized targets may be designated or ranged.

f. The laser shall always be pointed down-range (toward the target or impact area).

g. Whenever the laser is in use, all unprotected personnel in the immediate vicinity of the laser firing position shall remain behind the laser operator.

h. Never designate or range aircraft, moving vehicles, personnel, or animals.

i. Personnel without laser eye protection shall not use optical devices (i.e., binoculars) or look down-range during laser operations.

j. Prior to lasing, the target shall be positively identified under the cross hairs of the scope or on the operator's monitor.

k. Never designate water, glass, mirrors, plexiglas, or any other specular reflector. Specular reflector is defined as any shiny surface, which might reflect the laser beam.

l. Prior to commencing airborne lasing operations, a flyover of the range shall be made to ensure no unprotected or unauthorized personnel, or animals are in the laser hazard area.

m. Unprotected personnel shall not be allowed within the beam path and its associated buffer zone without protective laser optics. Eye protection shall have curved lenses and an optical density (OD) appropriate to the wavelength of the laser system being utilized. Please refer to paragraphs 8007 and 8008 in this chapter.

n. Lasing shall cease if unprotected or unauthorized aircraft enter the operations area or the buffer zone between the lazing aircraft and the target.

o. Class 3 and 4 lasers shall not be directed above the horizon.

p. Batteries shall be removed from the laser at the completion of each day's use, and whenever the laser is located outside the range area.

q. All personnel authorized to use class 3 or 4 laser systems shall be enrolled in a laser medical surveillance program (at the unit level) per BUMED INST 6470.23.

8004. ALLOWABLE LASER SYSTEMS

1. General

Camp Pendleton has been certified for the use of the systems listed below, and any other system approved by the Navy Laser Systems Review Board, which meets the allowable system, maximum allowable buffer, or NOHD for a requested Laser Training Area.

2. Man-Portable

a. AN/GVS-5	Laser Range Finder, Infrared Observation Set (LIOS)
b. AN/PAQ-1	Laser Target Designator (LTD)
c. AN/TVQ-2	Ground/Vehicle Laser Locator Designator (G/VLLD)
d. AN/PAQ-3	Modular Universal Laser Equipment (MULE)
e. AN/PAQ-4A & 4C	M-16A2 Laser Sight
f. GCP-1B	Ground Commanders Pointer (GCP-1A/2&2B)
g. IZLID II	Infrared Zoom Laser/Illuminator/Designator

	h. AN/PEQ-1	Special Operations Forces Laser Marker (SOFLAM)
	i. MILES	Multiple Integrated Laser Engagement System
	j. AN/GVT-1	Simulated Laser Target
	k. PGTS	Precision Gunnery Training System
3. Tank-Mounted	a. AN/VVG-1	(M551A1)
	b. AN/VVG-3	(M1)
4. Airborne	a. LAAT	(AH-1S MC)
	b. TADS/PNVS	(APACHE AAH)
	c. LPL-30	(hand held laser pointer)
	d. AIM-1	(MLR UH-1N & EXL AH-1W)(crew served weapon mounted)
	e. AN/ASQ-211	Night Targeting System
	f. AN/AAQ-22	Navigational Thermal Imaging System (NTIS) (UH-1N)
	g. Nite Eagle	(UH-1N)
	h. LATAGS	Laser Air to Air Gunnery System
	i. AGES/AD	Air to Ground Engagement System/Air Defense

8005. ALLOWABLE LOCATIONS FOR LASERS

The systems listed in paragraph 8004 in this chapter and those approved by the Navy Laser Safety Review Board may fire from the firing points listed below if they meet the allowable system, maximum allowable buffer or maximum allowable NOHD.

CAMP PENDLETON LASER RANGES

RANGE/ TRAINING AREA	FIRING PT (FP)	FP COORDI-NATE	MAX ALLOWABLE BUFFER	MAX ALLOWABLE NOHD (If system does not meet max allowable buffer)	ALLOWABLE SYSTEM (AIR/ GROUND/ BOTH)	LASER TRAINING AREA (LTA)	LTA COORDINATES	LATERAL LIMITS (GRID)
ZULU	OP A	637 898	15 mrad	N/A	GROUND	19	630 930 to 640 930 to 640 940 to 630 940 to 630 930	Rt - 006 Lt - 348
ZULU	OP A	637 898	15 mrad	N/A	GROUND	4	629 926 to 626 926 to 625 931 to 630 940 to 654 940 to 638 914 to 629 914 to 629 926	Rt - 021 Lt - 334
ZULU	OP B	6404 9020	15 mrad	N/A	GROUND	19	630 930 to 640 930 to 640 940 to 630 940 to 630 930	Rt - 001 Lt - 340
ZULU	OP D	6438 9064	15 mrad	N/A	GROUND	19	630 930 to 640 930 to 640 940 to 630 940 to 630 930	Rt - 355 Lt - 330
R-227	4	632 903	10 mrad	5.8 km (unaided)	GROUND	5	629 926 to 626 926 to 625 931 to 630 940 to 654 940 to 638 914 to 629 914 to 629 926	Rt - 030 Lt - 341
R-407	5	648 911	15 mrad	N/A	GROUND/AIR (hover only)	6	635 920 to 629 924 to 629 926 to 626 926 to 624 931 to 630 940 to 650 940 to 650 920 to 635 920	Rt - 014 Lt - 305
R-408	OP F	667 925	15 mrad	N/A	GROUND/AIR (hover only)	3	624 926 to 630 950 to 658 950 to 659 944 to 659 926 to 624 926	Rt - 341 Lt - 270

CAMP PENDLETON LASER RANGES (continued)

RANGE/ TRAINING AREA	FIRING PT (FP)	FP COORDI-NATE	MAX ALLOWABLE BUFFER	MAX ALLOWABLE NOHD (If system does not meet max allowable buffer)	ALLOWABLE SYSTEM (AIR/ GROUND/ BOTH)	LASER TRAINING AREA (LTA)	LTA COORDINATES	LATERAL LIMITS (GRID)
R-409A N	6	671 946	15 mrad	N/A	GROUND	7	659 945 to 641 948 to 644 956 to 661 950 to 659 945	Rt - 289 Lt - 261
R-409A N	6A	669 944	15 mrad	N/A	GROUND	7	659 945 to 641 948 to 644 956 to 661 950 to 659 945	Rt - 306 Lt - 275
R-409A S	7	683 932	15 mrad	N/A	GROUND	8	660 948 to 649 956 to 657 962 to 666 953 to 660 948	Rt - 321 Lt - 304
R-409A S	7A	685 933	15 mrad	N/A	GROUND	8	660 948 to 649 956 to 657 962 to 666 953 to 660 948	Rt - 318 Lt - 302
WHISKEY	OP J	596 992	5 mrad	500 meters or less	GROUND/AIR (hover only)	22	589 971 to 596 970 to 596 989 to 594 989 to 589 971	Rt - 209 Lt - 174
WHISKEY	OP J	596 992	15 mrad	N/A	GROUND/AIR (hover only)	21	575 978 to 580 972 to 593 990 to 593 991 to 575 978	Rt - 245 Lt - 208
R-212 TOW	8	560 949	N/A	500 meters or less	AIR (hover only)	9	562 952 to 566 955 to 567 954 to 949 563 to 562 952	Rt - 077 Lt - 030
R-212 TOW	8A	563 948	5 mrad	500 meters or less	AIR (hover only)	9	562 952 to 566 955 to 567 954 to 949 563 to 562 952	Rt - 037 Lt - 347

CAMP PENDLETON LASER RANGES (continued)

RANGE/ TRAINING AREA	FIRING PT (FP)	FP COORDI-NATE	MAX ALLOWABLE BUFFER	MAX ALLOWABLE NOHD (If system does not meet max allowable buffer)	ALLOWABLE SYSTEM (AIR/ GROUND/ BOTH)	LASER TRAINING AREA (LTA)	LTA COORDINATES	LATERAL LIMITS (GRID)
R-214	9	565 938 to 566 938	15 mrad	N/A	GROUND	10	565 938 to 564 943 to 565 943 to 566 938 to 565 938	Rt - 359 Lt - 345
R-216	10	571 938 to 572 936	15 mrad	N/A	GROUND	11	571 941 to 573 949 to 585 948 to 574 938 to 571 941	Rt - 047 Lt - 349
R-203	12	527 972 to 527 971	15 mrad	N/A	GROUND/AIR (hover only)	14	528 975 to 533 985 to 539 979 to 530 973 to 528 975	Rt - 061 Lt - 006
R-204B	13	534 967	15 mrad	N/A	GROUND/AIR (hover only)	15	534 968 to 535 978 to 542 975 to 537 968 to 534 968	Rt - 052 Lt - 342
R-314A	14	515 986 to 515 988	15 mrad	N/A	GROUND/AIR (hover only)	16	516 988 to 519 986 to 518 983 to 515 986 to 516 988	Rt - 080 Lt - 140
R-103	15	6527 8400	15 mrad	N/A	GROUND/AIR (hover only)	17	652 840 to 650 846 to 650 847 to 645 843 to 647 842 to 652 840	Rt - 344 Lt - 292
R-127	16	605 839	5 mrad	850 meters (unaided)	GROUND	18	606 841 to 608 844 to 611 842 to 608 839 to 606 841	Rt - 044 Lt - 011

8006. TYPICAL REFLECTIVE SURFACES

1. Specular Specular reflectors (shiny surfaces) are unsafe to lase.

2. Diffuse Diffuse reflectors are safe to lase.

3. Examples

SPECULAR REFLECTORS	DIFFUSE REFLECTORS
Glass or Plexiglas	Rocks
Calm or turbulent water	Camouflage
Ice	Old ordnance
Wet foliage	Dry foliage
Glossy paint	Matte paint
Chrome	Rusted metal

8007. REQUIRED EYE PROTECTION

For systems not listed, the appropriate eye protection, as recommended by the Navy Laser Safety Review Board, will be required.

MAN-PORTABLE

SYSTEM	WAVE LENGTH (NM)	REQUIRED EYE PROTECTION OPTICAL DENSITY (OD)	
		Unaided	Aided
AN/VGS-5	1064	3.7	5.3
AN/PAQ-1	1064	4.0	4.9
AN/TVQ-2 (G/VVLD)	1064	3.8	5.6
AN/PAQ-3 (MULE)	1064	3.9	5.6
AN/PAQ-4A & 4C	-	-	-
GCP-1B	-	-	-
IZLID II	870	2.0	3.3
AN/PEQ-1 (SOFLAM)	1064	4.0	5.3
MILES	-	N/A	N/A
AN/GVT-1 with diffuser without diffuser	-	N/A	N/A
PGTS	-	N/A	N/A

TANK-MOUNTED

SYSTEM	WAVE LENGTH (NM)	REQUIRED EYE PROTECTION OPTICAL DENSITY (OD)	
		Unaided	Aided
AN/VVG-1 (M551A1)	694	5.3	5.8
AN/VVG-3 (M1)	694	4.0	4.7
AN/AAS-33A (A-6F Tram)	1064	4.6	5.8
AN/AVQ-25 (F-111F PAVE/Tack)	1064	4.3	5.8

AIRBORNE

SYSTEM	WAVE LENGTH (NM)	REQUIRED EYE PROTECTION OPTICAL DENSITY (OD)	
		Unaided	Aided
LAAT (AH-1S MC)	1064	4.0	4.5
TADS/PNVS (AAH)	1064	4.0	5.5
LPL-30 (hand-held)	850	1.7	1.7
AIM-1 (MLR UH-1N)	850	1.7	1.7
AN/ASQ-211 NTS LDRS (AW-1W)	1064	3.5	5.2
AN/AAQ-22 (NTIS)	1064	4.0	4.0
Night Eagle (UH-1N)	1064	4.1	5.2
LANTIRN Combat Mode (F-15) Training Mode	1064 1540	4.2	5.8
LATAGS	-	N/A	N/A
AGES/AD	-	N/A	N/A

8008. NOMINAL OCULAR HAZARD DISTANCES (NOHD) AND RANGE SAFETY DATA FOR MILITARY LASER SYSTEMS

MAN-PORTABLE

SYSTEM	UNAIDED (NAKED EYE) M	AIDED (WITH BINOS, SCOPE, ETC.) M
AN/VGS-5 w/19db Filter (RED) w/29db Filter (YELLOW)	2700 290 39	20000 1800 500
AN/PAQ-1	700	33000
AN/TVQ-2 (G/VVLD) Ranging Mode w/8.5db Filter (YELLOW) Designating Mode	 8000 2500 25000	 40000 23000 80000
AN/PAQ-3 (MULE) Ranging Mode Designating Mode	 6500 20000	 35000 79000
AN/PAQ-4A & 4C	-	-
GCP-1B	-	-
IZLID II Low Power High Power	 200 315	 1440 2260
AN/PEQ-1 (SOFLAM)	9600	54000

TANK-MOUNTED

SYSTEM	UNAIDED (NAKED EYE) M	AIDED (WITH BINOS, SCOPE, ETC.) M
AN/VVG-1 (M5511A1)	15000	64700
AN/VVG-3 (M1)	7000	53500

AIRBORNE

SYSTEM	UNAIDED (NAKED EYE) M	AIDED (WITH BINOS, SCOPE, ETC.) M
LAAT (AH-IS MC)	5000	36400
TADS/PNVS (AAH)	20000	Information unavailable
LPL-30 (hand-held)	90	1600
AIM-1 (MLR UH-1N)	90	1600
AN/ASQ-211 NTS LDRS	15000	69000
AN/AAQ-22 (NTIS)	720	8600
Night Eagle (UH-1N)	15000	65000
LATAGS	N/A	N/A
AGES/AD	N/A	N/A

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APPENDIX A

DEFINITIONS

Overview

This appendix provides definitions of various words and acronyms found in this Manual.

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APPENDIX A

DEFINITIONS

Air Sentry	An individual designated by the Officer in Charge (OIC) of Firing to maintain surveillance of an assigned sector of airspace to warn of the approach of aircraft.
Area Alpha	Special military operations area connecting W-291 to R-2503A from surface to 2,000' MSL, established by a Letter of Agreement with the FAA, that affords fixed wing high speed VFR operations.
Artillery Firing Area	Area established to support artillery firing activities.
Base	Marine Corps Base, Camp Pendleton (also known as MCB).
Cantonment	An area assigned for administrative and logistical functions, such as housing, troop billeting, offices, storage and maintenance areas. Normally, field training and live-firing are not conducted within cantonment areas.
Common Impact Area	The impact area created when the surface danger zones of concurrently used ranges overlap.
Confined Area Landing Site (CALSITE)	Helicopter landing areas located in Camp Pendleton training areas used for confined area landing practice, external training, etc.
Consolidated Radar Control Facility (CRCF)	Marine Corps Base and Marine Corps Air Station Camp Pendleton, Air Traffic Control and Range Control Facility, BLDG 2399, Marine Corps Air Station, Camp Pendleton. Location of LONGRIFLE.
Controlled Firing Area (CFA)	Airspace established to conduct activities that would be hazardous to non-participating aircraft if not conducted in a controlled environment. It is the range user's respon-sibility to provide for the safety of persons and property on the surface and to cease firing when aircraft transit the CFA.

CPAAA	Camp Pendleton Amphibious Assault Area is an ocean area used for amphibious training activities and exercises.
CPAVA	Camp Pendleton Amphibious Vehicle Area is an area contained within CPAAA. It is adjacent to the shoreline and used for amphibious training activities.
Dedicated Impact Area	Impact area supporting live-fire of dud-producing ordnance (e.g., Quebec, Whiskey, and Zulu Impact Areas).
Drop Zone (DZ)	A tactical landing zone in which personnel or cargo paradrops are authorized.
Dud	Ammunition of any caliber or weight that has been fired, placed, dropped, thrown or launched but which fails to function as designed.
FCLP	Field Carrier Landing Practice
Field Training Facilities	Those areas designated for a specific type of training, normally not requiring the use of live ordnance (e.g., rappel towers, combat towns).
Fire and Maneuver Range	Range on which troop movement and live-firing may be conducted simultaneously.
Fire Danger Rating	National rating based on weather conditions and fire burning indexes describing the potential for wildland fire ignition, rate of spread, and suppression probability.
Firing Lane	The area within which a weapon system is fired. It consists of a start firing line, cease-firing disarm line, and left and right limits of fire.
Firing Line or Point	The location from which a weapon is fired at a target or into an impact area.
Flat Trajectory/ High Velocity Weapons	Recoilless rifles, tank guns, LAV 25mm guns, and artillery (when conducting direct-fire operations).

Formal School A school or a single course conducted by a school, which produces, as a result of its Program of Instruction (POI), a Marine qualified in a Military Occupational Specialty (MOS). This definition includes Weapons and Field Training Battalion (WFTBN), the Range Coach and Marksmanship Instructor, and Martial Arts Instructor/Trainer Courses conducted by 1st Marine Division.

Forward Air Controller (FAC) A Naval Aviator designated to serve in the same capacity as an OIC of Firing and/or Range Safety Officer (RSO), but specifically for control of aircraft in support of ground troops.

Forward Air Controller/Air-borne (FAC/A) A Naval Aviator/Flight Officer aboard an aircraft designated to serve in the same capacity as an OIC of Firing and/or Range Safety Officer (RSO), but specifically for control of aircraft in support of ground troops while airborne. On board MCB, Camp Pendleton, only rotary-wing FAC(A)s are authorized.

Hang Fire An undesired delay in the functioning of a firing system. A hang fire for a rocket occurs if the rocket propellant is ignited by the firing impulse, but the rocket fails to exit the launcher within the expected time frame.

High Explosive Impact Area Impact areas specifically designed for the impact of all types of ordnance, such as high explosive impact areas (Quebec, Camp Pendleton, and Zulu). These areas are also referred to as dedicated or permanent impact areas.

Instrument Flight Rules Aircraft flights conducted under instrument conditions.

Impact Area The area into which the fire of weapons is directed. It usually extends from the far boundary of the target line 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 type of weapon.

Landing Zone (LZ) A pre-designated, numbered helicopter landing zone, which provides major commands ready access to air transportation and medical evacuation.

Laser Range Safety Officer (LRSO) A designated individual who has attended the Laser Range Safety Course, and has been issued an LRSO card. The LRSO is responsible for ensuring compliance with the Range and Training Regulations and the unit standing operating procedures for laser operations and training.

Leased Area	Government property within the confines of MCB, Camp Pendleton that is leased to non-military tenants, such as the State Beach and agricultural areas.
Live-Fire Range	A range on which live-fire exercises, including the use of some types of practice ammunition, may be conducted.
LONGRIFLE	The communication callsign for Range Control [RADIO UHF 301.9, 255.2, 249.9, VHF 123.2, FM 30.35, 49.00; TELEPHONE (760) 725-4604/3974, DSN 365-4604/3974].
Malfunction	Failure of a munition to function in accordance with design, intent, or expected performance.
Maneuver Area	Two or more contiguous training areas designated and scheduled by a using unit for tactical exercises of battalion level or higher.
Military Munitions Rule (MMR)	Rule that identifies when conventional and chemical military munitions are or are not considered solid hazardous wastes.
Military Operations Area (MOA)	An airspace assignment established to separate or segregate certain military aircraft activities from IFR traffic and to identify for VFR traffic where these activities are occur.
Military Operations in Urban Terrain (MOUT) Facility	Refer to BO 3500.3 (MOUT SOP). Not to be confused with combat towns.
Misfire	Temporary failure or delay in the action of a primer, igniter, or propelling charge. A DRAGON, TOW, or other item that fails to launch, but internal components such as thermal batteries and gyros are initiated.
Mortar Firing Area	An area established to support multiple mortar-firing activities from a designated area to a pre-determined target position.

NEW	Net Explosive Weight (in pounds). The actual weight of explosive mixture of compound including the TNT equivalent of other energetic material, which is used in the determination of explosive limits and ESQD arcs.
No Fire Area (NFA)	A designated area into which neither live-fires nor effects of live-fire will occur. NFAs are designated by a six-digit grid with a radius in meters.
Non-Lethal	Also known as less than lethal. Pertains to training conducted with munitions not intended to be lethal.
Notice to Airmen (NOTAM)	A message to aircraft pilots in a specific area warning of airspace restrictions, equipment outages, or other factors which may affect flight activities.
Notice to Mariners (NOTMAR)	A publication to mariners and vessels warning of conditions dangerous to navigation, such as live-firing or amphibious exercises.
NBC	Nuclear, Biological, Chemical
NBC Agents	Devices, biological agents and chemicals that may cause damage incapacity, injury, sickness, or death.
Observation Post (OP)	A point from which impacting ordnance may be observed.
Officer in Charge (OIC)	An individual designated by the Commanding Officer of the training unit who assumes responsibility for all aspects of training to include but not limited to live-fire, paradrops, or air exercises.
Overhead-Fire	The firing of projectiles over the heads of personnel, or over areas in which the presence of personnel is suspected. Must be approved in advance by the Range Control Officer.
Paradrop	The controlled aerial delivery of personnel or equipment by parachute.

POL	Petroleum, oil, and lubricants
Position Commander	Officer in command of an artillery position.
Pyrotechnics	Non-injury causing smoke or signals, either flares or grenades. White phosphorous is not considered a pyrotechnic.
Range	A training facility designated for live-fire, practice firing of weapons, demolitions, flame weapons, or fire and maneuver exercises.
Range Guard	An individual designated to maintain surveillance over an assigned locale to prohibit unauthorized entry into a surface danger area, and to give the alarm in the event that entry is detected.
Range Safety Officer (RSO)	A designated individual who has attended the Camp Pendleton Range Safety Officer Course and has received a Camp Pendleton RSO card. The RSO is assigned by the OIC of Firing to assist in enforcing all safety measures while operating in Camp Pendleton ranges and training areas.
Restricted Airspace/Area	Airspace designated under Federal Aviation Regulations, Part 73, within which the flight of non-participating aircraft, while not wholly prohibited is subject to restriction.
San Onofre High/Low Military Operations Area (MOA)	High/Low MOA established over the coastal area activated during large-scale amphibious exercises to support aviation operations.
Special Use Airspace (SUA)	Airspace in which aviation activities must be confined because of their nature and where limitations may be imposed on aircraft operations that are not a part of those activities. Types of SUA include Restricted Areas, CFAs, MOAs, and Warning Areas.

Surface Danger Zone (SDZ)	The ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapons systems to include explosives and demolitions.
Survey Control Point	A permanent or semi-permanent concrete or brass marker placed to denote a topographical reference point.
TNT Equivalent	Considering the peak overpressure produced by detonation of a given weight of TNT as 100 percent, the TNT equivalency of an explosive is the amount of overpressure produced by detonation of an identical quantity of explosive compound under comparable conditions, expressed as a percentage.
TERF Route	Terrain Flight route used for helicopter low altitude navigation training.
Training Area	All areas on Camp Pendleton outside of cantonment and impact area boundaries.
VFR	Aircraft operations conducted under visual flight rules.

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APPENDIX B

IMPACT AREAS

Overview

This appendix provides details regarding the locations, dimensions, and procedures for entering the impact areas on board MCB, Camp Pendleton.

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	B-3
2. Impact Areas For Mortar Fires and Aviation-Delivered Ordnance Impact Area	B-4
3. Artillery Fires in Impact Areas	B-4
4. Ranges Not Within Impact Areas	B-4
5. No Fire Areas	B-4
6. Warning and Entry	B-5
7. Control	B-6
8. Coordination	B-6
9. General Training Use	B-7

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APPENDIX B

IMPACT AREAS

1. GENERAL

a. Zulu Impact Area Dedicated impact area bounded by grids 659 960 to 659 927 to 638 911 to 608 927 to 602 942 to 614 957 to 624 955 to 645 968 to the beginning.

b. Whiskey Impact Area Dedicated impact area bounded by grids 602 942 to 578 942 to 553 964 to 557 992 to 576 001 to 615 995 to 635 974 to 645 968, then following the Horno Ridge southwesterly to the beginning.

c. Quebec Impact Area Dedicated impact area bounded by grids 537 960 to 522 966 to 517 975 to 513 986 to 513 990 to 524 001 to 552 994 to 548 982 to 548 972 to 545 966 to the beginning.

d. Edson Range The range is bounded by grids 606 806 to 605 813 to 604 812 to 601 811 to 597 811 to 597 815 to 599 817 to 606 829 to 607 830 to 608 832 to 606 836 to 617 843 to 635 830 to 625 810 to 620 805 to 612 802 to the beginning.

e. X-Ray Impact Area The area is bounded by grids 621 846 to 615 853 to 613 860 to 621 872 to 617 875 to 613 885 to 618 888 to 626 890 to 633 888 to 635 892 to 644 890 to 649 895 to 655 891 to 647 877 to 652 855 to 654 855 to 655 851 to 653 849 to 654 843 to 650 840 to the beginning.

f. Grenade Ranges The locations listed below are hand grenade ranges, and are encircled by a surface danger zone radius of 150 meters.

GRID	DESCRIPTION
621 805	Range 503
625 893	Range 109
503 016	Range 307
624 849	MAC 6 (Tire House)
525 968	Range 202

2. IMPACT AREAS FOR MORTAR FIRES AND AVIATION-DELIVERED ORDNANCE IMPACT AREA

For the purpose of Surface Danger Zone (SDZ) construction, all buffers, ricochet areas, etc., shall be contained within the Camp Pendleton Impact Area. A blue-dotted line on the Camp Pendleton Military Installation Map depicts the impact area for mortar and aviation delivered ordnance fires. The area is bounded by 639 912 to 659 927 to 659 960 to 635 973 to 615 994 to 576 002 to 557 992 to 554 971 to 599 949 to 609 927 to the beginning. In addition to this area, the R-210E impact area is also authorized to support mortar fire (refer to appendix C of this Manual).

3. ARTILLERY FIRES IN IMPACT AREAS

An area designated for artillery fires only, and bounded by 577 000, continuing through 615 994, 635 973, 659 960, 659 927, 639 907, 629 912, 609 927, 599 942, 589 942, 549 962 to 559 996. For the purpose of SDZ construction, all buffers, ricochet areas, etc., must be contained within this impact area, and must avoid established NFAs.

4. RANGES NOT WITHIN IMPACT AREAS

The following ranges (also listed in appendix C of this Manual) are not within the boundaries of the impact areas delineated above: R-107, R-109, R-127, R-206, R-207, R-207A, R-300, R-307, R-401, and R-403. Surface danger zones for these ranges are depicted on the current edition of the Camp Pendleton Military Installation Map.

5. NO FIRE AREAS (NFA)

The Camp Pendleton NFAs listed on the following page are to be used when conducting live-fire training within the impact areas listed above.

IMPACT AREA	NFA	GRIDS	MANNED RADIUS	UNMANNED RADIUS
ZULU	RG 223B	621 925	500 M	100 M
ZULU	RG 409A	661 950	500 M	100 M
*ZULU	RG 409A	659 962 to 655 957 to 649 954 to 646 949 to 656 942 to 663 936 to 668 931 to 679 926 to 685 928 to 690 932 to 690 937 to 687 940 to 674 957 to 659 962	N/A	N/A
ZULU	OP I	649 968	500 M	100 M
ZULU	RG 218A	579 936 to 575 937 to 574 946 to 582 944	N/A	N/A
WHISKEY	OP J	596 995	500 M	100 M
WHISKEY	RG 600	621 984	500 M	N/A
WHISKEY	OP M	617 989	500 M	N/A

*Also designated as a No Training Area.

6. WARNING AND ENTRY

a. Boundaries Impact area and range boundaries are marked with red warning signs stating, "DANGER – IMPACT AREA – KEEP OUT." Signs are posted at approximately 100-meter intervals in prominent locations.

b. Entry Entry into these areas for official business is accomplished as follows.

(1) Permission for non-participants to enter a specific range may be granted by the Officer in Charge (OIC) of Firing on that range, or LONGRIFLE. OIC of Firing permission to enter the range DOES NOT constitute permission to enter the impact area.

(2) Permission to enter an impact area may be granted only by LONGRIFLE. EOD personnel must accompany anyone entering a dedicated impact area.

(3) Permission to travel established roads (Jardine Canyon, San Mateo Canyon, DeLuz Canyon entrance to R-409A, Aliso Canyon, or Roblar Roads) through impact areas may be granted only by LONGRIFLE.

(4) Entry into the Quebec, Whiskey, and Zulu Impact Areas for hunting is prohibited.

7. CONTROL

LONGRIFLE controls all firing on ranges, and into the designated impact areas. LONGRIFLE is located at the Consolidated Radar Control Facility (CRCF), Bldg. 2399, MCAS, Camp Pendleton. Telephone numbers are DSN 365-4604/3974 or commercial (760) 725-4604/3974.

8. COORDINATION

a. General Firing into impact areas shall be coordinated by LONGRIFLE.

b. CAS Missions Conducting CAS missions in the aircraft bombing and/or strafing areas within the Whiskey and Zulu Impact Areas may require temporary check-fires on any range or training area bordering these major impact areas.

c. Air Strikes After coordination with LONGRIFLE, units using ground weapons systems to mark for aircraft may continue to fire mortars for marking, illumination, and suppressive fire during the conduct of air strikes under the control of a FAC or FAC(A).

(1) The flight leader shall notify the rotary-wing FAC(A) or TACP upon completion of the strike and check out with LONGRIFLE

(2) After the strike is complete LONGRIFLE shall inform all RSOs whose ranges are in check-fire that they may resume firing.

9. GENERAL TRAINING USE

Units desiring to conduct exercises in non dud-producing impact areas shall submit a scheduling request, per chapter 3 of this Manual, and coordinate with the Range Control Officer no later than two (2) weeks in advance. Policing of the assigned portion of the impact area is the responsibility of the using unit.

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APPENDIX C

RANGES

Overview

This appendix provides a description and regulations for each ground and aviation range on board MCB, Camp Pendleton.

In This Appendix

The following topics and ranges are covered in this appendix.

Topic	See Page
1. Organization	C-5
2. Annex I - Ground Ranges	C-7
Fleet Hospital Ops/Training Command (Compound)	C-7
Field Medical Service School	C-9
R-102	C-11
R-102A	C-13
R-103 (Wilcox Range)	C-15
R-104B	C-17
R-107	C-19
R-109	C-21
R-111	C-25
R-116A	C-27
R-116B	C-29
R-116C	C-31
R-116D	C-33
R-117A	C-35
R-127	C-37
R-130 Complex	C-39
R-131 (MOUT)	C-41
R-131 (MAC 1)	C-43
R-131 (MAC 2)	C-45
R-131 (MAC 3)	C-47
R-131 (MAC 4)	C-49
R-131 (MAC 5)	C-51
R-131 [MAC 6 (Grenade House)]	C-53
R-200	C-55
R-200B	C-57
R-201	C-59
R-202	C-61
R-203	C-65
R-204B	C-67
R-206	C-69

Topic	See Page
R-207	C-71
R-207A	C-73
R-208C	C-75
R-210B	C-77
R-210C	C-79
R-210D	C-81
R-210E	C-83
R-210F	C-85
R-211	C-87
R-212A	C-89
R-212TOW	C-91
R-213	C-93
R-214 (Horno Range)	C-95
R-215A [Assault Field Firing (AFF) Course]	C-97
R-216 (Inactive)	C-99
R-217	C-101
R-218A	C-103
R-219	C-105
R-221	C-107
R-222	C-109
R-223A	C-111
R-223B	C-113
R-225	C-115
R-227	C-117
R-300	C-119
R-307.	C-121
R-312A	C-123
R-313A	C-125
R-314	C-127
R-314A	C-129
R-314B	C-131
R-314C	C-133
R-401	C-135
R-403A	C-137
R-403B	C-139
R-403C	C-141
R-407	C-143
R-407A	C-145
R-407B	C-147
R-407 (Tank/LAV Gunnery Range)	C-149
R-408	C-151
R-409A (Inactive - Under Construction)	C-155
R-501	C-159
R-503	C-161

Topic	See Page
R-505	C-163
R-505A	C-165
R-505B	C-167
R-600	C-169
3. Annex II - Aviation Ranges	C-171
Door Gunner #1	C-171
Door Gunner #2	C-173
R-212TOW (Air Launched)	C-175
R-220 (Whiskey A/C Strafing Area)	C-177
R-440 (Zulu A/C Bombing and Strafing Area)	C-179

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APPENDIX C

RANGES

1. ORGANIZATION

This appendix is presented in two annexes.

a. Annex I Ground Ranges

b. Annex II Aviation Ranges

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APPENDIX C

ANNEX I - GROUND RANGES

RANGE	Fleet Hospital Ops/Training Command (Compound)
LOCATION	Cristianitos Area (473 008)
TYPE	Corpsman Training Compound – Bivouac and Work Site
ALLOWABLE WEAPONS	M16A2 blanks, smoke grenades, simulated booby trap flash, artillery noise simulators – NO AIR-DEPLOYED PYRO OF ANY KIND
RANGE FAN LIMITS**	Within compound
BOUNDARIES**	Within compound (472 009, 473 009, 472 007, 473 007)
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Within boundaries of range
ENVIRONMENTAL	There is California Gnatcatcher habitat nearby. The gnatcatcher habitat is severely damaged by fire; therefore, extreme caution shall be used with open flame, heating elements, cigarettes, and pyrotechnics. Keep troops and vehicles out of the gnatcatcher habitat (brush areas). Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	None (facility is self-sufficient)
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-9841
	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL****
SPECIAL INSTRUCTIONS	1. No high explosive weapons are allowed on this range. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

2. Helicopters may over fly the area.

3. Ensure all weapons are cleared and inspected prior to departing the firing line.

4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

5. Contact the Automated Support Branch (ASB), Range Operations Division (ROD) at (760) 725-4805 fourteen (14) days in advance to coordinate training scenarios. Units shall reconfirm ASB support two (2) working days prior to the planned training event..

RANGE AND TRAINING REGULATIONS

RANGE	Field Medical Service School
LOCATION	November Training Area (650 770)
TYPE	Corpsman Training Facility – Infiltration Course
ALLOWABLE WEAPONS	M16A2 blanks, smoke grenades, simulated booby trap flash, artillery noise simulators, CS capsules - NO AIR-DEPLOYED PYRO OF ANY KIND
RANGE FAN LIMITS**	Within facility
BOUNDARIES**	Within facility
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Within boundaries of range
ENVIRONMENTAL	Refer to chapter 2 of this Manual.
RANGE FACILITIES	Bleachers, sea hut used for NBC training, machine gun and artillery simulators
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	N/A
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Only CS capsules shall be used at this facility. 2. This training area shall be scheduled by the Range Scheduling Office. 3. This training facility is designated specifically for and limited to the Field Medical Service School. 4. Ensure all weapons are cleared and inspected prior to departing the firing line. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

6. Contact the Automated Support Branch (ASB), Range Operations Division (ROD) at (760) 725-4805 fourteen (14) days in advance to coordinate training scenarios. Units shall reconfirm ASB support two (2) working days prior to the planned training event.

7. Accident and MEDEVAC procedures shall be accomplished per chapter 1 of this Manual.

RANGE AND TRAINING REGULATIONS

RANGE	R-102
LOCATION	644 841
TYPE	Pistol Range (Known Distance)
ALLOWABLE WEAPONS	Pistols and revolvers
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	6 meters
MAXIMUM RANGE**	46 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of wetland/drainage vegetation areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Range buildings; public address system; 72 targets; 14, 23, and 46 meter (15, 25, and 50 yard) firing lines; close combat pistol course; range markers; and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3540

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Regulations applicable to firing on Known Distance Pistol Ranges are contained in MCO P3574.1 and BO P3574.1.

2. No high explosive ordnance is allowed on this range.

3. Range fan limits are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Helicopters may over fly the area at 1,000' AGL and above.

5. R-102 shall not be occupied between the 25-yard line and the pits when R-102A is in a hot status.

6. When R-102 is in a hot status, R-102A shall not be occupied.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-102A	
LOCATION	646 844	
TYPE	Pistol/BZO Range	
ALLOWABLE WEAPONS	Rifle 5.56, pistol - all caliber	
RANGE FAN LIMITS**	Refer to Special Instructions below	
BOUNDARIES**	N/A	
MINIMUM RANGE**	Pistol - 7 yards	Rifle - 30 meters
MAXIMUM RANGE**	Pistol - 25 yards	Rifle - 30 meters
IMPACT AREA**	X-Ray Impact Area	
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of wetland/drainage vegetation areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.	
RANGE FACILITIES	Overhead cover, pistol firing line, BZO line, range fan markers, and flag pole	
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area	
ASSIGNED TO	CG, MCB	
TELEPHONE	Nearest phone at R-102 [(760) 725-3540]	

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. R-102A shall not be occupied when R-102 or R-103 are in a hot status.

2. The BZO range and pistol range may not be fired simultaneously.

3. Pistol fire shall only be conducted on the pistol range; rifle fire only on the BZO range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Firing is only authorized from designated firing points to corresponding targets which are perpendicular to the firing line; cross-firing is not authorized.

5. Range fan limits are measured from the left and right firing line markers for each range.

a. Pistol range

(1) Left - 310 degrees mag

(2) Right - 310 degrees mag

b. BZO range

(1) Left - 313 degrees mag

(2) Right - 328 degrees mag

6. Prior to going hot on the R-102A BZO Range, the R-103 pit area must be cleared and a road guard shall be posted on R-103 at the junction of the 100-yard line and the target one pit access road. Positive communication shall be maintained, at all times, between the R-102A RSO and road guard.

7. During weekend shoots, all civilian gun clubs will be limited to firing between targets 73 and 143 on R-103 to allow the R-102A Pistol Range to operate simultaneously. Both the R-102A and R-103 RSOs shall coordinate prior to going hot to ensure no personnel from R-103 are firing on targets 1 to 72.

8. All weapons shall be cleared and inspected prior to departing the range.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM and unit SOP.

10. Helicopters may over fly the area at 1,000' AGL and above.

11. No high explosive ordnance is allowed on this range.

RANGE AND TRAINING REGULATIONS

RANGE	R-103 (Wilcox Range)
LOCATION	654 845
TYPE	Rifle Range (Known Distance)
ALLOWABLE WEAPONS	Rifles (except .50 cal.), man-portable laser, M203 (illum only)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	600 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of wetland/drainage vegetation areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Range buildings; public address system; 146 firing points at the 100, 200, 300, 500, and 600 yard firing lines; range markers; and flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3436
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Regulations applicable to firing on Known Distance Pistol Ranges are contained in directives in the MCO 3570 series. 2. No high explosive ordnance is allowed on this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. Range fan limits are measured from the left and right firing line markers.

4. Helicopters may over fly the area at 1,000' AGL and above.

5. When the R-102A BZO Range is in a hot status, the R-103 pit area shall remain clear. Coordination shall be made with the R-102A RSO prior to moving into the pits.

6. During weekend shoots, all civilian gun clubs will be limited to firing between targets 73 and 143 on R-103 to allow the R-102A Pistol Range to operate simultaneously. Both the R-102A and R-103 RSOs shall coordinate prior to going hot to ensure no personnel from R-103 are firing on targets 1 to 72.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-104B
LOCATION	653 852
TYPE	Non-Lethal Fam Fire
ALLOWABLE WEAPONS	12 gauge (DODIC A011, A012, AA29, AA30, AA31), M-203 (DODIC BA07, BA08, BA09), Rubber Ball Grenade shall be hand-employed only
RANGE FAN LIMITS**	Left - 250 degrees mag Right - 270 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	5 meters
MAXIMUM RANGE**	50 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual.
RANGE FACILITIES	Firing line, range fan markers, bleachers, tables, saw horses, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	5, 15, 30, and 50 meter lines
ASSIGNED TO	CG, MCB
TELEPHONE	None
	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL****
SPECIAL INSTRUCTIONS	1. Ensure all weapons are cleared and inspected prior to departing the firing line. 2. Ensure control measures (saw horse) are posted at both ends of the access road prior to requesting hot status. 3. The RSO SHALL WALK THE BERM ALONG THE RIGHT **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

LATERAL LIMIT TO ENSURE NO PERSONNEL ARE IN THE IMPACT AREA.

4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

5. No high explosive ordnance is allowed on this range.

6. DODIC A011 ("00" Buck Shot) is ONLY authorized for MP Company Non-Lethal Course.

7. Range fan limits are measured from the left and right firing line markers.

8. Personnel using this range shall remain within the specified boundaries.

9. All fire shall be directed down-range, within the fan limits.

10. All persons shall be thoroughly briefed on vertical hazard and other applicable safety issues prior to going "hot."

11. Anyone observing an unsafe condition shall give the command, "Cease fire."

12. The RSO shall be stationed at the center of the firing line and will move with the firing detail up or down-range.

13. A red light (blinking) shall be posted on the range pole during night fire. Contact LONGRIFLE to request the red light.

RANGE	R-107
LOCATION	682 868
TYPE	Skeet and Trap Range
ALLOWABLE WEAPONS	Shotguns using birdshot only
RANGE FAN LIMITS**	Skeet Range Left - 204 degrees mag Skeet Range Right - 250 degrees mag Trap Range Left - 214 degrees mag Trap Range Right - 354 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	325 meters
IMPACT AREA**	N/A
ENVIRONMENTAL	There is California Gnatcatcher habitat nearby. The gnatcatcher habitat is severely damaged by fire; therefore, extreme caution shall be used with open flame, heating elements, cigarettes, and pyrotechnics. Keep troops and vehicles out of the gnatcatcher habitat (brush areas). Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Range buildings, two skeet ranges, two trap ranges, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-4832

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is operated by the Assistant Chief of Staff, Marine Corps Community Services.

2. No high explosive ordnance is allowed on this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. Empty shotgun shell casings shall be collected and properly disposed of immediately after firing.

4. All firing shall be supervised by a RSO.

5. Dry firing is done from firing points only.

6. Shotguns shall not be loaded until the shooter is in a firing position and the down-range area is clear.

7. Shotguns shall be pointed down-range at all times while on the firing line.

8. Shooting is permitted at conventional targets (clay pigeons) only.

9. Ensure all weapons are cleared and inspected prior to departing the firing line.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-109
LOCATION	623 894
TYPE	Hand Grenade Range
ALLOWABLE WEAPONS	High explosive fragmentation grenades (impact area only) Practice grenades and non-lethal grenades (practice pits only)
RANGE FAN LIMITS**	Left - 125 degrees mag Right - 130 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	70 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of wetland/drainage vegetation areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Six throwing positions, one control/observation tower, one EOD observation bunker, firing line, range markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area during hot status
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3736

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Dud sweeps on this range shall be conducted by qualified EOD personnel only.

2. EOD shall be notified five (5) working days prior to commencement of throwing hand grenades on weekend/holidays.

3. One hand grenade at a time shall be thrown.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Holding point #1 is at the bottom of the stairs near the practice pit area. This is the limit of advance for all future relays. Personnel will remain at or behind this point until the next four (4) throwers are signaled to advance to the grenade issue point (holding point #2).

5. Holding point #2 is the grenade issue point designated by the wooden bunker. This area is behind and one (1) level below the observation tower. The authorized personnel at this point are the grenade issue person and the next four (4) throwers. This next relay of throwers will remain inside the bunker until directed to advance to the throwing pits.

6. Range fan limits are measured from the left and right firing line markers.

7. In the event of a dud, training must cease; and LONGRIFLE and EOD shall be notified. Training shall not resume until authorized by LONGRIFLE.

8. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

9. All personnel not in the throwing bay shall be below the steps next to the practice-throwing pit.

10. The RSO and COMM assets shall be inside the reviewing tower during hot status. Other authorized personnel in the tower are: OIC, and no more than two (2) observers.

11. Should bays #1, #2, or #3 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #4, #5, and #6.

12. Should bays #4, #5, or #6 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #1, #2, and #3.

13. If a dud is experienced on both sides of the range, all training shall stop until EOD has cleared the range.

14. Practice grenades shall be thrown in practice grenade bays only. Residue from these grenades shall be policed by the using unit.

15. Using units shall drag the impact area with a raking device provided on site before departing the range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

16. The practice pit area shall be raked before departing the range.

17. A safety vehicle will be staged at the lower level at the bottom of the berm near the road.

18. The corpsman will be in the observation tower or by the safety vehicle at the practice grenade area.

19. The entire range is inside the 150 meter SDZ (frag pattern). Helmets and flak jackets are required for all personnel, throwing grenades, waiting to throw grenades, safety personnel, road guards, and all personnel in practice pit area when the range is in a hot status, and HE grenades are being thrown.

20. All grenades impacting outside the designated impact area shall be reported to LONGRIFLE.

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RANGE AND TRAINING REGULATIONS

RANGE	R-111
LOCATION	617 887
TYPE	Transition Rifle Course (Individual Combat Positions)
ALLOWABLE WEAPONS	Pistols, rifles to 5.56, shotguns, M203 (illum only)
RANGE FAN LIMITS**	Left - 105 degrees mag Right - 127 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	350 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	The willow trees, brush, and sandy wash areas behind the firing line of this range provide habitat for endangered Least Bell's Vireos. As long as the Fire Danger Rating (FDR) is adhered to, normal range operations will not affect minimal use of the wetland and river bottom vegetation areas to the extent practical from 15 March to 1 September. Do not clear vegetation outside range boundaries without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Six firing lines, one control tower, one white left lateral limit marker, one orange right lateral limit marker
TROOP PENETRATION LIMIT FROM FIRING LINE**	Refer to Special Instruction #1.
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. The maximum troop penetration limit is measured from the static firing line of each firing lane to the last row of cement target holders.

2. Due to airspace restrictions and other safety issues, mortars are not authorized.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. The RSO shall maintain a constant watch for aircraft operating within the surface danger zone (SDZ). The RSO shall be responsible for cessation of fire.

4. Units desiring to use this range shall contact the Automated Support Branch (ASB), Range Operations Division (ROD) at (760) 725-4805 at least fourteen (14) days prior to the planned training event to coordinate training scenarios. Units shall reconfirm ASB support two (2) working days prior to the planned training event.

5. Ensure all weapons are cleared and inspected prior to departing the firing line.

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-116A
LOCATION	641 890
TYPE	Known Distance Rifle Range
ALLOWABLE WEAPONS	Rifle 7.62, 5.56
RANGE FAN LIMITS**	Left - 175 degrees mag Right - 198 degrees mag
BOUNDARIES**	R-116 Complex
MINIMUM RANGE**	100 yards (90 meters)
MAXIMUM RANGE**	800 yards (720 meters)
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range, and troops should avoid digging activity or removal of any artifacts found on the surface, or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during periods when the soil is moist to prevent compacting the soil. Road grading, mechanical excavation/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Head, admin office, firing towers, flag pole, control gates, impact area, 50 firing points at the 90, 180, 275, and 460 meter (100, 200, 300, 500 yard) firing lines; decreasing to 40 firing points at the 550 meter (600 yard) firing line; decreasing to 10 firing points at the 640 and 720 meter (700 and 800 yard) firing lines
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0103 or DSN 577-3556

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Personnel shall proceed either on foot or by military vehicle to firing positions, targets, and range butts area. Civilian vehicles shall NOT be used for this purpose.

2. No high explosive ordnance is allowed on this range.

3. Range fan limits are measured from the left and right firing line markers, and the 800 and 100-yard firing lines.

4. This range conflicts with Aliso Canyon.

5. The RSO shall ensure all access gates to R-117A are closed and locked when this range is in a hot status.

6. Road guards shall be posted, or gates shall be closed at access roads coming off of Basilone Road on the east and west sides of the range.

7. All shooters shall check in/out with the R-116A Complex Range Complex.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-116B
LOCATION	637 888
TYPE	BZO Range (Battle Site Zero)
ALLOWABLE WEAPONS	Rifle/Pistol 7.62, 5.56, 9mm, .45 cal., shotgun
RANGE FAN LIMITS**	Left - 198 degrees mag Right - 220 degrees mag
BOUNDARIES**	R-116 Complex
MINIMUM RANGE**	15 yards
MAXIMUM RANGE**	50 yards
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range, and troops should avoid digging activity or removal of any artifacts found on the surface, or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during periods when the soil is moist to prevent compacting the soil. Road grading, mechanical excavation/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Tower, head facility, 25 firing points with pop-up targets, admin office, range flag, control gate
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond impact berm
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0103 or DSN 577-3556

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Personnel shall proceed either on foot or by military vehicle to firing positions, targets, and range butts area. Civilian vehicles shall NOT be used for this purpose.

2. No high explosive ordnance is allowed on this range.

3. Range fan limits are measured from the left and right firing line markers.

4. This range conflicts with Aliso Canyon.

5. R-116C (270 Degree Moving Target Range) shall not be occupied when R-116B is in a hot status.

6. Firing points shall not be altered.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-116C
LOCATION	636 886
TYPE	270 Degree Multi-target Combat Engagement
ALLOWABLE WEAPONS	Rifle, pistol, shotgun, 5.56, 9mm, .45 cal., 12 gauge
RANGE FAN LIMITS**	Left - 74 degrees mag Right - 316 degrees mag
BOUNDARIES**	R-116 Complex
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	25 meters
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range, and troops should avoid digging activity or removal of any artifacts found on the surface, or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during periods when the soil is moist to prevent compacting the soil. Road grading, mechanical excavation/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Tower, 30 pop-up targets, three (3) moving targets (hard-wired), range flag
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond impact berm
ASSIGNED TO	CG, MCB
TELEPHONE	CNSWG-1 – (619) 437-3556 or DSN 577-3556 R-116A – (760) 725-0103 or DSN 365-0103

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SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Personnel shall proceed either on foot or by military vehicle to firing positions, targets, range butts area, and designated areas. Civilian vehicles shall NOT be used for this purpose, nor are they allowed on the range.

2. No high explosive ordnance is allowed on this range.

3. This range conflicts with Aliso Canyon.

4. This range shall not be occupied when R-116B (BZO Range) is in a hot status.

5. No POV parking is allowed on this range.

6. All firing shall be conducted from authorized firing points only.

7. Primary training focus supports advanced special operations (SO/SOC) individual and small unit combat engagement. This target system simulates multiple threats in an urban environment.

8. Normal scheduling shall reduce conflicts with the BZO Range (R-116C) and the Close Quarter Combat Range (R-116D).

9. Serious injury may occur should a target system actuate when personnel are scoring targets or performing maintenance.

10. Range fire fan limits are measured from the left and right lateral markers and selected firing positions within the shooting box via Profile Sheets.

11. Training scenarios shall be selected and documented on Profile Sheets and coordinated with LONGRIFLE prior to the shooting evolution.

12. Two weeks prior to the scheduled evolution, the User Element shall schedule with the Range Scheduling Office, and coordinate with the Camp Director to establish shooting skill levels, and program target scenarios.

13. The User Element shall provide paraffin impregnated and paper overlay “E” silhouette targets for the training evolution.

14. Only authorized personnel are allowed in the control tower and pop-up target area.

15. Ensure all weapons are cleared and inspected prior to departing the firing line.

16. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-116D
LOCATION	637 890
TYPE	360 Degree Shooting House
ALLOWABLE WEAPONS	Rifle 7.62, 5.56; pistol 9mm, .45 cal.; simmunitions (Refer to Special Instructions #5-#8.)
RANGE FAN LIMITS**	Contained within structure
BOUNDARIES**	Contained within structure
MINIMUM RANGE**	1 meter
MAXIMUM RANGE**	When your back is against the wall
IMPACT AREA**	Contained within structure
ENVIRONMENTAL	Archaeological sites are located at this range, and troops should avoid digging activity or removal of any artifacts found on the surface, or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during periods when the soil is moist to prevent compacting the soil. Road grading, mechanical excavation/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Shooting house with multiple room adjustments, range flag
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0103 or DSN 577-3556

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SPECIAL INSTRUCTIONS

1. Personnel shall proceed either on foot or by military vehicle to the shooting structure. Civilian vehicles shall NOT be used for this purpose, nor are they allowed on the range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. ¼ lb. NEW (net explosive weight) or less is authorized for breaching only.

3. Ensure all weapons are cleared and inspected prior to departing the shoot house.

4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

5. All participants and safety observers shall wear a full-face safety mask, goggles, helmet, and flak jacket.

6. The OIC shall inspect and instruct all participants to ensure no live ammunition is utilized during these training periods. Rubber ammunition is prohibited.

7. Ensure all conversion kits are properly installed and the weapons have been marked as modified.

8. When a safe weapon leaves the training area (i.e., head call), the OIC shall inspect it prior to authorizing usage.

RANGE AND TRAINING REGULATIONS

RANGE	R-117A
LOCATION	649 896
TYPE	Known Distance and Unknown Distance Sniper Range, Live-Fire Stalking Maneuver
ALLOWABLE WEAPONS	Rifle 7.62, 5.56
RANGE FAN LIMITS**	Left - 160 degrees mag Right - 200 degrees mag
BOUNDARIES**	Known Distance Range - from 649 896 to 641 879 to 646 880 back to 649 885 Unknown Distance Corridor - from 649 885 to 643 899 to 644 892 to 644 886
MINIMUM RANGE**	100 yards (90 meters)
MAXIMUM RANGE**	1400 yards (1280 meters)
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Tower, 3 flag poles, 12 RETS targets [four (4) moving infantry targets and eight (8) stationary infantry targets], 10 standard butts targets
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-1008

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SPECIAL INSTRUCTIONS

1. The RSO shall conduct a face-to-face brief with R-116A personnel prior to occupying this range.

2. The RSO shall ensure the old R-117 access gate is secured, as well as the butts gate to R-116A.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. The RSO shall ensure the tower, old access gate, and the butts safety flags are posted.

4. A Condition 1 status on weapons is authorized on firing lines only.

5. Stalking: During sniper training, units are authorized to maneuver with weapons in a Condition 3.

6. The RSO shall ensure the safety and security of all personnel training on this range.

7. Range fan limits are measured from the left and right line markers.

8. This range conflicts with Aliso Canyon and the Kilo One Training area.

9. The preferred firing positions (gun to target) are firing perpendicular to the target or from the center/right side of the maneuver corridor to the left side of targets when possible.

10. The range is under the direct supervision of the Range NCO, and it is contractor-operated. All units shall coordinate with the contractor at least 48 hours in advance to arrange for an in-brief and to develop training scenarios.

11. Ensure all weapons are cleared and inspected prior to departing the firing line.

12. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-127
LOCATION	604 841
TYPE	LAV Laser Sub Caliber Gunnery Range
ALLOWABLE WEAPONS	5.56, single shot only, eye safe (Class IV) laser, (see Special Instruction #7)
RANGE FAN LIMITS**	Left - 020 degrees mag Right - 033 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	20 meters
MAXIMUM RANGE**	100 meters
IMPACT AREA**	Oscar Two Maneuver Area and X-Ray Impact Area
ENVIRONMENTAL	There is California Gnatcatcher habitat nearby. The gnatcatcher habitat is severely damaged by fire; therefore, extreme caution shall be used with open flame, heating elements, cigarettes, and pyrotechnics. Keep troops and vehicles out of the gnatcatcher habitat (brush areas). Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Space for five (5) LAVs on firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None

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SPECIAL INSTRUCTIONS

1. Personnel shall ensure all rounds impact in the designated impact area.

2. Use of lasers on this range is covered in chapter 8.

3. The RSO shall ensure two range flags (one at 606 839 and one near the firing line) are flying during firing.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Constant communication shall be maintained between the RSO and the vehicle firing line.

5. Road guard shall be posted at the junction of Reeper Road and the trail to R-127.

6. Units shall be prepared to establish communication links with LONGRIFLE via retrans/RC292/OE-254.

7. The only weapon to be fired on this range is the M-16A2 rifle mounted in the LAV SUB CALIBER ATTACHMENT to simulate main gun firing.

8. A positive mechanical elevation stop is required. This will be accomplished by mounting a cargo strap across the front of the vehicle to include the barrel of the main gun. This cargo strap will be cinched down to allow only minimal elevation and traversing. This will enable the gunner to maintain positive control on the amount of movement on the main gun.

9. Ensure all weapons are cleared and inspected prior to departing the firing line.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-130 Complex
LOCATION	618 857
TYPE	Special Operations Training Complex
ALLOWABLE WEAPONS	Pistols, rifles, submachine and machine guns (except .50 cal.), shotguns, M203 (authorized DODICs M4070A1, M382, B480, M385), grenades (concussion), explosives (not to exceed 40 lbs. tamped/untamped in designated areas)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	614 854 to 614 871 to 622 872 to 624 862 to 624 854 to beginning
MINIMUM RANGE**	The minimum range shall be determined by the mission training requirements, and the capability of the unit or individuals to use the weapons selected.
MAXIMUM RANGE**	The maximum range for any training evolution shall be that no fired rounds will leave the grid boundaries established above.
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	There is California Gnatcatcher habitat nearby. The gnatcatcher habitat is severely damaged by fire; therefore, extreme caution shall be used with open flame, heating elements, cigarettes, and pyrotechnics. Keep troops and vehicles out of the gnatcatcher habitat (brush areas). Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Two close quarters battle shooting houses, submachine gun/pistol range, moving target range, vehicle assault ranges A and B, infantry squad assault course, live-fire obstacle course, special demolitions range, simulated missile launcher site, simulated missile launch radar site, simulated aircraft crash site, sniper hides
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-2924 and 725-2547

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SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. All certifications (except Camp Pendleton RSO) and scheduling are done through the CG, I MEF, Special Operations Training Group (SOTG).

2. Certified sergeants may serve as RSOs on this range. The standard RSO certification procedures apply.

3. Requirements for individual ranges are contained in the R-130 SOP, and may be coordinated with SOTG personnel at the range complex.

4. Ensure all weapons are cleared and inspected prior to departing the firing line.

5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MOUT)
LOCATION	621 847
TYPE	Military Operations in Urban Terrain (MOUT)
ALLOWABLE WEAPONS	Blanks, smoke, pyrotechnics, flash bangs, trip flares, ¼ lb. TNT, TOW blast simulator
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. Ensure all weapons are cleared and inspected prior to departing the MOUT Facility. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MAC 1)
LOCATION	622 853
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	Rifles (M16A2), pistols (.38 cal., .40 cal., .45 cal., and 9mm), shotguns ("00" buckshot), M203 (illum only), M249 SAW
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MAC 2)
LOCATION	622 853
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	Rifles (M16A2), pistols (.38 cal., .40 cal., .45 cal., and 9mm), shotguns ("00" buckshot), M203 (illum only), M249 SAW
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MAC 3)
LOCATION	622 853
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	Rifles (M16A2), pistols (.38 cal., .40 cal., .45 cal., and 9mm), shotguns ("00" buckshot), M203 (illum only), M249 SAW
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MAC 4)
LOCATION	622 853
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	Rifles (M16A2), pistols (.38 cal., .40 cal., .45 cal., and 9mm), shotguns ("00" buckshot), M203 (illum only), M249 SAW
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 (MAC 5)
LOCATION	622 853
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	5.56, M40A1 sniper rifle, M203 (TP and illum only), pistols [(.38 cal., .45 cal., and 9mm); refer to special instruction #2 below]
RANGE FAN LIMITS**	N/A
BOUNDARIES**	619 847 to 621 856 to 633 856 to 633 846
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. Use of pistols is authorized for the Close Combat Rifle Course by Division Schools, and the Urban Obstacle Course by School of Infantry only. 3. This range conflicts with training activities conducted in Aliso Canyon. 4. Ensure all weapons are cleared and inspected prior to departing the firing line. 5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-131 [MAC 6 (Grenade House)]
LOCATION	625 849
TYPE	Military Operations in Urban Terrain (MOUT) Assault Course (MAC)
ALLOWABLE WEAPONS	High explosive fragmentation grenades (in front room of tire house only), practice grenades (in practice pits only), pistols (.38 cal., .40 cal., .45 cal., and 9mm), 5.56 rifles
RANGE FAN LIMITS**	N/A
BOUNDARIES**	Tire house
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	X-Ray Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Admin building, classroom, conference room, flag pole, MOUT environment, MAC facilities
TROOP PENETRATION LIMIT FROM FIRING LINE**	Troops may maneuver through all rooms in the tire house.
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0887
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Refer to BO P3500.3 (MOUT SOP). 2. This range conflicts with training activities conducted in Aliso Canyon. 3. EOD shall be notified five (5) working days prior to commencement of throwing hand grenades on weekends/holidays. 4. One hand grenade at a time shall be thrown. 5. In the event of a dud, training shall cease. Notify LONGRIFLE for EOD support. Training shall not resume until authorized by LONGRIFLE.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

6. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

7. All personnel not directly involved with the training scenario shall be outside of the tire house.

8. The RSO shall be present in the tire house during hot status, and shall observe each grenade thrown.

9. Practice grenades shall be thrown in practice grenade bays only. Residue from these grenades shall be policed by the using unit.

10. Ensure all weapons are cleared and inspected prior to departing the firing line.

11. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-200
LOCATION	506 948
TYPE	Infiltration Range
ALLOWABLE WEAPONS	¼ lb. TNT or C4 equivalent, artillery noise simulators, machine gun simulators
RANGE FAN LIMITS**	N/A
BOUNDARIES**	506 948 to 505 949 to 504 950 to 508 951 to beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	None
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of the wetland/drainage areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Control tower, controlled demolitions, wiring, barbed wire, machine gun simulators, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Using units shall provide ¼ lb. TNT or C4 equivalent and caps as required. 2. The RSO shall ensure all charges have been expended. Misfires shall be removed from the range upon completion of training, and unused demolition materials shall be accounted for. 3. Units desiring electrically-operated target support shall contact the Automated Support Branch (ASB), Range Operations Division (ROD)

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

at (760) 725-4508 at least fourteen (14) days prior to the planned training event to coordinate training scenarios. Units shall also reconfirm ASB support two (2) working days prior to the planned training event.

4. When pits are in use, personnel shall not stand erect within 25 meters of the demo pits.

5 Ensure all weapons are cleared and inspected prior to departing the firing line.

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-200B
LOCATION	509 949
TYPE	Day Infiltration Course
ALLOWABLE WEAPONS	Blanks, bayonets, smoke devices, pyrotechnics
RANGE FAN LIMITS**	N/A
BOUNDARIES**	510 949 to 510 948 to 508 949 to 508 948 to beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	None
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of the wetland/drainage areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Three (3) lanes of ten obstacles each, flag pole, machine gun simulator, demo pit, and control tower
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Using units shall provide ¼ lb. TNT or C4 equivalent and caps as required. 2. The RSO shall ensure all charges have been expended. Misfires shall be removed from the range upon completion of training, and unused demolition materials shall be accounted for. 3. Units desiring electrically-operated target support shall contact the Automated Support Branch (ASB), Range Operations Division (ROD) at (760) 725-4508 at least fourteen (14) days prior to the planned

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

training event to coordinate training scenarios. Units shall also reconfirm ASB support two (2) working days prior to the planned training event.

4. When pits are in use, personnel shall not stand erect within 25 meters of the demo pits.

5. Ensure all weapons are cleared and inspected prior to departing the firing line.

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-201
LOCATION	516 976
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns (except .50 cal.), M203 (illum only), SMAW (inert or practice only, mortar (illum only), certified lasers
RANGE FAN LIMITS**	Left - 022 degrees mag Right - 067 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	1500 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. No high explosive ordnance is allowed on this range. 2. Range fan limits are measured from the left and right firing line markers. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-202
LOCATION	525 968
TYPE	Hand Grenade Range
ALLOWABLE WEAPONS	High explosive (HE) fragmentation (in impact area only), practice grenades (in practice pits only)
RANGE FAN LIMITS**	Left - 314 degrees mag Right - 322 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	20 meters
MAXIMUM RANGE**	40 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Practice Area - Six (6) concrete block throwing pits with various targets and distances jointed by a safety wall, bleachers, and port-a-johns HE Area - Four (4) concrete block throwing pits, numbered 1 through 4, from left to right, joined by a safety wall; one (1) concrete block control bunker with red step-up box; range fan markers; flag pole; bleachers; and a fire and maneuver course with various targets and distances
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area during hot status
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7189

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS	1. Holding Point #1 is midway on the troop access trail designated by the red line across the path. This is the limit of advance for all future relays. Personnel shall remain at or behind this point until the next four (4) throwers are signaled to advance to the grenade issue point (Holding Point #2).

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. Holding Point #2 is the grenade issue point designated by the red line on the deck. This area is behind the observation tower under the staircase. The authorized personnel at this point are the grenade issue person and the next four (4) throwers. This next relay of throwers shall remain inside the red line area until directed to advance to the throwing pits.

3. Dud sweeps on this range shall only be conducted by qualified EOD personnel.

4. In the event of a dud, training shall cease. Notify LONGRIFLE for EOD support. Training shall not resume until authorized by LONGRIFLE.

5. Only one hand grenade at a time shall be thrown.

6. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

7. Range fan limits are measured from left and right firing line markers.

8. Should bays #1 or #2 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #3 and #4.

9. Should bays #3 or #4 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #1 and #2.

10. If a dud is experienced on both sides of the range, all training shall stop until EOD has cleared the range.

11. The RSO and COMM assets shall be inside the reviewing tower during hot status. Other authorized personnel in the tower are the OIC, and no more than two (2) observers.

12. Using units shall police all debris from the practice pits before departing the range.

13. Using units shall drag the impact area with a raking device provided on site before departing the range.

14. The practice pit area shall be raked before departing the range.

15. A safety vehicle shall be staged at the practice grenade area.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

16. A corpsman shall be in the observation tower or by the safety vehicle at the practice grenade area.

17. The entire range is inside the SDZ (frag pattern). Helmets and flack jackets are required for all personnel in support of, participating in, or observing training while the range is in a hot status.

18. No additions to or modification of targetry are allowed without the express written consent of the LONGRIFLE OIC.

19. All grenades impacting outside of the designated impact area shall be reported to LONGRIFLE.

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RANGE AND TRAINING REGULATIONS

RANGE	R-203
LOCATION	526 974
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Rifles, machine guns, SMAW, AT4, DRAGON, MK19, 25mm (except DODIC A974), M203 (illum only)
RANGE FAN LIMITS**	Left - 028 degrees mag Right - 063 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	150 meters
MAXIMUM RANGE**	600 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. All tire stacks and tire targets are for small arms only. All other weapon systems shall utilize hard targets. 2. Ensure all weapons are cleared and inspected prior to departing the firing line. 3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-204B
LOCATION	533 969
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Rifles, machine guns, M203 (illum only), SMAW, MK19, 25mm (except DODIC A974), mortars
RANGE FAN LIMITS**	Left - 003 degrees mag Right - 034 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	500 meters
MAXIMUM RANGE**	2500 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. No ordnance shall impact on San Juan Road into Jardine Canyon.

2. Range fan limits are measured from the left and right firing line markers.

3. Magazines shall be loaded only on the firing line on command of the OIC or the SNCO-in-Charge.

4. Mortars shall be fired from a position to the right of the firing line.

5. Ensure all weapons are cleared and inspected prior to departing the firing line.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-206
LOCATION	553 926
TYPE	BZO/Non-Lethal Familiarization Firing Range
ALLOWABLE WEAPONS	Rifles, pistols, shotguns, 5.56, 9mm, 12 gauge buckshot/9 shot, 12 gauge (DODIC A011, A012, AA29, AA30, AA31), M-203 (DODIC BA07, BA08, BA09), Rubber Ball Grenade shall be hand-employed only
RANGE FAN LIMITS**	Left - 250 degrees mag Right - 275 degrees mag
BOUNDARIES**	553 937 to 553 927
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	25 meters
IMPACT AREA**	Range boundaries
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	25 firing points at 25 meters for short-range zeroing, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. No high explosive ordnance is allowed on this range. 2. Range fan limits are measured from the left and right firing line markers. 3. No firing is permitted at distances greater than those prescribed above, unless approved by the LONGRIFLE OIC. 4. Units will provide and use only standard paper targets. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

5. Ensure all weapons are cleared and inspected prior to departing the firing line.

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-207
LOCATION	531 942
TYPE	Demolition Range
ALLOWABLE WEAPONS	Demolitions not to exceed two (2) lbs. TNT or C4 equivalent, claymore mines (demonstrations only)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	531 944 to 532 944 to 531 941 to 532 941 to beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Within range boundaries
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of the wetland/drainage areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Covered bleachers, classroom, demolition pits, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7431
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Training in the Alpha Three Area will conflict when claymores are fired. 2. Helmets and flak jackets shall be worn by all personnel while on this range. 3. All training material/trash shall be removed from this range upon completion of training. 4. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-207A
LOCATION	498 949
TYPE	Demolition Range
ALLOWABLE WEAPONS	Demolitions not to exceed ½ lb. charges
RANGE FAN LIMITS**	N/A
BOUNDARIES**	498 949 to 497 948 to 496 947 to 496 947 to 496 948
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Within range boundaries
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of the wetland/drainage areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Covered bleachers, classroom, demolition pits, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Ensure the road crossing behind the range is closed off. 2. Helmets and flak jackets shall be worn by all personnel while on this range. 3. All training material/trash shall be removed from this range upon completion of training. 4. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-208C
LOCATION	538 961
TYPE	Offensive Combat Range (small unit)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, and machine guns (5.56 and 7.62 only), claymore mines (with approval of the RCO)
RANGE FAN LIMITS**	Left - 000 degrees mag Right - 045 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	There is Least Bell's Vireo habitat adjacent to this range in the willow trees and brush. Keep troops and vehicles out of the wetland/drainage areas. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	One control tower (currently unsafe for use), firing line markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Maneuver up to the troop penetration limit (posted)
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7747

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. A roadblock is required on San Juan Road/Jardine Canyon (537 959/ 576 013) to prevent entry into the impact area. This range conflicts with training activities conducted with Jardine Canyon.

2. No high explosive ordnance is allowed on this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. A concept of operations brief to the RCO is required at least fourteen (14) working days prior to the training evolution.

4. All maneuver scenarios, including flanking, shall be from right to left within the lateral limits. Left to right maneuvering is PROHIBITED.

5. Prior to any live-fire, the RSO shall conduct at least one cold walk-through with all firing personnel. Target identification and proper limits of fire shall be fully briefed.

6. Range fan limits are measured from the right and left markers in the maneuver area, below the tower. These markers are a white cement block for left, and a red cement block for right.

7. Contact the Automated Support Branch (ASB), Range Operations Division (ROD) at (760) 725-4805 fourteen (14) days in advance to coordinate training scenarios. Units shall reconfirm ASB support two (2) working days prior to the planned training event.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

10. Obey all posted signs.

RANGE	R-210B
LOCATION	544 956
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns (except .50 cal.)
RANGE FAN LIMITS**	Left - 356 degrees mag Right - 026 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	1,000 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on this range. These rodents can be found on the firing lines between the firing lines and target areas, and along the dirt access roads. Normal range operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	100 meters (UXO past 100 meters)
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7847

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. No high explosive ordnance is allowed on this range.

2. Range fan markers are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. This range conflicts with training activities conducted within Jardine Canyon, LFAM 708, and LFAM 707.

4. Ensure all weapons are cleared and inspected prior to departing the firing line.

5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-210C
LOCATION	546 955
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns (except .50 cal.), M203 (illum only)
RANGE FAN LIMITS**	Left - 355 degrees mag Right - 038 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	25 meters
MAXIMUM RANGE**	1500 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on this range. These rodents can be found on the firing lines between the firing lines and target areas, and along the dirt access roads. Normal range operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Firing line, range fan markers, flag pole, and BZO line
TROOP PENETRATION LIMIT FROM FIRING LINE**	100 meters (UXO past 100 meters)
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7847

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS	1. Range fan limits are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. Troops may conduct fire and movement up through the first 100 meters.

3. Ensure all weapons are cleared and inspected prior to departing the firing line.

4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-210D
LOCATION	552 955
TYPE	M203 Qualification Range
ALLOWABLE WEAPONS	M203 HE/Practice
RANGE FAN LIMITS**	Left - 009 degrees mag Right - 025 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	90 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on this range. These rodents can be found on the firing lines between the firing lines and target areas, and along the dirt access roads. Normal range operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Two firing lines, range fan markers, flag pole, ten firing positions, and bleachers
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7847

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS	1. Range fan limits are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. Cross-lane firing is prohibited when employing all firing positions.

3. Use only 40mm grenade cartridge M406, M433, or M385 for practice.

4. The RSO shall ensure all rounds remain within the impact area.

5. All M203 HE rounds will be fired from the right side of the firing line, and will impact between the orange training practice targets and the range right lateral limit.

6. Ranges 210E/F shall not be occupied when R-210D is in a hot status.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-210E
LOCATION	557 956
TYPE	Defensive Combat Range (small unit)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns, M203 HE, SMAW, AT4, DRAGON, 25mm, TOW, mortars
RANGE FAN LIMITS**	Left - 045 degrees mag Right - 066 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on this range. These rodents can be found on the firing lines between the firing lines and target areas, and along the dirt access roads. Normal range operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Firing line, range fan markers, flag pole, bleachers, and parking lot
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Trees shall not be used as targets
2. R-210E shall not be occupied when R-212TOW is in a hot status.

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. R-210E shall not be occupied when R-210D is in a hot status with HE.

4. R-210E may be occupied when R-210D is in a hot status with TP only.

5. When employing weapons with a back blast area on R-210E, a road guard shall be posted at 555 860.

6. When employing weapons with a back blast area on R-210E, an additional road guard shall be placed at 557 954 when R-210F is occupied.

7. Weapons with a back blast area closes the access road to R-210F, and requires coordination between both R-210E and R-210F RSOs for safe troop movement.

8. All road guard positions shall maintain positive two-way communication with the RSO at all times.

9. Ensure all weapons are cleared and inspected prior to departing the firing line.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-210F
LOCATION	556 957
TYPE	BZO/Field Firing Range
ALLOWABLE WEAPONS	5.56 ball and 5.56 SAW
RANGE FAN LIMITS**	Left - 058 degrees mag Right - 062 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on this range. These rodents can be found on the firing lines between the firing lines and target areas, and along the dirt access roads. Normal range operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/ blading, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Firing line, range fan markers, BZO line, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	40 meters (400 meters if approved by LONGRIFLE)
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range shall not be occupied when R-210D is in a hot status.

2. The R-210F and R-210E RSOs shall coordinate to identify if weapons with a back blast area will be fired; as weapons with a

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

back blast area on R-210E closes the R-210F access road.

3. Range fan limits are measured form the left and right firing line markers.

4. Troops may conduct fire and movement up through the first 40 meters. Movement from 40 meters to 400 meters requires approval by LONGRIFLE, and R-210E to be in a "cold" status.

5. All firing lanes shall remain abreast of one another; cross-lane firing is prohibited.

6. The BZO range and pistol range may not be fired simultaneously.

7. Ensure all weapons are cleared and inspected prior to departing the range.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM and unit SOP.

9. A corpsman, with first aid equipment and a safety vehicle, shall be present at all times when firing is in progress. A corpsman shall also be present during all range maintenance activities involving digging or pounding stakes into the ground.

RANGE	R-211
LOCATION	543 951
TYPE	Demolition Range
ALLOWABLE WEAPONS	TNT or C4 charges not to exceed 15 lbs. untamped/tamped
RANGE FAN LIMITS**	N/A
BOUNDARIES**	50 meter circle to the northeast of benchmark at 544 951
MINIMUM RANGE**	300 meters, or behind berm at 543 951
MAXIMUM RANGE**	Basilone Road boundary
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Flag pole, designated safety area, and concrete benchmark
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This is a demo only range, for training in basic demolition procedures using ring mains and simple charges. All charges shall be surface-laid.

2. All personnel shall be in a designated safe area (bunker/behind berm at 543 951) when firing is in progress.

3. A road guard shall be posted at 542 950 with a "demolition in progress" sign, and with two-way radio communication to the RSO.

4. No traffic/personnel shall enter the range without permission from the RSO.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. All personnel shall wear flak jackets and helmets at all times while on this range.

6. The RSO shall check each shot hole, looking for unconsumed explosives prior to departing the range. The RSO shall also ensure all shot holes are filled and the debris is policed-up.

7. ALL unconsumed explosives shall be policed-up and consolidated for one last clean-up shot prior to the range going cold.

8. ALL unused blasting materials shall be retrieved upon completion of training, and shall be returned to the Las Pulgas ASP.

9. ALL target materials which were used (blown) during training shall be policed-up and taken back with the unit.

10. Line charges are not allowed on this range.

11. NO VEHICLES are permitted in the parking lot when firing is in progress.

12. A total of three (3) radios are needed to safely use this range.

13. The RSO is responsible for all charges, and ensuring all misfire procedures are in compliance with current directives.

14. All demolitions shall be detonated in the demo pit located at 544 952 only.

15. The area at 543 950 shall only be used to drop off or pick up materials used for the demo.

16. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-212A
LOCATION	551 942
TYPE	Offensive/BZO Combat Rifle and Pistol
ALLOWABLE WEAPONS	Rifles, pistols, shotguns (no slugs), machine guns (except .50 cal.)
RANGE FAN LIMITS**	Refer to the Special Instructions below
BOUNDARIES**	549 942 to 551 950 to 555 950
MINIMUM RANGE**	3 meters
MAXIMUM RANGE**	150 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Grassy hills along the east side of Basilone Road contain a proposed threatened plant species. Vehicular traffic to and from this range should remain on existing roads.
RANGE FACILITIES	30 static firing positions, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Refer to the Special Instructions below
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Pistols may be carried in Condition 4 on this range.

2. No high explosive ordnance is allowed on this range.

3. All types of targets may be used on this range to include cardboard or plastic silhouettes, and metal pepper poppers with a minimum distance of 10 yards.

4. Night vision devices may be used for night firing.

5. The instructions listed below pertain to the individual sections of this range. Only one section shall be used at a time.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

a. Static Firing Line

(1) There shall be no troop penetration beyond the firing line while firing is in progress.

(2) The maximum range for pistols is 50 meters.

(3) The maximum range for rifles is 150 meters.

(4) The left range fan limit is 18 degrees mag; the right range fan limit is 20 degrees mag; measured from the left and right firing line markers, respectively.

b. Combat Trails. Troop penetration is into the target area, one at a time, accompanied by an instructor/safety NCO, while firing is in progress.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-212TOW
LOCATION	559 951
TYPE	Primary TOW Range/Field Firing Range
ALLOWABLE WEAPONS	Machine guns (including 20mm), 25mm (except M791/A974), AT4, DRAGON, MK19, TOW, mortars (illum only)
RANGE FAN LIMITS**	Left - 330 degrees mag Right - 020 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	250 meters
MAXIMUM RANGE**	3500 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Range fan markers, flag pole, control tower, firing line, one mortar position
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. During night firing, only 60mm/81mm illumination is allowed.

2. Range fan limits are measured from the left and right firing line markers.

3. When firing DRAGON or TOW, wire shall be retrieved by the using unit after firing is secured by reeling wire. Do not enter the impact area to retrieve wire.

4. This range <u>shall not</u> be occupied when R-214 is in a hot status.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. R-212TOW (air launched) training instructions are provided in annex II of this appendix.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-213
LOCATION	562 941
TYPE	Pistol Range (known distance)
ALLOWABLE WEAPONS	Pistols
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	6 meters
MAXIMUM RANGE**	23 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Grassy hills along the east side of Basilone Road contain a proposed threatened plant species. Vehicular traffic to and from this range should remain on existing roads.
RANGE FACILITIES	Range building; public address system; firing lines at 7, 15, and 25 yards; 20 firing points, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7331

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Personnel leaving this range while firing is in progress on the 300 or 500 yard lines of R-214 shall use the road which exits south of the range.

2. Regulations applicable to firing on known distance pistol ranges are contained in MCO P3574.2, directives in the MCO 3570 series, and FMFM 0-8.

3. No high explosive ordnance is allowed on this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Range fan limits are measured from the left and right firing line markers.

5. Ensure all weapons are cleared and inspected prior to departing the firing line.

6. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-214 (Horno Range)
LOCATION	564 939
TYPE	Rifle Range (known distance)
ALLOWABLE WEAPONS	Rifles, man-portable laser
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	90 meters
MAXIMUM RANGE**	460 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Grassy hills along the east side of Basilone Road contain a proposed threatened plant species. Vehicular traffic to and from this range should remain on existing roads.
RANGE FACILITIES	Range building; public address system; firing lines at 90, 180, 275, and 460 meters (100, 200, 300, and 500 yards); range fan markers, 72 firing points; and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7331

****RANGE REGS POSTED****
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SPECIAL INSTRUCTIONS

1. Regulations applicable to firing on known distance rifle ranges are contained in directives in the MCO 3570 series, and FMFM 0-8.

2. No high explosive ordnance is allowed on this range.

3. Laser target area #10 for R-214 is 564 940 to 563 945 to 564 945 to 565 940 to the beginning.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Ensure all weapons are cleared and inspected prior to departing the firing line.

5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-215A [Assault Field Firing (AFF) Course]
LOCATION	567 939
TYPE	Offensive Field Firing (platoon)
ALLOWABLE WEAPONS	Pistols, rifles, M203 (illum/smoke only), 60mm (illum only), machine guns up to 7.62; AX11, LX21, M18A1 claymore mine (special request only)
RANGE FAN LIMITS**	Left - 356 degrees mag Right - 013 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	300 meters
MAXIMUM RANGE**	1,000 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Assembly area, control tower, operations office/storage building, classroom, ammunition break-down building, vaulted head facility, 30 Stationary Infantry Targets (SITs), 17 Moving Infantry Targets (MITs)
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-0194 (tower) and 725-0195 (office)

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is under the direct supervision of the range NCO and is contractor-operated. All units shall coordinate with the contractor at least 48 hours in advance to arrange for an in-brief and to develop a training scenario.

2. Range lateral limits are measured from the extreme left and right of the maneuver box. A four by four white sign marks the left limit. A four by four orange sign marks the right limit. A 14-foot CANDY STRIPED pole in the center of the range, and in front of SIT 101

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

represents the maximum angle of fire when within the first 300 meters of the range (FRONT OF TOWER), and should be used as a reference point. When maneuvering through the first 300 meters from the left side of the range, the 14-foot CANDY STRIPED pole represents the right limit and NO weapons shall be pointed past the pole; when maneuvering from the right side, it represents the left limit and NO weapons shall be pointed past the pole.

NOTE: During night live training, all poles shall have chem-lites or other user-provided lights. The chem-lites must be seen by the naked eye of the range NCO; he has the final say.

3. No high explosive ordnance of any type is allowed on the range.

4. FMF units shall have priority use.

5. Dud mortar illumination rounds pose a serious safety threat to maneuvering personnel. If dud mortars are encountered in the maneuver areas, dud locations should be marked. Notify LONGRIFLE for EOD support.

6. 7.62 machine guns are only authorized to fire from 570 942 at a principle direction of fire of 012 degrees mag (cement bunker).

7. Coordination with the RCO is required when R-215A is occupied while R-218A is in a hot status.

8. When troop penetration goes beyond 200 meters from the firing line, R-216 and R-218A shall be in a cold status.

9. Ensure all weapons are cleared and inspected prior to departing the firing line.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

11. Claymore mines are only authorized to fire from 570 944 at a principle direction of fire of 011 degrees mag.

RANGE AND TRAINING REGULATIONS

RANGE	R-216 (Inactive)
LOCATION	573 939
TYPE	Sniper Training Only
ALLOWABLE WEAPONS	5.56, 7.62
RANGE FAN LIMITS**	FIRING LINE #1 Left - 342 degrees mag Right - 05 degrees mag FIRING LINE #2 Left - 326 degrees mag Right -348 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	25 meters
MAXIMUM RANGE**	1,000 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Grassy hills along the east side of Basilone Road contain a proposed threatened plant species. Vehicular traffic to and from this range should remain on existing roads.
RANGE FACILITIES	Firing line, range fan markers, lighted firing line, open-air classroom, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	800 yards
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7870

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is designated for sniper training only.
2. The firing lines are marked by engineer stakes with orange paint.
3. No high explosive ordnance is allowed on this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Range fan limits are measured from the left and right firing line markers.

5. R-216 shall be in a cold status when troop penetration goes beyond 200 meters from the firing line on R-215A.

6. When R-215A or R-218A is concurrently scheduled, prior coordination is required in order for troops to be cleared forward of the firing line.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-217
LOCATION	583 936
TYPE	M203 Qualification Course
ALLOWABLE WEAPONS	M203 HE, M79 HE
RANGE FAN LIMITS**	Left - 333 degrees mag Right - 030 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Grassy hills along the east side of Basilone Road contain a proposed threatened plant species. The trees, brush, and associated sandy wash areas between Basilone Road and this range provide habitat to endangered species. Normal range operations will not affect this habitat. Vehicles shall remain on existing roads, year-round, and minimize the use of undeveloped creek crossings during nesting season. Do not clear vegetation in these areas without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	10 firing positions, firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Range fan limits are measured from the left and right firing line markers. 2. Ensure all weapons are cleared and inspected prior to departing the firing line. 3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-218A
LOCATION	578 936
TYPE	Infantry Squad Defensive Firing Range
ALLOWABLE WEAPONS	.50 cal. and below, 60mm (illum only), M203 (illum/smoke only)
RANGE FAN LIMITS**	Left - 328 degrees mag Right - 20 degrees mag
BOUNDARIES**	Firing line grid 57728 93625 to 57796 93602
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	2,000 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	The trees, brush, and associated sandy wash areas between Basilone Road and this range provide habitat to endangered species. Normal range operations will not affect this habitat. Vehicles shall remain on existing roads, year-round, and minimize the use of undeveloped creek crossings during nesting season. Do not clear vegetation in these areas without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Control tower, vaulted head facility, ammo distribution building, enclosed bleachers, classroom building, equipment storage building, 102 Stationary Infantry Targets (SITs), 12 Infantry Moving Targets (IMTs), 35 Infantry Hostile Fire Simulators (IHFSs), 44 Infantry Night Muzzle Flash Simulators (NMFSs)
TROOP PENETRATION LIMIT FROM FIRING LINE**	None
ASSIGNED TO	CG, MCB
TELEPHONE	763-2192

****RANGE REGS POSTED****
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SPECIAL INSTRUCTIONS

1. This range is under the direct supervision of the Range NCO and is contractor-operated. All units shall coordinate with the contractor at

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

least 48 hours in advance to arrange for an in-brief, and to develop training scenarios.

2. The RSO shall post two road guards (one at each end of the range road). Contact the Range NCO for the exact location(s).

3. No high explosive ordnance of any type is allowed on this range.

4. FMF units shall have priority use.

5. R-218A conflicts with R-215A.

6. R-218A shall be in a cold status when troop penetration goes beyond 200 meters from the firing line on R-215A.

7. When R-215A or R-216 is concurrently scheduled, prior coordination is required in order for troops to be cleared forward of the firing line. A scheme of maneuver, fire support plan, and face-to-face brief to the RCO may be required.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-219
LOCATION	594 937
TYPE	Demolition Range
ALLOWABLE WEAPONS	Charges are not to exceed 50 lbs. tamped/untamped, 40 lb. non-shrapnel producing shaped charges, cratering charges, M18A1 claymore mines, bangalore, anti-personnel obstacle breaching system (APOBS)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	593 938 to 594 936 to 596 937, north along San Onofre Canyon (south fork) to 598 941 to 596 943 to the beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Bunkers, bleachers, range sign
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond range boundaries
ASSIGNED TO	CG, MCB
TELEPHONE	None

SPECIAL INSTRUCTIONS

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

1. All personnel shall wear flak jackets and helmets at all times while on this range.

2. Post a road guard(s) at 588 995 with two-way radio communication to the RSO. No traffic/personnel shall enter the range without the RSO's permission.

3. The RSO shall check each shot hole, looking for unconsumed explosives prior to departing the range. The RSO shall also ensure all shot holes are filled and the debris is policed-up.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. ALL unconsumed explosives shall be policed-up and consolidated for one last clean-up shot prior to the range going cold.

5. ALL unused blasting materials shall be retrieved upon completion of training, and shall be returned to the Las Pulgas ASP.

6. ALL target materials which were used (blown) during training shall be policed-up and taken back with the unit.

7. Line charges are not allowed on this range.

8. Personnel shall be at minimum stand-off distances, per MCO directives in the 3570 series, when firing is in progress.

9. A “demolition in progress” sign shall be at 588 935 (posted at the range road entrance.

10. NO VEHICLES are permitted in the parking lot when firing is in progress.

11. A total of three (3) radios are needed to safely use this range.

12. The RSO is responsible for all charges, and ensuring all misfire procedures are in compliance with current directives.

13. All demolitions shall be detonated within the demo pit only.

14. The staging area shall only be used to drop off or pick up materials used for the demo.

15. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

16. Use of anti-tank mines require coordination with the RCO seven (7) working days prior to the training evolution.

RANGE	R-221
LOCATION	600 929
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Rifles, machine guns, M203, MK19, 25mm (except M791/A974)
RANGE FAN LIMITS**	Left - 008 degrees mag Right - 035 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	3,000 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Control tower, firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7435
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Post a road guard at 597 930 to prevent entry onto Horno Ridge Road. 2. 25mm (A974/M791) ammunition is prohibited on this range. 3. Range fan limits are measured from the surveyed monument on the left side of the firing line. 4. Ensure all weapons are cleared and inspected prior to departing the firing line. 5. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-222
LOCATION	608 922
TYPE	Machine Gun Range
ALLOWABLE WEAPONS	Rifles, machine guns, M203 (illum only), MK19, 25mm (except M791/A974)
RANGE FAN LIMITS**	Left - 335 degrees mag Right - 035 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	3,000 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Range markers, range signs
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Range fan limits are measured from the survey monument at the right side of the firing line. 2. 25mm (A974/M791) ammunition is prohibited on this range. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-223A
LOCATION	620 915
TYPE	Defensive Combat Range (Individual)
ALLOWABLE WEAPONS	M203 (illum, TP-orange dye)
RANGE FAN LIMITS**	Left - 025 degrees mag Right - 057 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	35 meters (400 meters for mortars)
MAXIMUM RANGE**	300 meters (1,000 meters for mortars)
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Observation tower, firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. No high explosive ordnance is allowed on this range. 2. Range fan limits are measured from the surveyed monument in the center of the firing line. 3. Ensure all weapons are cleared and inspected prior to departing the firing line. 4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP. 5. Access to this range is controlled by the Range NCO located at Range 223B.

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RANGE	R-223B
LOCATION	617 917
TYPE	Multi-Purpose Machine Gun Range
ALLOWABLE WEAPONS	.50 cal., 7.62, 5.56, 60mm (illum only), M203 (illum/smoke only)
RANGE FAN LIMITS**	Left - 360 degrees mag Right - 033 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	150 meters
MAXIMUM RANGE**	850 meters for target feedback 1400 meters for static targets
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Control tower, vaulted head facility, classroom with bleachers and overhead cover, office area, ammo distribution point, indoor classroom, public address system, lighting, left and right lateral limits
TROOP PENETRATION LIMIT FROM FIRING LINE**	200 meters
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 763-0690 and 725-4805

****RANGE REGS POSTED****
****AT THE RANGE****
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SPECIAL INSTRUCTIONS

1. All personnel, including contractors, will check in with LONGRIFLE and request to go down-range when passing the 200-meter line.

2. The using unit is responsible for policing and leveling of road surface when disturbed by vehicles.

3. .50 cal. may only be fired from the far right firing positions with the following range fan limits: Left - 350 degrees mag, and Right - 005 degrees mag.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

4. Vehicles shall not exceed 10 mph while firing.

5. Free-gunning is NOT allowed on this range.

6. Keep muzzles pointed down-range at all times, especially while the vehicle is in motion.

7. The fire and maneuver course shall not be in operation when the fixed firing points are in a hot status (no simultaneous operations).

8. No vehicles are allowed on fixed firing point berms.

9. This range is under the direct supervision of the Range NCO, and is contractor-operated. All units shall coordinate with the contractor at least 48 hours in advance to arrange for an in-brief, and to develop training scenarios.

10. Ensure all weapons are cleared and inspected prior to departing the firing line.

11. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-225
LOCATION	619 907
TYPE	Field Firing Range (infantry weapons)
ALLOWABLE WEAPONS	Pistols, rifles (except sniper), machine guns (except .50 cal.), mortars (illum only)
RANGE FAN LIMITS**	Left - 012 degrees mag Right - 046 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	50 meters (300 meters for mortars)
MAXIMUM RANGE**	650 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats have been found between this range and R-227. These rodents may also be found along the dirt access roads in this area. Normal range operations will not affect this habitat. Vegetation mowing is authorized, year-round, on this range, but tractor mowing of burrow areas should be limited during period when the soil is very moist to prevent soil compaction. Road grading/blading, mechanical excavating, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environment Security. Archaeological sites are located at this range and troops should avoid digging activity or removal of any artifacts found on the surface or as part of their activity. Off-road vehicle use should be limited to previously disturbed areas of dry soils to avoid severe rutting and subsequent erosion of soils, which leads to severe gullies.
RANGE FACILITIES	Control tower, firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7835

****RANGE REGS POSTED****
****AT THE RANGE****
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SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Range fan limits are measured from the surveyed monument located on the left side of the firing line.

2. Ensure all weapons are cleared and inspected prior to departing the firing line.

3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-227
LOCATION	631 904
TYPE	Field Firing Range (infantry weapons) - (laser certified)
ALLOWABLE WEAPONS	Pistols, rifles (except sniper), machine guns (except .50 cal.), M203 HE, mortars, SMAW, AT4, MK19, direct-fire artillery, lasers
RANGE FAN LIMITS**	LOWER & UPPER FIRING LINES Left - 325 degrees mag Right - 015 degrees mag NOTE: Lateral limits shot from red/white marker on firing line
BOUNDARIES**	N/A
MINIMUM RANGE**	25 meters (weapon dependent)
MAXIMUM RANGE**	5800 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats have been found between this range and R-225. These rodents may also be found along the dirt access roads in this area. Normal range operations will not affect this habitat. Vegetation mowing is authorized, year-round, on this range, but tractor mowing of burrow areas should be limited during period when the soil is very moist to prevent soil compaction. Road grading/blading, mechanical excavating, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environment Security.
RANGE FACILITIES	Control tower, firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-4877

****RANGE REGS POSTED****
****AT THE RANGE****
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SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Tracked vehicles must stay clear from the prepared firing positions (fox holes) and are only permitted to conduct firing from the right side of the firing line.

2. Range fan limits are measured from the left and right firing line markers.

3. Post a road guard by the flag pole when back blast weapons are being fired.

4. Back blast weapons shall be fired from the extreme right of the firing line only.

5. Orange/White barriers outside the lateral limits are not authorized for engagement.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-300
LOCATION	486 975
TYPE	BZO/Non-Lethal Familiarization Firing Range
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns (except .50 cal.), 9mm, 5.56, 7.62, 12 gauge (DODIC A011, A012, AA29, AA30, AA31), M-203 (DODIC BA07, BA08, BA09), Rubber Ball Grenade shall be hand-employed only
RANGE FAN LIMITS**	Left - 120 degrees mag Right - 120 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	36 yards
IMPACT AREA**	Bravo Three Training Area
ENVIRONMENTAL	The willow trees, brush, and sandy wash areas in the streambed adjacent to this range provide habitat for the endangered Least Bell's Vireo, Southwestern Willow Flycatcher, and Arroyo Southwestern Toad. Normal range operations will not affect this habitat. Troops and vehicles should avoid and minimize use of the wetland and river bottom vegetation areas, to the extent practical during nesting season. Do not clear vegetation outside the range boundaries without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Firing lines (10, 15, & 25 meters; and 36 yards), range fan markers, bleachers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS	1. Range fan limits are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. No firing is permitted at distances greater than those prescribed above.

3. Units shall provide and use only standard-issue targets on wood supports. No metal supports or targets are permitted on this range.

4. Using units shall police all debris from targets and supports before departing from the range.

5. Road guards shall be posted on the road, on either side of the range in the vicinity of 48788 97630 and 48393 97483, when the range is in a hot status.

6. Machine guns shall be fired from bipods or tripods with T&E. No off-hand or free-gunning is allowed with machine guns.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-307
LOCATION	503 015
TYPE	Hand Grenade Range
ALLOWABLE WEAPONS	HE fragmentation grenades (in impact area only), practice grenades (in practice bays only)
RANGE FAN LIMITS**	Left - 198 degrees mag Right - 206 degrees nag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	70 meters
IMPACT AREA**	Bravo Three Training Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Four concrete block throwing pits, one concrete block control bunker, one concrete block EOD observation bunker, range fan marker, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond pit area during hot status
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Dud sweeps on this range shall be conducted by qualified EOD personnel only.

2. EOD shall be notified five (5) working days prior to commencement of throwing hand grenades on weekends/holidays.

3. Only one hand grenade at a time will be thrown.

4. Range fan limits are measured from the left and right firing line markers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. In the event of a dud, training shall cease. Notify LONGRIFLE for EOD support. Training shall not resume until authorized by LONGRIFLE.

6. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

7. Practice grenades shall be thrown in practice grenade bays only. residue from these grenades shall be policed by the using unit.

8. Should bays #1, 2, or 3 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #4, 5, and 6.

9. Should bays #4, 5, or 6 experience a dud, training shall cease on this side of the range. Notify LONGRIFLE immediately. Training may continue in bays #1, 2, and 3.

10. If a dud is experienced on both sides of the range, all training shall stop until EOD has cleared the range.

11. Using units shall drag the impact area with a raking device provided on site before departing the range.

12. The practice pit area shall be raked before departing the range.

13. The entire range is inside the SDZ (frag pattern). Helmets and flak jackets are required for all personnel in support of, participation in, or observing training while the range is in a hot status.

RANGE AND TRAINING REGULATIONS

RANGE	R-312A
LOCATION	506 997
TYPE	Pistol Range (known distance)
ALLOWABLE WEAPONS	Pistols, revolvers
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	14 meters
MAXIMUM RANGE**	45 meters
IMPACT AREA**	R-312A
ENVIRONMENTAL	There are many populations of proposed threatened plant species in the area to the north of this range. Endangered Stephen's Kangaroo Rats live one and around this range. Vegetation mowing is authorized, year-round, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/blading, mechanical excavating, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Range buildings; firing lines at 14, 23, and 46 meters (15, 25, and 50 yards); 25 firing points, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond the target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7305
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. No high explosive ordnance is allowed on this range. 2. This range conflicts with San Mateo Canyon. When this range is in a "hot," aircraft shall transition at or above 1,000 ft, AGL.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. Ensure all weapons are cleared and inspected prior to departing the firing line.

4. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-313A
LOCATION	506 995
TYPE	Rifle Range (known distance)
ALLOWABLE WEAPONS	Rifles 7.62 and below
RANGE FAN LIMITS**	N/A
BOUNDARIES**	N/A
MINIMUM RANGE**	90 meters
MAXIMUM RANGE**	460meters
IMPACT AREA**	R-313A
ENVIRONMENTAL	There are many populations of proposed threatened plant species in the area to the north of this range. Vegetation mowing is authorized, year-round, but tractor mowing of burrow areas should be limited during periods when the soil is very moist to prevent soil compaction. Road grading/blading, mechanical excavating, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Range buildings; public address system; firing lines at 90, 180, 275, and 460 meters (100, 200, 300, and 500 yards); 72 firing points, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond the target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7305
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Ensure all weapons are cleared and inspected prior to departing the firing line. 2. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE AND TRAINING REGULATIONS

RANGE	R-314
LOCATION	516 989
TYPE	Field Firing Range
ALLOWABLE WEAPONS	Mortars (illum only), M203 [illum and TP (DODIC B519)], AT4 & MK19 (TP only)
RANGE FAN LIMITS**	Left - 071 degrees mag Right - 103 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	100 meters
MAXIMUM RANGE**	800 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	The sandy wash areas in the streambed adjacent to this range provide habitat for the endangered Arroyo Southwestern Toad. Normal range operations will not affect this habitat. Troops and vehicles should avoid and minimize use of the wetland and river bottom vegetation areas, with the exception of established road-type stream crossings, to the extent practical during breeding season. Do not clear vegetation outside the range boundaries without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Control tower, left and right lateral limit signs, left and right firing line markers, three (3) sets of tracks with moving targets, seven (7) defensive firing points, firing points on the stationary range to the left of the moving target firing line, practice hand grenade throwing area in the rear of the firing line, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7543

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Range fan limits are measured from the left and right firing line markers.

2. R-314 and R-314A shall be in a cold status when personnel request access to R-314B. The RSO/OIC shall coordinate.

3. R-314 shall not be occupied when R-314A is in a hot status.

4. Access to movers on R-314 shall be coordinated with the R-314A RSO. Those ranges shall remain in a cold status until personnel have returned to the firing line at R-314.

5. Movement beyond the firing line requires EOD support.

6. The RSO shall ensure all personnel know the location and identification of the right and left lateral limit markers. The RSO shall be responsible for the cessation of firing when the target carrier reaches the safety limits.

7. Firing shall only be conducted from the prescribed firing line.

8. Personnel shall not enter the control tower at any time, unless authorized by the range operator.

9. Dud mortar illumination rounds pose a serious safety threat to maneuvering personnel. When dud mortars are found on the access road to moving targets, the dud locations shall be marked. Notify LONGRIFLE for EOD support.

10. Ensure all weapons are cleared and inspected prior to departing the firing line.

11. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-314A
LOCATION	514 987
TYPE	Night Defensive Fire and Demonstration Range
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns (240G, .50 cal.), AT4 & MK19 (TP only), mortars (illum only), M203 (illum only)
RANGE FAN LIMITS**	Left - 055 degrees mag Right - 075 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	25 meters
MAXIMUM RANGE**	600 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	The sandy wash areas in the streambed adjacent to this range provide habitat for the endangered Arroyo Southwestern Toad. Normal range operations will not affect this habitat. Troops and vehicles should avoid and minimize use of the wetland and river bottom vegetation areas, with the exception of established road-type stream crossings, to the extent practical during breeding season. Do not clear vegetation outside the range boundaries without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Control tower, machine gun and artillery noise simulators, demolition firing points located 36 yards in front of firing line, bleachers, firing line, range fan markers, combat firing positions, 50 BZO targets, lighted firing line for night use, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited beyond BZO targets
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7211

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. The RSO shall ensure all charges have been expended and/or misfires are removed from the range upon completion of training, and unused demolition materials are accounted for.

2. Range fan limits are measured from the left and right firing line markers.

3. Access to movers on R-314 shall be coordinated with the R-314A RSO. Those ranges shall remain in a cold status until personnel have returned to the firing line at R-314.

4. R-314A shall not be used when R-314C is in a hot status.

5. R-314A shall not be used when R-314 is occupied.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-314B
LOCATION	516 996
TYPE	Combination Offensive Combat Range (individual quick kill course and fire team, fire and movement)
ALLOWABLE WEAPONS	Pistols, rifles (5.56 only), shotguns, AT4, MK19, mortars (illum only)
RANGE FAN LIMITS**	FIRE & MOVEMENT Left - 160 degrees mag Right - 183 degrees mag QUICK KILL – N/A
BOUNDARIES**	521 924 to 522 935 to 530 992 to 529 987 to 521 992 to the beginning
MINIMUM RANGE**	15 meters
MAXIMUM RANGE**	150 meters
IMPACT AREA**	Within boundaries of the range
ENVIRONMENTAL	The sandy wash areas in the streambed adjacent to this range provide habitat for the endangered Arroyo Southwestern Toad. Normal range operations will not affect this habitat. Troops and vehicles should avoid and minimize use of the wetland and river bottom vegetation areas, with the exception of established road-type stream crossings, to the extent practical during breeding season. Do not clear vegetation outside the range boundaries without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Artillery simulators, classrooms, and flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited beyond BZO targets
ASSIGNED TO	CG, MCB
TELEPHONE	None [nearest phone is at R-314 (760) 725-7211]
	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL****
SPECIAL INSTRUCTIONS	1. Ensure all weapons are cleared and inspected prior to departing the firing line. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

2. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

3. Movement to R-314B requires R-314 and R-314A to be in a cold status.

RANGE AND TRAINING REGULATIONS

RANGE	R-314C
LOCATION	515 984
TYPE	Offensive Combat Range (small unit)
ALLOWABLE WEAPONS	Rifle (5.56 only), M249 SAW
RANGE FAN LIMITS**	Left - 089 degrees mag Right - 107 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	50 meters
MAXIMUM RANGE**	400 meters
IMPACT AREA**	Quebec Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Firing line, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond final target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7211

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is designed as a fire and movement course. It is for frontal assaults only.

2. Only one squad at a time is permitted on the range. A safety NCO shall accompany each fire team through the course.

3. R-314C shall not be used when R-314A is in a hot status.

4. The next squad shall not load their weapons until the previous squad is off the range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. A helmet and flak jacket shall be worn by all personnel proceeding down-range.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-401
LOCATION	667 798
TYPE	EOD Destruction and Test Range
ALLOWABLE WEAPONS	Simultaneous burning/detonation of explosive weight of not more than 40 lbs.; inerting and stripping of all types of explosive ordnance; limited testing of small arms ammunition
RANGE FAN LIMITS**	N/A
BOUNDARIES**	663 804 to 663 800 to 668 799 to 674 802 to 669 808 to the beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Within range boundaries
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Burning pan, steaming pad, range building, ordnance inerting workshop and bunker, personnel shelter bunker, boundary markers, and 2 flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3348
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. This range shall be used by qualified and authorized EOD personnel. 2. This range shall not be used as a troop maneuver area. 3. Controlled Firing Area #1 shall be activated prior to using R-401. 4. All scheduling of R-401 shall be coordinated with the Base EOD Team by the requesting unit. 5. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-403A
LOCATION	724 857
TYPE	Known Distance Pistol Range
ALLOWABLE WEAPONS	Pistols and shotguns
RANGE FAN LIMITS**	Left - 061 degrees mag Right - 068 degrees mag
BOUNDARIES**	Bay "A" of R-403 Series
MINIMUM RANGE**	1 yard for MCB PMO only 7 yards for all others
MAXIMUM RANGE**	36 yards
IMPACT AREA**	Juliett Training Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	8 shooting positions, 8 metal target holders, ready table, flag pole, 2 ready benches, pistol firing lines at 7, 15, and 25 yards, range fan markers
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-5081

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is used primarily for small arms.
2. High explosive ordnance is not allowed on this range.
3. The range fan limits are measured from the left and right firing line.
4. Only authorized targets shall be used in the target holders.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. An RSO and OIC are required on each bay.

6. All weapons shall be in a Condition 4 status prior to the shooters departing the bay.

7. Ensure all weapons are cleared and inspected prior to departing the firing line.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

9. Due to inadvertent trespassing by joggers, hikers, etc., all gates shall be locked and range flags raised. Range 403 has three (3) gates, which shall be manned with road guards, and five (5) range flags, which shall be raised when in a hot status. Gate and flag pole locations are shown on the attached diagram.

RANGE AND TRAINING REGULATIONS

RANGE	R-403B
LOCATION	724 857
TYPE	Pistol Tactical Course
ALLOWABLE WEAPONS	Pistols and shotguns
RANGE FAN LIMITS**	Left - 070 degrees mag Right - 079 degrees mag
BOUNDARIES**	Bay "B" of Range 403 Series
MINIMUM RANGE**	From obstacles
MAXIMUM RANGE**	From obstacles
IMPACT AREA**	Juliett Training Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	FBI practical police pistol course lanes and barricades, range buildings, ready bench, port-a-johns, range fan markers, and flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-5081

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is used for small arms.

2. High explosive ordnance is not allowed on this range.

3. The range fan limits are measured from the left and right firing line markers.

4. Only cardboard and plastic targets are authorized. All targets shall be placed inside the wooden box/coffins. All targets shall be placed perpendicular to the firing line.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. Only one shooter (in a Condition 1 status) shall be on the course at one time.

6. An RSO and OIC are required on each bay.

7. All weapons shall be in a Condition 4 status prior to the shooters departing the bay.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

10. Due to inadvertent trespassing by joggers, hikers, etc., all gates shall be locked and range flags raised. Range 403 has three (3) gates, which shall be manned with road guards, and five (5) range flags, which shall be raised when in a hot status. Gate and flag pole locations are shown on the attached diagram.

RANGE	R-403C
LOCATION	724 857
TYPE	Pistol Tactical Course
ALLOWABLE WEAPONS	Pistols and shotguns
RANGE FAN LIMITS**	Left - 078 degrees mag Right - 087 degrees mag
BOUNDARIES**	Bay "C" of Range 403 Series
MINIMUM RANGE**	From obstacles
MAXIMUM RANGE**	From obstacles
IMPACT AREA**	Juliett Training Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	FBI practical police pistol course lanes and barricades, range buildings, ready bench, port-a-johns, range fan markers, and flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond target area
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-5081

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is used primarily for small arms.

2. High explosive ordnance is not allowed on this range.

3. The range fan limits are measured from the left and right firing line markers.

4. Only authorized targets shall be used. All targets shall be placed on line and perpendicular to the firing line. Units may request target support from the Range Operations Division (ROD).

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. Only one shooter shall be on the course at one time. All other shooters shall remain behind the firing line when firing is in progress.

6. An RSO and OIC are required on each bay.

7. All weapons shall be in a Condition 4 status prior to the shooters departing the bay.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

10. Due to inadvertent trespassing by joggers, hikers, etc., all gates shall be locked and range flags raised. Range 403 has three (3) gates, which shall be manned with road guards, and five (5) range flags, which shall be raised when in a hot status. Gate and flag pole locations are shown on the attached diagram.

RANGE AND TRAINING REGULATIONS

RANGE	R-407
LOCATION	647 912
TYPE	Field Firing Range and Small Arms Air Defense Training
ALLOWABLE WEAPONS	Rifles, machine guns, MK19, M203HE, SMAW, AT4, TOW, Avenger, mortars, 25mm (except A974/M791), tanks main gun (TP only), all direct-fire artillery, man portable laser
RANGE FAN LIMITS**	Left - 295 degrees mag Right - 327 degrees mag Right (Tank) - 325 degrees mag
BOUNDARIES**	FIRING LINE Left - 64799 91018 Right - 64915 91178
MINIMUM RANGE**	180 meters (weapon dependent)
MAXIMUM RANGE**	3,800 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range and troops should avoid digging activity or removal of any artifacts found on the surface or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during period when the soil is moist to prevent soil compaction. Road grading/blading, mechanical excavation, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environment Security
RANGE FACILITIES	Firing line, seven small arms air defense firing positions, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED NEXT PAGE

SPECIAL INSTRUCTIONS

1. Road guards are required on the road at 645 905 and 648 910 when firing weapon systems with back blast.

2. The tank cannons shall not be fired at elevations in excess of five (5) degree quadrant elevation.

3. This range is closed when the Tank/LAV Gunnery Range is in operation.

4. A maneuver area is available to be used as a moving tank live-fire course. All rounds fired, including possible ricochets, must impact within the range fan as established for stationary firing.

5. Range fan limits are measured from the left and right markers on the firing line.

6. TOW missile wire shall be cut and recovered after firing is secured. DO NOT GO PAST THE ESTABLISHED FIRING LINE.

7. The RSO shall submit a safety diagram prior to shooting mortars.

8. 25mm A974/M791 is prohibited on this range.

9. AVENGER – The stinger missile shall not be fired on this range. The MP3 .50 cal. machine gun is authorized for use on this range to track and fire on a drone plane. The AVENGER System may only be fired from a stationary position with the rear of the vehicle-oriented down-range. R-407A/B may be occupied, but shall not be in a hot status when the AVENGER System is in a live-fire status. Left and right lateral limits shall be established when the system is emplaced. The drone plane shall not be flown above the horizon. This will aid in limiting the vertical angle of muzzle to avoid down-range conflicts. The instructor shall observe the aiming point on the video monitor and maintain positive override control with the remote control panel.

10. **CAUTION** – The WHITE/ORANGE MARKERS (jersey bouncers in the vicinity of 626 917) identify the indirect-fire/CAS impact area line and support the fixed-wing CAS release point only. DO NOT BRIEF THEM as the LEFT LATERAL LIMIT marker FOR R-407.

11. Ensure all weapons are cleared and inspected prior to departing the firing line.

12. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-407A
LOCATION	649 917
TYPE	Field Firing Range
ALLOWABLE WEAPONS	Rifles, machine guns, MK19, SMAW, AT4, TOW, AVENGER, mortars, 25mm
RANGE FAN LIMITS**	Left - 290 degrees mag Right - 324 degrees mag
BOUNDARIES**	FIRING LINE Left - 65020 91574 Right - 65084 91677
MINIMUM RANGE**	200 meters
MAXIMUM RANGE**	3800 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range and troops should avoid digging activity or removal of any artifacts found on the surface or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during period when the soil is moist to prevent soil compaction. Road grading/blading, mechanical excavation, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environment Security
RANGE FACILITIES	Firing line and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Road guards are required on the road at 648 914 and 651 917 when firing weapon systems with back blast.

2. The tank cannons shall not be fired at elevations in excess of five (5) degree quadrant elevation.

3. This range is closed when the Tank/LAV Gunnery Range is in operation.

4. TOW missile wire shall be recovered after firing is secured.

5. The RSO shall submit a safety diagram prior to shooting mortars.

6. 25mm A974/M791 is prohibited on this range.

7. AVENGER – The stinger missile shall not be fired on this range. The MP3 .50 cal. machine gun is authorized for use on this range to track and fire on a drone plane. The AVENGER System may only be fired from a stationary position with the rear of the vehicle-oriented down-range. R-407A/B may be occupied, but shall not be in a hot status when the AVENGER System is in a live-fire status. Left and right lateral limits shall be established when the system is emplaced. The drone plane shall not be flown above the horizon. This will aid in limiting the vertical angle of muzzle to avoid down-range conflicts. The instructor shall observe the aiming point on the video monitor and maintain positive override control with the remote control panel.

8. Ensure all weapons are cleared and inspected prior to departing the firing line.

9. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-407B
LOCATION	644 910
TYPE	Field Firing Range
ALLOWABLE WEAPONS	Rifles, machine guns, MK19, SMAW, AT4, TOW, mortars, 25mm
RANGE FAN LIMITS**	Left - 305 degrees mag Right – 335 degrees mag
BOUNDARIES**	FIRING LINE Left - 64797 90591 Right - 64439 90657
MINIMUM RANGE**	150 meters
MAXIMUM RANGE**	4,000 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Archaeological sites are located at this range and troops should avoid digging activity or removal of any artifacts found on the surface or as part of their activity. Endangered Stephen's Kangaroo Rats live on and around this range. Normal range firing operations will not affect this habitat. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during period when the soil is moist to prevent soil compaction. Road grading/blading, mechanical excavation, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environment Security
RANGE FACILITIES	Range signs, bleachers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

SPECIAL INSTRUCTIONS

1. Road guards are required when firing weapon systems with back blast.

2. This range is closed when the Tank/LAV Gunnery Range is in operation.

3. Range fan limits are measured from the surveyed monuments at each end of the firing line.

4. TOW missile wire shall be recovered after firing is secured.

5. R-407B may be occupied, but shall not be in a hot status when the MP3 .50 cal. machine gun is attached to the AVENGER System is in a live-fire status with the drone plane.

6. Ensure all weapons are cleared and inspected prior to departing the firing line.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-407 (Tank/LAV Gunnery Range)
LOCATION	644 906 to 6507 9155 (frontage includes R-407, R-407A/B.
TYPE	Moving Tank Gunnery Range (live-fire)
ALLOWABLE WEAPONS	Machine guns, MK19, 25mm (except A974/M791), tank main gun (training practice only), mortars
RANGE FAN LIMITS**	Left - 315 degrees mag Right - 325 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	600 meters
MAXIMUM RANGE**	3800 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Range markers and flag poles
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Range guards are required at 6432 9050 and 6522 9160.

2. The Tank Gunnery Range includes R-407 and R-407A.

3. Two (2) range flags shall be raised while the range is manned (one (1) at R-407 and one (1) at R-407A.

4. The chamber of the main gun may be loaded while maneuvering from the left limit to the right limit.

5. Tanks/LAVs shall maintain constant radio communication with LONGRIFLE and the RSO.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

6. R-407, R-407A/B shall be in a cold status when OP G is occupied.

7. The firing line/route for vehicles shooting while on the move is from R-407 to R-407A. A safety NCO or RSO Assistant shall be with each vehicle to ensure firing is within safety fan limits and that other safety precautions are adhered to.

8. Lateral limits for this range are the left lateral limit marker for R-407 and right lateral limit marker for R-407A.

9. 25mm A974/M791 ammunition is prohibited on this range.

10. Users shall schedule all three (3) ranges with the Range Scheduling Office prior to use.

11. Ensure all weapons are cleared and inspected prior to departing the firing line.

12. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-408
LOCATION	Eastern end of Zulu Impact Area
TYPE	Offensive Combat Range (platoon)
ALLOWABLE WEAPONS	Pistols, rifles, machine guns, M203 (illum only), claymore mines, mortars, AT4, SMAW
RANGE FAN LIMITS**	Left - 285 degrees mag Right - 320 degrees mag
BOUNDARIES**	660 927 to 667 927, north along Roblar RD to 668 934 to 660 935
MINIMUM RANGE**	50 meters
MAXIMUM RANGE**	2500 meters
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Endangered Stephen's Kangaroo Rats live on and around this range. These rodents are found between the firing line and target areas, in the target areas, and along the dirt roads leading to the target areas. Normal range firing operations will not affect this habitat. Archaeological sites are located at this range and troops should avoid digging activity or removal of any artifacts found on the surface or as part of their activity. Vegetation mowing is authorized year-round on this range, but tractor mowing should be limited during period when the soil is moist to prevent soil compaction. Road grading/blading, mechanical excavation, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chie of Staff, Environment Security
RANGE FACILITIES	Control tower, buildings, range fan markers, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond posted markers
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3756

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS	1. A concept of operations brief to the RCO is required at least fourteen (14) working days prior to the training evolution.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

2. Personnel using R-408 shall remain within specified boundaries.

3. The area east of Roblar RD shall not be used for live-fire. Loaded weapons shall not be permitted in that sector.

4. All fire shall be directed down-range within the fan limits.

5. Small arms limits of fire shall be strictly observed.

6. Small arms shall be fired at authorized targets only.

7. Assaults may be conducted on-line or in fire team rushes.

8. Personnel possessing small arms that malfunction during an assault shall continue to move forward on-line, and shall not attempt clearing.

9. There shall be one safety NCO with each squad for on-line assaults and one (1) safety NCO with each fire team for time team rush assaults.

10. The RSO for R-408 shall be stationed in the control tower. The RSO and safety NCO for mortar location shall monitor the exercising unit's tactical net.

11. The safety NCOs shall enforce applicable safety regulations to include inspecting each weapon upon completion of firing.

12. Platoon commanders shall give the order for small arms weapons to be loaded only after troops are in position for commencing a base of fire, or an assault.

13. Using units shall have organic communication assets with the RSO. They shall provide one (1) radio with an operator for the RSO on R-408, and one (1) radio with an operator for the safety NCO on mortar location.

14. All personnel using this range shall be thoroughly briefed on applicable safety regulations.

15. Anyone observing an unsafe condition during firing exercises shall give the command, "cease fire" by the most expedient method available.

16. If a cease-fire command is given in the range maneuvering area, the safety NCO at mortar location shall be informed, via radio, by the RSO. The safety NCO shall immediately command, "cease fire" on the firing line.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

17. Ammunition for small arms shall be issued at 654 926. Ammunition for supporting arms shall be distributed on the firing line at mortar position.

18. Mortar location is determined by scheme of maneuver. An SDZ shall be submitted to the Range Control Officer per appendix E of this Manual.

19. RSOs shall report any duds found within the limits of the range to LONGRIFLE immediately (for EOD support). If the dud is located in close proximity to any troop movement, troop maneuver shall cease until the dud has been removed by EOD.

20. There shall be no troop movement in front of AFA-32 when it is occupied with artillery.

21. Night assaults require continuous illumination or appropriate night vision devices.

22. Ensure all weapons are cleared and inspected prior to departing the firing line.

23. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-409A (Inactive - Under Construction)
LOCATION	674 942
TYPE	Multi-Purpose Range Complex (MPRC)
ALLOWABLE WEAPONS	Pistols, rifles, shotguns, machine guns, M203 (illum only), TOW (inert only), 25mm (TPT M793 only), mortars (illum only), tank main gun (M724, M856, M831 only), 40mm (special request only), 2.75: (inert), 5.0” (inert), 20mm (TP only)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	
MINIMUM RANGE**	300 meters
MAXIMUM RANGE**	TBD per weapons system
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Control tower with remote control station (RCS), four (4) vehicle firing lanes, 10 armor hull-down positions, 10 infantry moving targets, 15 stationary armor targets (pop-ups), three (3) moving armor targets
TROOP PENETRATION LIMIT FROM FIRING LINE**	1900 meters
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-3394

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. This range is under the direct supervision of a Range NCO and is contractor-operated. All units shall coordinate with the MPRC Site Manager at least 48 hours in advance to arrange for an in-brief, and to develop a training scenario.

2. This range is not equipped for the use of indirect lighting. Using units shall provide their own system for use with passive sights.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. This range is a non dud-producing range due to troops and vehicle maneuvering on the range. All weapons/weapons systems must use ball, inert or practice ammo only. Tracer ammo of any caliber is authorized, fire danger rating permitting, but no white phosphorous or high explosive ordnance of any kind.

4. No one may fire to the left of the left range marker, nor to the right of the azimuth of the right range marker. This limits fire to the direct front, or to the immediate right, or the left front of the individual maneuver elements. No flanking or overhead-fire shall be delivered without approval from the LONGRIFLE OIC.

5. There shall be a safety NCO (corporal or above) with each maneuvering element (to squad level). Each safety NCO shall position himself so he will be the closest person to the adjacent maneuvering element that is firing. The maneuvering element safety NCO shall limit his control to safety and shall not become involved in tactical matters unless safety is involved.

6. Personnel shall immediately cease fire on receipt of any emergency cease-fire order from any source. Weapons shall be cleared and locked, and personnel involved shall remain in position until instructed by the safety NCO to resume the exercise. After an emergency cease fire order has been issued, weapons shall not be loaded, nor firing resumed without permission from the RSO.

7. During the assault phase, all small arms fire shall be aimed to impact at least 50 meters ahead of advancing personnel, to preclude danger from ricochets.

8. Personnel within 50 meters of a target pit shall not fire directly at the pit, or the target mechanism therein. This is to prevent damaging target mechanisms.

9. Weapons shall not be loaded until forward of the control tower.

10. Sixty and 81mm mortars shall only be used for night illumination. Units shall provide SDZs to LONGRIFLE prior to the planned training event.

11. Road guards shall be placed at three (3) separate locations for live-fire at R-409A, including Case Springs Road, Roblar Road, and DeLuz Canyon. Communication shall be maintained along all road guards.

12. Units desiring to keep pyrotechnics loaded or unloaded overnight shall furnish appropriate security.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

13. Lateral limits shall be illuminated via chem-lite or other mechanisms during night live-fire. Lights shall be seen by the naked eye by the Range NCO. The Range NCO will have the final say.

14. Units desiring training with charges shall coordinate with the Range NCO and contractor prior to training to preclude cabling damage.

15. Contact the R-409A Range NCO for Jonnell Device pyrotechnic use numbers.

16. Only DODIC L602 pyrotechnic charges shall be used in the Jonnell Armor Target Kill Simulator (ATKS). Using units are responsible for requisitioning, transporting, and guarding these pyrotechnics. The range contractor shall load the ATKS with user-provided charges upon request.

17. Helicopter firing shall be conducted at an altitude that allows for firing at targets only. Target mechanisms shall not be engaged/fired upon.

18. This range is identified as a high fire danger area during the fire season. Units desiring to use 25mm TPT may not be authorized to fire.

19. The firing of wire-guided (i.e., TOW missiles inert/practice only) shall be handled on a case-by-case basis. See the Range NCO for the R-409A SOP for additional information on firing wire-guided missiles.

20. Ensure all weapons are cleared and inspected prior to departing the firing line.

21. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-501
LOCATION	608 823
TYPE	Field Firing Range and BWT/MCT
ALLOWABLE WEAPONS	Pistols, rifles (5.56), ¼ lb. TNT or C4 equivalent, M203 (illum only), claymore mines (demonstration only), AT4 (trainer)
RANGE FAN LIMITS**	Left - 026 degrees mag Right - 060 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	14 meters
MAXIMUM RANGE**	600 meters
IMPACT AREA**	Edson Impact Area
ENVIRONMENTAL	Several vernal pool complexes exist within the range. Off-road driving (especially during high soil moisture conditions) may impact these pools. Vehicular traffic should remain on existing roads to the extent practical. Off-road vehicle use should be limited to previously disturbed areas of dry soils to avoid severe rutting and subsequent erosion of soils which leads to severe gullies. Troops and vehicles should minimize and avoid activity within the upland brush and creek bottom willow vegetation which support endangered and threatened species. Extreme caution shall be used with open flame, heating elements, cigarettes, and pyrotechnics. Do not clear vegetation without prior approval from the Assistant Chief of Staff, Environmental Security. Normal range operations are authorized per the Fire Danger Rating. Several large archaeological sites are located within this range area. Road grading/ blading, mechanical excavation, filling, and heavy equipment operation are prohibited without prior approval from the Assistant Chief of Staff, Environmental Security.
RANGE FACILITIES	Control tower, demolition beds, bleachers, firing line, range fan markers, electronically-controlled targets, lighted firing line for night use, 9 defensive firing positions and moving tank targets, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	600 meters
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-2760

SPECIAL INSTRUCTIONS LISTED ON NEXT PAGE

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Using units shall provide ¼ lb. TNT or C4 equivalent and caps as required.

2. The RSO shall ensure all charges have been expended, or unused demolitions are accounted for; misfires shall necessitate an immediate check-fire; and notify LONGRIFLE immediately (for EOD support).

3. No high explosive ordnance is allowed on this range.

4. Range fan limits are measured from the left and right firing line markers. The RSO shall ensure all firing is directed at targets and weapons are not elevated above them.

5. The RSO shall ensure all personnel are instructed as to the location and identification of the right and left lateral safety limit markers. The RSO shall be responsible for the cessation of firing when the target carrier reaches the safety limits.

6. Firing shall be conducted only from the prescribed firing line.

7. The using unit shall confirm the use of the range with the Automated Target Branch (ASB), Range Operations Division (ROD), (760) 725-4805, fourteen (14) days prior to the planned training event to coordinate the training scenario. Units shall reconfirm ASB support two (2) working days prior to the planned training event.

8. No one shall enter the control tower at any time unless authorized by the RSO or the range operator.

9. Ensure all weapons are cleared and inspected prior to departing the firing line.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-503
LOCATION	620 805
TYPE	Hand Grenade Range
ALLOWABLE WEAPONS	HE fragmentation grenades (in impact area only), practice grenades (in practice pits only)
RANGE FAN LIMITS**	Left - 305 degrees mag Right - 335 degrees mag
BOUNDARIES**	N/A
MINIMUM RANGE**	10 meters
MAXIMUM RANGE**	70 meters
IMPACT AREA**	Edson Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Four (4) concrete bock throwing pits jointed by a safety wall, one (1) concrete block observation bunker, one (1) concrete block RSO
TROOP PENETRATION LIMIT FROM FIRING LINE**	Prohibited
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Dud sweeps on this range shall be conducted by qualified EOD personnel only. 2. EOD shall be notified five (5) working days prior to commencement of throwing hand grenades on weekends/holidays. 3. Only one hand grenade at a time will be thrown. 4. Range fan limits are measured from the left and right outer edge of bays 1 and 4. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

5. In the event of a dud, training shall cease. Notify LONGRIFLE for EOD support. Training shall not resume until authorized by LONGRIFLE.

6. The EOD observation bunker between pits 2 and 3 shall not be occupied when the range is in a hot status.

7. Grenade ranges shall cease training one hour prior to sunset. In the event a dud grenade is not cleared before reduced light conditions, the using unit shall provide a guard force until the grenade can be cleared.

NOTE: EOD's minimum response time to grenade ranges is one hour.

8. Practice grenades shall be thrown in practice grenade bays only. Residue from these grenades shall be policed by the using unit.

9. Using units shall drag the impact area with a raking device provided on site before departing the range.

10. The practice pit area shall be raked before departing the range.

RANGE	R-505
LOCATION	624 804
TYPE	Day Infiltration Range
ALLOWABLE WEAPONS	Blanks (5.56mm, 7.62mm), smoke devices, pyrotechnics, artillery noise simulators
RANGE FAN LIMITS**	N/A
BOUNDARIES**	616 802 to 617 803 to 617 802 to 618 803 to beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	N/A
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Control tower, barbed wire, machine gun and artillery simulators, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-2382
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. This range shall only be operated by Range Operations Division personnel. 2. Ensure all weapons are cleared and inspected prior to departing the firing line. 3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-505A
LOCATION	622 806
TYPE	Night Infiltration Range
ALLOWABLE WEAPONS	Blanks (5.56mm, 7.62mm), smoke devices, pyrotechnics, artillery noise simulators
RANGE FAN LIMITS**	N/A
BOUNDARIES**	620 802 to 624 809 to 622 802 to 625 808
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	N/A
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Barbed wire, wooden wall, trench
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7163
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. The course shall start from 625 807 and run southwest to 621 802. 2. Ensure all weapons are cleared and inspected prior to departing the firing line. 3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-505B
LOCATION	624 800
TYPE	Night Infiltration Range
ALLOWABLE WEAPONS	Blanks (5.56mm, 7.62mm), smoke devices, pyrotechnics, artillery noise simulators
RANGE FAN LIMITS**	N/A
BOUNDARIES**	622 800 to 627 803 to 624 798 to 629 803
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	N/A
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Barbed wire, wooden wall, trench
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7163
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. The course shall start from 628 802 and run southwest to 624 798. 2. Ensure all weapons are cleared and inspected prior to departing the firing line. 3. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

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RANGE	R-600
LOCATION	621 984
TYPE	Demolition Range
ALLOWABLE WEAPONS	Charges not to exceed 200 lbs. untamped and 600 lbs. tamped, MICLIC (live line charges/inert line charges)
RANGE FAN LIMITS**	N/A
BOUNDARIES**	620 986 to 618 984 to 621 982 to 622 984 to beginning
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Range sign, MEDEVAC procedure sign, allowable weapon sign, hearing protection sign, and flag pole
TROOP PENETRATION LIMIT FROM FIRING LINE**	Not beyond range boundary limits
ASSIGNED TO	CG, MCB
TELEPHONE	(760) 725-7163

SPECIAL INSTRUCTIONS

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

1. All personnel shall wear flak jackets and helmets at all times while on this range.

2. Post a road guard(s) at 624990 with communication to the RSO. No traffic/personnel shall enter the range without the RSO's permission.

3. Post two demolition signs at 631 993 and 629 994 (Roblar Road) facing oncoming traffic.

4. The RSO shall check each shot hole, looking for any unconsumed explosives prior to departing the range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

5. ALL unconsumed explosives shall be policed-up and consolidated for one last clean-up shot prior to the range going cold.

6. ALL unused blasting materials shall be returned to the Las Pulgas ASP.

7. ALL target materials which were used (blown) during training shall be policed-up and carried to AFA-17. LONGRIFLE maintains the gate key for AFA-17.

8. Electric firing shall not occur within 155 meters of energized power lines.

9. NO DEMOLITION TRAINING is authorized during, or on approach of, electric or severe dust storms.

10. A volt-ohmmeter shall be used to check for stray electromagnetic energy per directives in the MCO 3570 series, prior to using a line charge.

11. The RSO is responsible for all charges and ensuring all misfire procedures are in accordance with directives.

12. All malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

APPENDIX C

ANNEX II - AVIATION RANGES

RANGE	Door Gunner #1
LOCATION	From hilltop at 584 005 to the hilltop at 600 000 (within R-2503B)
TYPE	Helo Door Gunner Range
ALLOWABLE WEAPONS	Machine guns
RANGE FAN LIMITS**	Between 204 degrees mag and 152 degrees mag – toward Whiskey Impact Area
BOUNDARIES**	(Impact area) 601 994 to 601 976 to 573 983 to 582 997
MINIMUM RANGE**	500 meters
MAXIMUM RANGE**	2150 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	N/A
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Aircraft shall check in with LONGRIFLE when entering Camp Pendleton airspace, describe mission, ordnance aboard, obtain permission, and clear route to the range. 2. Pilots and gunners shall be familiar with the impact area, firing limits, danger zones, and safety regulations for this range.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued)

3. Communication shall be maintained at all times between the aircraft and LONGRIFLE on UHF 301.9/VHF123.2. Firing shall be suspended immediately upon loss of communication.

4. Jardine Canyon cannot be occupied when this range is in a hot status.

5. Prior to use of this range, aircraft shall make a thorough run of the area prior to asking LONGRIFLE to go "hot."

6. The maximum altitude when firing shall not exceed 2,000' AGL.

7. All rounds shall impact within the impact area boundaries of this range.

8. A maximum of two aircraft may occupy the firing area at one time. The pilots and gunners must understand that the entire area in front of the gun and throughout the impact area shall be clear PRIOR TO EACH FIRING.

9. Notify LONGRIFLE when use of the range is complete, with ordnance expended.

10. MPs 3, 3A, and OP J cannot be occupied when Door Gunner #1 is in use.

11. Ensure all weapons are cleared and inspected upon completion of training on the range.

12. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	Door Gunner #2
LOCATION	From hilltop at 617 995 to the hilltop at 634 979 (within R-2503B)
TYPE	Helo Door Gunner Range
ALLOWABLE WEAPONS	Machine guns
RANGE FAN LIMITS**	Between 246 degrees mag and 212 degrees mag – toward Whiskey Impact Area
BOUNDARIES**	626 973 to 613 962 to 595 986 to 612 988
MINIMUM RANGE**	500 meters
MAXIMUM RANGE**	2150 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	N/A
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None
SPECIAL INSTRUCTIONS	****RANGE REGS POSTED**** ****AT THE RANGE**** ****SUPERCEDE THIS MANUAL**** 1. Aircraft shall check in with LONGRIFLE when entering Camp Pendleton airspace, describe mission, ordnance aboard, obtain permission, and clear route to the range. 2. Pilots and gunners shall be familiar with the impact area, firing limits, danger zones, and safety regulations for this range. 3. Communication shall be maintained at all times between the aircraft and LONGRIFLE on UHF 301.9/VHF123.2. Firing shall be suspended immediately upon loss of communication. **SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE**

SPECIAL INSTRUCTIONS (continued)

4. Prior to use of this range, aircraft shall make a thorough recon of R-600, OP M, and MFAs 9/9A prior to asking LONGRIFLE to go "hot." R-600, OP M, and MFAs 9/9A cannot be occupied when Door Gunner #2 is in use.

5. The maximum altitude when firing shall not exceed 2,000' AGL.

6. All rounds shall impact within the impact area boundaries of this range.

7. A maximum of two aircraft may occupy the firing area at one time. The pilots and gunners must understand that the entire area in front of the gun and throughout the impact area shall be clear PRIOR TO EACH FIRING.

8. Notify LONGRIFLE when use of the range is complete, with ordnance expended.

9. Ensure all weapons are cleared and inspected upon completion of training on the range.

10. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE AND TRAINING REGULATIONS

RANGE	R-212TOW (Air Launched)
LOCATION	559 952
TYPE	AH1 Range
ALLOWABLE WEAPONS	20mm, TOW
	Left - 020 degrees mag Right - 040 degrees mag
RANGE FAN LIMITS FOR TOW**	Eastern-most firing position: Left - 030 degrees mag Right - 045 degrees mag
	Western-most firing position: Left - 030 degrees mag Right -045 degrees mag
FIRING AREA FOR TOW	Refer to Special Instruction #5 (below)
FIRING AREA FOR 20MM	Refer to Special Instruction #1 (below)
TARGET AREA**	596 982 to 601 969 to 566 952 to 562 965
MINIMUM RANGE**	600 meters
MAXIMUM RANGE**	3750 meters
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	Emergency LZ at R-212TOW, firing line/point markers
START FIRING LINE**	Straight line from 550 958 to 557 947
CEASE FIRING LINE**	Straight line from 561 964 to 567 952
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS LISTED ON THE NEXT PAGE

SPECIAL INSTRUCTIONS

1. Due to surface danger zone restrictions, TOW firing can only be allowed from the following positions: 560 952 through 560 953, or from 555 952, 555 953, or 554 953. Any point along this line is permissible for firing.

2. When helicopters are firing TOWs, the following ranges MUST BE UNOCCUPIED: R-210E, R-210D, R-210C and R-210B. Helos must recon these ranges to ensure the ranges and adjacent areas are clear of personnel prior to firing and report this via radio to LONGRIFLE.

3. TOW firing (impact area) shall be confined to targets located along the fire break starting at 568 966 eastward to the hilltop at 585 973, and the targets on fingers just south of the fire break in the vicinity of 576 967.

4. Range fan limits for 20mm are defined by two criteria, BOTH OF WHICH MUST BE MET:

a. Firing weapons shall impact within the target area.

b. Weapons shall be trained in line with the down-range axis of the target area vice across it to prevent rounds and ricochets from exiting the sides of the target area at oblique angles.

5. CONFLICTS – Helicopters SHALL NOT occupy any of the airspace mentioned in this Manual when any of the following ranges are in a hot status: R-210E, R-212T, R-213, or R-214

6. When firing guns, OP J, MP3, MP3A, R-600, Door Gunner #1, and Door Gunner #2 must be unoccupied.

7. Safety precautions shall be adhered to as prescribed in NATOPS and directives in the MCO 3570 series.

8. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

RANGE	R-220 (Whiskey A/C Strafing Area)
LOCATION	Area bounded by 569 972, 609 972, 609 992, 569 992, and back to 569 972
TYPE	Aircraft Strafing Range
ALLOWABLE WEAPONS	Cannon, air-to-ground rockets, lasers
RUN IN HEADING**	080 – 180 degrees mag (weapon system)
BOUNDARIES**	Whiskey Impact Area
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Whiskey Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	N/A
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

2. One cold pass is required prior to dropping/firing live ordnance or lasers (refer to chapter 4 of this Manual).

3. The impact of all lasers shall be contained within the Whiskey Impact Area and below the horizon (refer to chapter 8 of this Manual).

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RANGE	R-440 (Zulu A/C Bombing and Strafing Area)
LOCATION	Area bounded by 609 928, 609 942, 651 965, 659 960, 659 927, 639 912, and back
TYPE	Aircraft Bombing and Strafing Range
ALLOWABLE WEAPONS	Cannon, air-to-ground rockets, bombs [not to exceed 500 lbs. (MK82)], lasers; TOW missile (special request only)
RUN IN HEADING**	305 – 030 degrees mag (weapon system)
BOUNDARIES**	Zulu Impact Area
MINIMUM RANGE**	N/A
MAXIMUM RANGE**	N/A
IMPACT AREA**	Zulu Impact Area
ENVIRONMENTAL	Refer to chapter 2 of this Manual
RANGE FACILITIES	N/A
TROOP PENETRATION LIMIT FROM FIRING LINE**	N/A
ASSIGNED TO	CG, MCB
TELEPHONE	None

****RANGE REGS POSTED****
****AT THE RANGE****
****SUPERCEDE THIS MANUAL****

SPECIAL INSTRUCTIONS

1. Refer to chapter 4 of this Manual.

2. Controlling agencies [TACP or Rotary Wing FAC(A)] shall select targets to ensure maximum safety to adjacent manned positions from the normal fragmentation pattern of the ordnance being used.

3. Run in headings are 305 – 030 degrees mag.

4. One cold pass is required prior to dropping/firing live ordnance or lasers.

SPECIAL INSTRUCTIONS CONTINUED ON NEXT PAGE

SPECIAL INSTRUCTIONS (continued

5. The impact of all lasers shall be contained within the Zulu Impact Area and below the horizon. Refer to chapter 8 of this Manual for specific lasing points.

6. TOW missile findings will be briefed to the RCO.

7. All weapon malfunctions shall be corrected per the appropriate TM/FM, and unit SOP.

APPENDIX D

ARTILLERY FIRING AREAS

Overview

This appendix provides details regarding the Artillery Firing Areas aboard MCB, Camp Pendleton, and the procedures for their use.

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	D-3
2. Procedures For Firing From Artillery Firing Areas	D-3
3. Firing Precautions	D-5
4. Safety Personnel	D-6
5. Communication	D-6
6. Coordination Between Artillery and Air Assets	D-6
7. Special Instructions for Firing Improved Conventional Munitions (ICM)	D-7
8. FASCAM	D-8
9. Direct-Fire Procedures	D-8
10. Artillery Firing Areas (AFAs)	D-8

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APPENDIX D

ARTILLERY FIRING AREAS

1. GENERAL

a. Ammunition Restrictions

Ammunition restrictions shall be per the provisions in TM 43-001-28, the applicable Weapon Technical Manual, and handling procedures per BO P8000.2.

b. Safety Requirements

A corpsman, with first aid equipment and a safety vehicle, shall be present at all times when firing is in progress. Whenever possible, this vehicle should be an ambulance.

2. PROCEDURES FOR FIRING FROM ARTILLERY FIRING AREAS

a. General

The Artillery Firing Areas (AFAs), indicated in the 11th Marines Survey on pages D-9, D-10, and D-11 are authorized for use by units conducting indirect-fire aboard Camp Pendleton.

b. Preparation

All AFAs require reconnaissance by survey, and preparation of a surface danger diagram prior to occupation and live-firing. The geographic center of the AFA is surveyed to fourth order accuracy, and marked by a concrete monument witnessed by a yellow cassonite marker. Each AFA is also marked by a sign, which denotes the AFA number, and a hearing hazard zone.

c. Vehicle Operations

All vehicle operations, in conjunction with the use of AFAs, shall comply with the provisions of chapter 6 of this Manual.

d. Radar/ Registration Points

Radar positions, observation posts for High Burst/Mean Point Impact (HB/MPI) registration, and registration points shall be surveyed to fifth order accuracy.

e. Orienting Station/End of Orienting Line

Firing units must survey an Orienting Station (OS) and establish an End of Orienting Line (EOL) for each firing position per FM 6-2.

---

f. One Common Impact Area

The Zulu and Whiskey Impact Areas have been combined into one common impact area and redefined for artillery firing purposes. The new artillery indirect-fire impact area is defined as an area beginning at 576 002 continuing through 615 994, 635 973, 659 960, 659 927, 639 907, 629 912, 609 927, 599 942, 589 942, 549 962, and ending at 559 996. All surface artillery surface danger zones shall be contained within this impact area.

---

g. SDZ Diagram Construction and Safety Cards

Using the surveyed OS as the firing point, firing units shall construct a SDZ diagram, per directives in the MCO 3570 series, and a Range Safety Card per unit Safety SOPs for each AFA to be used. The entire diagram, to include buffer zones, may not exceed the limits of the impact area defined in paragraph 2.f. above. The artillery battalion commander (or his designated representative) shall approve all diagrams and safety cards prior to firing.

---

h. SDZ Diagram Locations

SDZ diagrams shall be at the Fire Direction Center (FDC) of the firing unit, observer location, and RSO position. The SDZ diagram shall also be provided to the Range Scheduling Office no later than seven (7) working days in advance. When the artillery firing exercise (FIREX) is battalion size or larger, a copy of the SDZs will be maintained at the controlling unit's FDC.

---

i. Target Area

The target area, as depicted on the SDZ diagram, will be communicated to LONGRIFLE prior to the unit going into a hot status.

---

j. SDZ Preclusions

SDZ diagrams shall be constructed to preclude firing over Base cantonment areas. The diagrams and range cards will remain valid as long as the battery center, determined upon occupation of the AFA, is within 200 meters of the surveyed OS.

---

k. Automated Range Safety System Program

The use of the Automated Range Safety System Program is authorized. Tactical fire control measures may be substituted for SDZs, provided they correspond to directives in the MCO 3570 series.

---

l. Non-Designated AFAs Use of an AFA not designated in this Manual shall be made by a special request, accompanied by a SDZ diagram. Forward requests to the Commanding General, MCB (Assistant Chief of Staff, Operations and Training) thirty (30) days prior to the proposed firing date. Establishment of an AFA, not described in this Manual, shall also require an environmental review. Please refer to chapter 2 of this Manual for environmental documentation requirements.

m. Coordinates The 11th Marines Survey on pages D-9, D-10, and D-11 provides a listing of the coordinates, altitude (to the nearest tenth of a meter), and coordinating instructions for each approved AFA.

n. Consolidated AFA Booklet The Commanding Officer, Eleventh Marines has prepared a consolidated AFA booklet, with survey data cards, for each AFA. Each data card provides survey data, directions to, and a sketch of each AFA. The AFA booklets are on file with the Range Scheduling Office and 11th Marines. Artillery battalion S-3s should also have a copy of the AFA booklet.

o. Surveys Contact 11th Marines Regimental Survey for any information regarding surveys aboard Camp Pendleton.

p. Special Use Airspace Dimensions and operational characteristics of Special Use Airspace (SUA), required to support artillery live-fire, are discussed in detail in paragraph 4001 in chapter 4 of this Manual.

3. FIRING PRECAUTIONS

a. Overhead-Fire When firing over the heads of maneuver units or occupied positions, ammunition cleared for overhead-fire is required.

b. No Fire Areas No Fire Areas are listed in appendix B of this Manual, which shall be accounted for in the SDZ diagram construction.

c. Powder Burning Powder burning shall be conducted in AFAs during FDRs of BLUE, GREEN, and YELLOW. In order to reduce the potential for costly wildland fires, when the FDR is ORANGE or RED, the unit conducting training shall burn powder at AFAs 16 and 31 only, unless coordinated with LONGRIFLE. During all powder burning activities, powder shall be burned in areas cleared to mineral earth, and no closer than 200 feet to vegetation. Powder shall be burned in single or double rows, not to exceed 12 inches in width, and not to exceed a total of 40 increments (bags). Units shall have fire extinguishers, water, and shovels at the burn site. Units shall contact

LONGRIFLE for permission prior to burning. During FDRs of ORANGE and RED, units shall remain at the burn site for 30 minutes after the last burn, ensuring no fires have been started in the surrounding vegetation.

4. SAFETY PERSONNEL

Safety personnel and their responsibilities are detailed in chapter 3 of JtRegtO P3570.2A.

5. COMMUNICATION

a. FIREXs

When an artillery firing exercise (FIREX) is battalion size or larger, a Base RSO from the organization conducting the exercise may check out all the AFAs assigned to the organization conducting the FIREX. Communication shall be established and monitored between LONGRIFLE and each firing unit occupying an AFA, prior to and during all firing. The controlling headquarters shall conduct all normal traffic between the controlling unit and LONGRIFLE. Subordinate units shall monitor the Range Safety Net, entering the net only when called, or in the event of an emergency, MEDEVAC, etc. This procedure is designed to reduce traffic on the Range Control Net, and provide positive communication with each firing unit in case of emergencies. When a unit calls LONGRIFLE, they shall identify themselves as the (unit) Fire Direction Center, and not the alphanumeric unit callsign. The controlling headquarters shall advise LONGRIFLE of the current location of all firing units involved in the FIREX.

b. Check-Firing

All personnel shall be briefed to immediately command, “Check-fire” upon observing any unsafe condition, and to state the reason check-firing is announced. Once the problem is corrected, the OIC of Firing shall contact LONGRIFLE for permission to cancel check-firing. Upon approval, he will command, “Cancel check- fire.”

6. COORDINATION BETWEEN ARTILLERY AND AIR ASSETS

a. “Priority Use”

To increase training efficiency, a “Priority Use” scheduling system has been implemented. This does not preclude any other unit from scheduling training on an air or ground day. “Priority Use” only means a “priority” for range and airspace utilization. For details, refer to paragraph 3001.2 in chapter 3 of this Manual.

b. Unit Coordination

Close coordination is required when air and ground units schedule a range simultaneously. When a ground unit wants to schedule training on an Air Priority day, the following coordination will be required.

(1) Prior to shooting, the firing unit must contact the unit controlling the aircraft and agree upon the coordination procedures to be used on Air Priority days.

(2) The firing unit shall collocate a Liaison Officer/Forward Observer (LNO/FO) with the Forward Air Controller (FAC).

(3) With LONGRIFLE concurrence, the LNO/FO shall receive approval from the AO/FAC for any live-fire after LONGRIFLE has passed control of the aircraft to the AO/FAC. The LNO/FO ensures firing units conduct missions only when aircraft are out of the impact area, above maximum ordinate, or are operating within formal or informal Air Coordination Areas (ACAs).

(4) When aviation activities are scheduled on Ground Priority days, the coordination process is reversed.

(5) Any artillery unit may schedule a live-fire exercise on an Air Priority day, but that unit shall accept being put in a "check-firing" status when a scheduled aircraft checks in with LONGRIFLE. On Ground Priority days, air activity will be suspended pending completion of conflicting artillery training. Firing units will not be placed in a "check-firing" status unless it is required to preclude a serious safety violation.

---

7. SPECIAL INSTRUCTIONS FOR FIRING IMPROVED CONVENTIONAL MUNITIONS (ICM)

---

a. Firing Conditions

ICM shall <u>only</u> be fired under the conditions listed below.

(1) With the approval of a special request to the Assistant Chief of Staff, Operations and Training

(2) From AFAs 10, 31, 32, and 33, unless otherwise authorized

(3) Into grid square 6393

(4) When the OIC of Firing has coordinated with LONGRIFLE, has ensured all areas under the gun target line are clear of personnel, and has been granted permission to fire.

---

b. Firing Procedures and Safety Precautions

Special firing procedures and safety precautions applicable to ICM are contained in directives in the MCO 3570 series.

c. EOD Notification

The firing unit shall inform EOD when ICM is fired into the designated impact grid.

8. FASCAM

The firing of scatterable mine munitions is prohibited.

9. DIRECT-FIRE PROCEDURES

a. Direct-Fire Shoots

Direct-fire shoots shall be conducted per current unit safety SOPs and FM 6-50. SDZ diagram construction shall be completed prior to firing; and shall comply with chapter 11, directives in the MCO 3570 series, figure 11-3 of MCO P3570.1B, and the appropriate Weapons Technical Manual.

b. Direct-Fire Ranges

Ranges 227 and 407 are designated for direct-fire.

c. SDZ Diagrams

Prior to conducting a direct-fire shoot, SDZ diagrams shall be submitted to the Range Scheduling Office.

10. ARTILLERY FIRING AREAS (AFAs)

The AFAs and OSs aboard MCB, Camp Pendleton are listed on the following pages.

ARTILLERY FIRING AREAS (AFAs)
CAMP PENDLETON
11TH MARINES SURVEY

STATION	ORD	EASTING	NORTHING	HEIGHT	REMARKS
AFA 01	4TH	453 326	369 275	175	
AFA 02	4TH	452 840	369 239	179	
AFA 04	4TH	449 314	368 973	168	
AFA 05	4TH	449 186	368 892	104	Inactive
AFA 06	4TH	448 668	368 932	136	
AFA 07	4TH	446 934	368 934	165	
AFA 09	4TH	458 377	368 238	199	RSOP only
AFA 10	4TH	459 420	368 187	204	
OS 27	4TH	459 497	368 195	198	
OS 28	4TH	459 244	368 204	192	
OS 29	4TH	459 132	368 216	191	
AFA 11	4TH	458 276	368 148	148	
AFA 12	4TH	456 592	368 143	214	
AFA 13	4TH	458 751	368 027	138	RSOP only
AFA 14	4TH	454 808	367 662	61	RSOP only
AFA 15	4TH	455 495	367 583	43	RSOP only
AFA 16	4TH	456 357	367 529	42	RSOP only
AFA 17	4TH	461 444	368 026	100	
AFA 18	4TH	461 814	367 978	90	
AFA 19	4TH	463 624	367 925	119	
OS 6	4TH	463 645	367 929	119	
AFA 20	PAD	463 814	367 869	133	RSOP only
AFA 21	4TH	464 201	368 013	129	
OS 7	4TH	464 178	368 012	129	
AFA 22	4TH	465 528	367 722	60	
AFA 24	4TH	467 088	367 928	132	
OS 9	4TH	467 040	367 935	137	
AFA 25	4TH	465 704	367 994	131	
OS 3	4TH	465 732	367 980	122	

ARTILLERY FIRING AREAS (AFAs)
CAMP PENDLETON
11TH MARINES SURVEY
(Continued)

STATION	ORD	EASTING	NORTHING	HEIGHT	REMARKS
AFA 26	4TH	465 948	368 039	162	
OS 35	4TH	465 974	368 036	159	
AFA 27	4TH	466 458	368 029	136	
OS 10	4TH	466 525	368 025	137	
AFA 28	4TH	467 311	368 077	208	
OS 11	4TH	467 379	368 073	204	
AFA 29	4TH	467 057	368 123	184	
OS 13	4TH	467 011	368 120	184	
AFA 30	4TH	465 307	368 066	166	
OS 8	4TH	465 238	368 063	164	
AFA 31	4TH	465 789	368 146	221	
OS 14	4TH	465 745	368 109	199	
OS 15	4TH	465 650	368 181	213	
AFA 32	4TH	466 062	368 252	282	
OS 19	4TH	466 104	368 272	284	
OS 20	4TH	466 021	368 256	282	
AFA 33	4TH	466 466	368 229	239	
OS 16	4TH	466 679	368 226	239	
OS 18	4TH	466 494	368 239	240	
OS 23	4TH	469 520	368 218	102	
AFA 35	4TH	469 563	368 290	99	
OS 24	4TH	469 504	368 292	93	
AFA 39	4TH	471 218	368 605	230	
OS 25	4TH	471 105	368 584	222	
OS 39	4TH	471 100	368 534	228	
AFA 40	4TH	462 881	368 874	767.2	
OS 42	4TH	462 897	368 883	770.2	
AFA 41	4TH	461 910	368 914	752	
OS 43	4TH	461 966	368 925	753.3	

ARTILLERY FIRING AREAS (AFAs)
CAMP PENDLETON
11TH MARINES SURVEY
(Continued)

STATION	ORD	EASTING	NORTHING	HEIGHT	REMARKS
AFA 42	4TH	461 681	369 026	747.6	
AFA 43	4TH	459 363	369 018	644.6	
OS 38	4TH	459 427	369 023	661	
AFA 44	4TH	460 177	369 143	679.5	
OS 37	4TH	460 161	369 138	674.6	
AFA 45	4TH	460 122	369 208	720.1	
AFA 46	4TH	457 874	369 163	597.2	
AFA 90	PAD	472 730	367 724	143.4	RSOP only
AFA 91	PAD	473 477	367 574	159	RSOP only
AFA 92	PAD	472 125	367 498	163.2	RSOP only
AFA 93	PAD	464 529	367 138	18.0	RSOP only
AFA 94	PAD	466 070	367 073	76.4	RSOP only
AFA 95	PAD	465 512	366 933	16.9	RSOP only
AFA A	PAD	454 469	369 326	121.6	
AFA C	PAD	460 394	369 022	718.8	
AFA D	PAD	460 616	369 096	735.6	
AFA F	PAD	470 238	368 443	242.7	
AFA G	PAD	458 034	368 006	126.1	
AFA H	PAD	450 877	369 011	80.1	
AFA I	PAD	451 766	369 110	88.3	
AFA J	PAD	456 301	368 367	148.3	

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APPENDIX E

MORTAR POSITIONS

Overview

This appendix provides details regarding the mortar positions (MPs) on board MCB, Camp Pendleton, and the procedures for their use.

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	E-3
2. Procedures for Firing from Mortar Positions	E-4
3. Procedures for Firing Mortars from Outside Mortar Positions	E-5
4. Surface Danger Zones	E-6
Figure	
E-1 SDZ Example	E-7

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APPENDIX E

MORTAR POSITIONS

1. GENERAL

The following procedures shall be used when firing mortars anywhere on MCB, Camp Pendleton.

a. Ammunition Handling

Ammunition shall be handled per the provisions in TM 43-001-28, the applicable Weapon Operations Manual, and ammunition handling procedures in BO P8000.3.

b. Safety Requirements

A corpsman, with first aid equipment and a safety vehicle, shall be present, at all times, when firing is in progress.

c. Communication

Communication with LONGRIFLE shall be conducted per the provisions in this Manual.

d. Restrictions

Firing mortars over the heads of unprotected troops is prohibited. Mortars may be fired over armored vehicles located 100 meters or more from the line of fire. Mortars will not be fired over Basilone Road. Requests to fire from other than established sites will be considered on an individual basis.

e. Direct Observation

The impact of all rounds fired shall be under direct observation. The RSO shall ensure qualified observers are present.

f. Removal of Increments

Increments removed before firing shall be placed in a metal or wooden covered container located outside the firing position at a safe separation distance (i.e., 25m).

g. Deflection Limits and Quadrant Elevations

The RSO shall calculate, by charge for each mortar tube, the left and right deflection limits and the minimum and maximum quadrant elevations that can safely be fired from that position.

h. Calculated Safety Information The OIC of Firing shall ensure the Fire Direction Center and each Gun Chief have a copy of the safety information calculated by the RSO for mortar tubes in their possession. The information shall be written on a range card in the form of a "SAFETY T" for each charge to be fired in that position.

i. Calculated Firing Data After the Fire Direction Center calculates the firing data, the RSO and Gun Chief shall check it against the appropriate "SAFETY T," to ensure the data placed on the mortar is safe. Only then will rounds be fired.

2. PROCEDURES FOR FIRING FROM MORTAR POSITIONS

a. Authorized Mortar Positions The mortar positions listed below are authorized for use by units conducting mortar fire aboard Camp Pendleton.

MORTAR POSITION	GRID	FROM AZIMUTH	TO AZIMUTH	MIN RANGE	MAX RANGE	IMPACT AREA	CALIBER
MP-1	6377 9050	5835	0420	1400	4500	ZULU	81MM, 60MM
MP-2	6419 9065	5680	0360	1450	4000	ZULU	81MM, 60MM
MP-3	5975 9937	3500	4100	700	3325	WHISKEY	81MM, 60MM
MP-3A	5953 9947	4410	2130	600	2325	WHISKEY	81MM, 60MM
MP-4	6556 9157	5300	6200	1000	3800	ZULU	81MM, 60MM
MP-5	5288 9670	0159	0489	500	2400	QUEBEC	*81MM
		0498	0797		1600		60MM
MP-6	5300 9670	6400	0204	500	1850	QUEBEC	*81MM, 60MM

SPECIAL INSTRUCTIONS: Mortars may be fired from behind the pits on a line 50 meters to the rear, and parallel to the pits.

NOTE: All azimuths are given in grid.

b. Scheduling All mortar positions shall be scheduled through the Range Scheduling Office prior to conducting training. Scheduling requests shall be completed per paragraph 3002 in chapter 3 of this Manual, to include the DODICs of all ammunition to be fired. Ammunition not listed on the approved scheduling request shall not be fired.

*Brief to Range Control Officer required no later than seven (7) working days in advance of planned fire.

c. Range Regs Information regarding the conduct of firing is contained in the ammo can attached to a pole at each mortar position. The ammo cans contain appropriate safety data (left-right azimuth, target area, min-max range of the target box from OS), along with RSO instructions, regulations, and a red flag.

---

d. SDZ Diagram Construction Firing units shall construct a SDZ diagram per directives in the MCO 3570 series. The entire diagram, to include buffer zones, may not exceed the boundaries of the mortar fires impact area or impede on established NFAs as defined in appendix B of this Manual.

---

e. SDZ Diagram Require-ments RSOs shall ensure a proper SDZ diagram is constructed per directives in the MCO 3570 series. The OIC of Firing shall sign the SDZ diagram. A copy of the SDZ diagram shall be maintained at the locations listed below.

(1) FDC of firing unit

(2) Observer location

(3) RSO position

---

f. Target Area The target area, as described in the SDZ, shall be communicated to LONGRIFLE prior to the unit requesting a hot status.

---

3. PROCEDURES FOR FIRING MORTARS FROM OUTSIDE MORTAR POSITIONS

Units firing from sites, other than mortar positions (e.g., ranges, AFAs, etc.) shall comply with appropriate range regulations and the provisions listed below.

---

a. Scheduling All areas shall be scheduled through the Range Scheduling Office and approved by the RCO prior to conducting training. Scheduling requests shall be completed per paragraph 3002 in chapter 3 of this Manual, to include the DODICs of all ammu-nition to be fired, and SDZ diagram. Ammunition not listed on the approved scheduling request shall not be fired.

---

b. SDZ Diagram Construction Firing units shall construct a surface danger zone diagram per directives in the MCO 3570 series. The entire diagram, to include buffer zones, shall not exceed the boundaries of the appropriate mortar fires impact area or impede on established NFAs as defined in appendix B of this Manual.

---

c. SDZ Diagram Requirements

RSOs shall ensure a proper SDZ diagram is constructed per directives in the MCO 3570 series. The OIC of Firing shall sign the SDZ diagram. A copy of the SDZ diagram shall be maintained at the locations listed below.

(1) FDC of firing unit

(2) Observer location

(3) RSO position

---

d. Mortar Firing Areas (MFAs)

Procedures governing firing from MFAs will be disseminated in a separate directive.

---

e. Target Area

The target area, as described in the SDZ, shall be communicated to LONGRIFLE prior to the unit requesting a hot status.

---

4. SURFACE DANGER ZONES

Surface danger zone requirements for 60mm, 81mm, 4.2-inch, and 120mm mortars are listed below and in figure E-1 on page E-7 of this Manual.

MORTAR SURFACE DANGER ZONE REQUIREMENTS FOR AREAS A and B

(Dimensions of areas in meters[1, 2,3,4])

CALIBER	AREA A	AREA B
60 mm	250	300
81 mm	400	400
4.2 inch	400	500
120 mm	600	600

[1] Quadrant elevation limits must be modified to take into account the distance to the minimum and maximum limits of the impact area. After registration, corrections must be applied to the deflection quadrant elevation limits. When firing the 4.2 inch mortar, if registration firing is not conducted, metro and velocity error corrections will be applied to these limits, or all targets will continue to be selected in the central portion of the impact area.

[2] Dimensions of areas A and B may be reduced by 50% when firing illumination cartridges.

[3] Cartridges without HE filler (i.e., M880) do not require areas A and B.

[4] Distance X will not be less than the maximum range of the greatest charge to be fired.

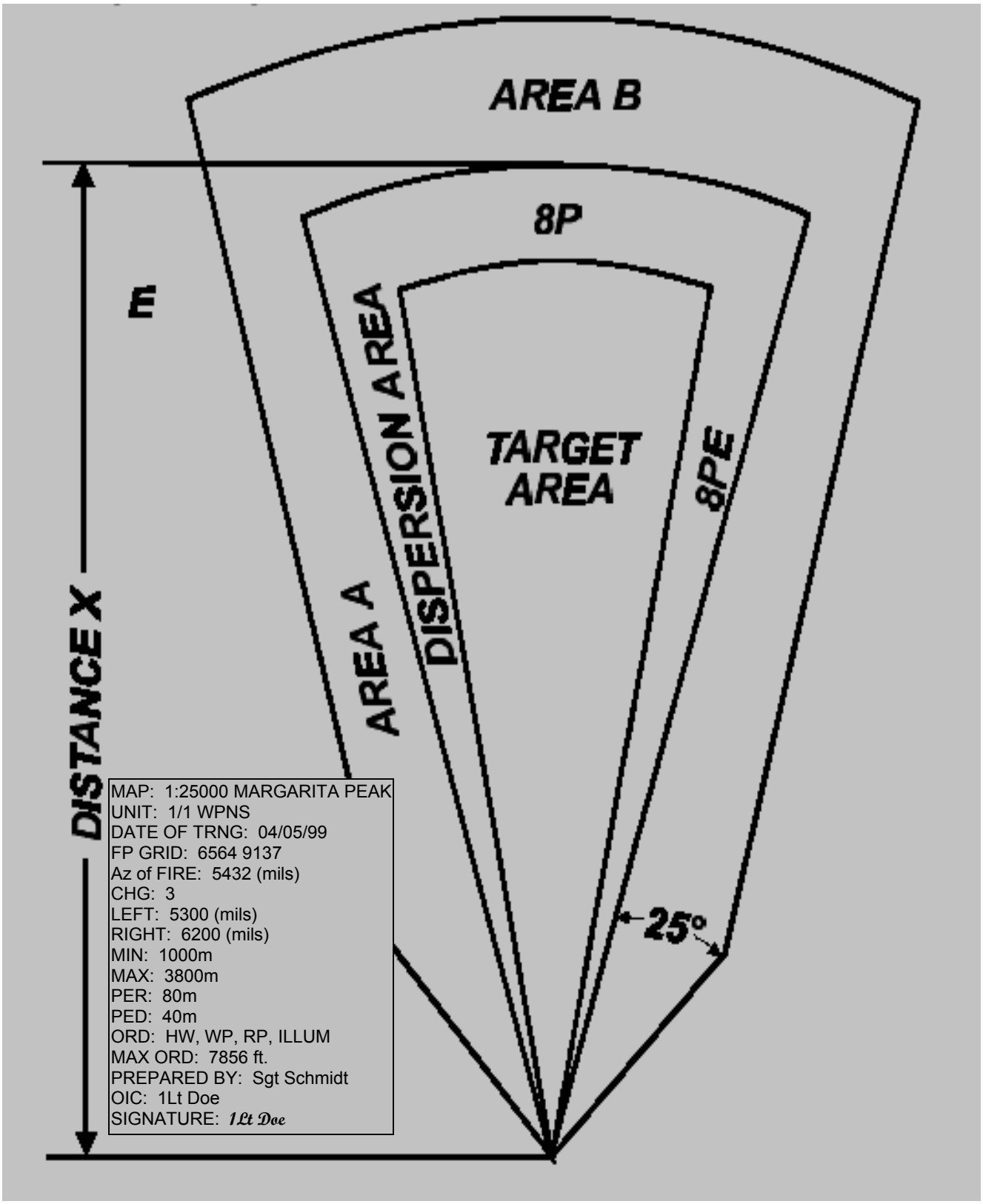
AREA B
8P
E
AREA A
DISPERSION AREA
TARGET AREA
8PE
DISTANCE X
25°
MAP: 1:25000 MARGARITA PEAK
UNIT: 1/1 WPNS
DATE OF TRNG: 04/05/99
FP GRID: 6564 9137
Az of FIRE: 5432 (mils)
CHG: 3
LEFT: 5300 (mils)
RIGHT: 6200 (mils)
MIN: 1000m
MAX: 3800m
PER: 80m
PED: 40m
ORD: HW, WP, RP, ILLUM
MAX ORD: 7856 ft.
PREPARED BY: Sgt Schmidt
OIC: 1Lt Doe
SIGNATURE: 1Lt Doe

Figure E-1

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APPENDIX F

UTILIZATION OF CS

Overview

This appendix provides details regarding the utilization of CS on board MCB, Camp Pendleton, and procedures for the execution of the Individual Protective Equipment Confidence Exercise (IPECE).

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	F-3
2. CS Training	F-3
3. Responsibilities of the OIC	F-4
4. Responsibilities of the RSO	F-5
5. IPECE Safety Brief	F-5
6. IPECE Facility Requirements	F-6
7. Chamber Charging Procedures	F-8
8. IPECE Conducted In Chambers or Tents	F-8
9. IPECE Conducted In an Open Area	F-9
10. Post IPECE Procedures	F-10

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APPENDIX F

UTILIZATION OF CS

1. GENERAL

The following procedures shall be used when CS capsules or CS grenades are utilized anywhere on MCB, Camp Pendleton.

2. CS TRAINING

a. Authorized CS Chambers

The CS chambers listed below are authorized for use by units conducting Individual Protective Equipment Confidence Exercises (IPECEs) aboard Camp Pendleton.

LOCATION	GRID	DESCRIPTION	SCHEDULED BY
14 AREA	737 859	Concrete Block Structure	Range Scheduling
33 AREA	658 851	Concrete Block Structure	Range Scheduling
41 AREA	595 828	Concrete Block Structure	Range Scheduling
53 AREA	556 926	Concrete Block Structure	Range Scheduling
62 AREA	487 990	Concrete Block Structure	Range Scheduling

b. Scheduling

All CS chambers shall be scheduled through the Range Scheduling Office prior to conducting training. Scheduling requests shall be completed per paragraph 3002 in chapter 3 of this Manual, to include the DODICs of all ammunition to be utilized during training. Ammunition not listed on the scheduling request shall not be fired.

c. Range Regs

(1) Information regarding the conduct of the IPECE is contained in the ammo can attached to the range pole. The ammo cans contain appropriate safety, IPECE procedures along with RSO instructions, regulations, and a red flag.

(2) The RSO/OIC shall not allow CS gas-producing devices to be used within 1,500 meters of the I-5 Freeway. and within 500 meters of any hard surfaced roads or built-up areas anywhere aboard Camp Pendleton.

(3) The gas chamber RSO shall be a properly qualified staff sergeant or above, who shall ensure only CS is used in gas chambers, and only in the proper amounts for the structure size being used.

(4) The individual conducting training must hold an MOS of 5711 or 5702 for the conduct of IPECE or smoke training.

(5) The use of CS in mask confidence (gas chamber) exercises shall be supervised by a Formal School-trained 5711 NCO or above. This requirement is not waiverable.

(6) Under no circumstances will CS capsules or CS powder be introduced into smoke grenade materials. This action is strictly prohibited per paragraph 1005 in chapter 1 of this Manual.

d. Communication Prior to lighting off the CS chamber, communication with LONGRIFLE shall be established. A request to go hot will be required. Notify LONGRIFLE approximately 30 minutes prior to securing the range so that a Range Inspector can clear the range as clean prior to the unit's departure.

3. RESPONSIBILITIES OF THE OIC

a. OIC Requirements The OIC shall be a SSgt or above and must be NBC qualified for the conduct of IPECE or smoke training.

b. Safety Brief Ensure all personnel undergoing training participate in the safety brief.

c. Range and Safety Regulations The OIC shall be knowledgeable in all local range and safety regulations pertaining to CS and IPECE training.

d. Scheduling Ensure the IPECE is appropriately scheduled via the Range Scheduling Office.

e. Safety Requirements Ensure a dedicated safety vehicle with corpsman and non-participating driver are on-site. Safety vehicle personnel shall be familiar with Individual Protective Equipment (IPE) and have IPE to include their issued protective mask in case they have to enter the chamber or exercise area to tend to an emergency.

f. Preparation Supervision Supervise preparation and conduct of the IPECE to include build-up of CS concentration inside the chamber and ensure the exercise is conducted at a safe distance from any non-participating personnel.

g. Assistant Instructor Brief Brief assistant instructors on safety requirements.

h. Training Supervision Supervise all IPECE training.

4. RESPONSIBILITIES OF THE RSO

a. RSO Requirements The RSO will be a staff sergeant or above and must be NBC qualified for the conduct of IPECE or smoke training.

b. Munition Modification Per paragraphs 7008 and 7009 of this Manual, modifications or mixing of munitions are prohibited. CS capsules or loose CS shall not be incorporated into smoke producing materials.

c. Hard-Surfaced Roads and Built-Up Areas The RSO shall not allow CS to be used within 1,500 meters of the I-5 Freeway or within 500 meters of any hard-surface roads or built-up areas anywhere aboard Camp Pendleton.

5. IPECE SAFETY BRIEF

a. Eligibility to Participate Personnel with the following specific physical conditions shall be referred to medical providers for determination of eligibility to participate in an IPECE (findings and recommendations will be recorded in the individual's health record).

(1) Personnel with respiratory conditions to include histories of asthma

(2) Cardiac conditions

(3) Severe facial acne or any active dermatitis

(4) Open wounds

(5) Pregnancy or suspected pregnancy

---

b. Excluded Medical Conditions

The following medical conditions, if applicable, shall exclude personnel from participating in an IPECE. On-site corpsmen shall verify the medical condition of all participants.

(1) Upper respiratory infection in the last fourteen (14) days that still requires medication

(2) Dental surgery in the past 72 hours

(3) Cuts requiring sutures that are still in place

(4) Pregnancy

(5) Any unexplained rashes, scrapes, scratches, cuts, or respiratory disorder; or medical condition not covered

---

c. Non-Medical Precautions

(1) Wearing contact lenses while training with CS or tearing agents is prohibited. Individuals who normally wear contact lenses must remove them and use properly fitted optical inserts.

(2) Due to the additional heat stress of an IPECE, ensure an adequate water supply is available and personnel are encouraged to drink plenty of water.

(3) Make heads calls prior to entering the chamber.

(4) Due to CS causing involuntary eye closure, no person may ride in the cab of a government vehicle, or operate a government vehicle after exposure. Additionally, personnel shall not drive any vehicle (government or personal) for two (2) hours after exposure, or until they take a thorough shower.

(5) Personal vehicles shall not be driven to and from an IPECE.

---

6. IPECE FACILITY REQUIREMENTS

---

a. General

IPECE training is conducted in a chamber, a field tent, or an open area. An enclosure is preferable to an open area, because the desired vapor concentration can be controlled and maintained.

---

b. Facility and Materials

The chamber or tent should be reasonably airtight and provide an enclosed space of sufficient size with a separate entrance and exit. Materials include: CS or tearing agent capsules, an improvised generator (made from an empty aluminum or stainless

steel can with holes punched in all sides), and a candle. CS, smoke or tearing agent grenades will not to be used inside enclosed facilities. Tents used as IPECE training facilities should be used exclusively for this purpose.

---

c. Open Area and Terrain

If the IPECE is to be conducted in an open area, the exercise area selected should be relatively flat, free from ditches, holes, and other possible individual safety hazards. CS or tearing agent grenades may be used. Wind conditions must be considered, and continuously monitored to ensure that downwind drift of CS or tearing agents will not expose non-participating personnel.

---

d. Safety Standards

The following safety standards must be practiced and enforced to ensure training effectiveness and to prevent unnecessary injuries.

(1) Training shall occur at least 100 meters from any other activity, and 500 meters from uncontrolled civilian access roads and cantonment areas. Units shall provide appropriate government transportation to and from an IPECE. Participating personnel shall not be permitted to drive personal vehicles to or from an IPECE.

(2) Commanders will approve use of CS or tearing agents during training based on advice from NBC personnel (MOS 5702/5711).

(3) CS, smoke, or tearing agent **grenades** shall not be used in confined spaces (e.g., chambers, tents, and buildings).

---

e. Pre-Entry Brief

A pre-entry brief shall be conducted by qualified instructors and provided to participants prior to their entry into the chamber or tent, or their participation in the open area exercise. This brief will cover the following.

(1) Proper donning, fitting, and doffing of mask and IPE

(2) Use of the "buddy" system to ensure proper fit of field protective mask and IPE prior to entry and during conduct of the exercise

(3) Conduct and events performed during entrance into the facility, residence in the facility, and exiting the facility

(4) The brief shall also include emergency procedures, and will also be used as a screening method to identify and refer all personnel with specific physical ailments and conditions to medical providers.

---

f. Exit Brief

An exit brief shall be conducted, and will cover the following.

(1) Prevention of contamination and residual contamination effects after the exercise

(2) Participants shall not operate military or personal vehicles, due to eye tearing, for a minimum of two (2) hours, or until personnel have taken a shower and preformed personal hygiene.

7. CHAMBER CHARGING PROCEDURES

a. Total CS or Tearing Agent Allowed

Instructors initiate the dispensing of CS or tearing agent in the chamber or tent. Total CS or tearing agent capsules used for the conduct of an IPECE shall be calculated using one of the following methods.

(1) For Meters Use. [LxWxH (interior of chamber in meters) divided by 30] – 1 = equals total capsules to initially charge chamber. Total capsules for initial charge + one capsule per every 10 participants = total capsules required for entire IPECE.

(2) For Feet Use. [LxWxH (interior of chamber in feet) divided by1058] – 1 = equals total capsules to initially charge chamber. Total capsules for initial charge + one capsule per every 10 participants = total capsules required for entire IPECE .

b. Charging the Chamber

Normally, six (6) to eight (8) capsules are adequate to establish initial concentration. A heat source will be used for heating the CS or tearing agent capsules. Instructors will exercise caution to ensure the heat source does not cause spontaneous combustion or that the heat source does not emit harmful vapors.

c. Ventilation

At the conclusion of an IPECE, the chamber shall be aired out for minimum of 30 minutes (doors, windows, flaps open).

8. IPECE CONDUCTED IN CS CHAMBERS OR TENTS

a. Allowable Agents

Only M7 series CS or appropriate tearing agent capsules (DODIC K765) shall be used for the conduct of IPECEs.

b. Protective Equipment

Personnel will don masks and IPE, and utilize the “buddy method” to inspect mask and IPE prior to entry into a chamber or tent. Upon entry into the chamber, if the mask leaks, the individual will raise his/her hand above their head, and an instructor will attempt to expeditiously correct the problem in the chamber/tent. If the leak cannot be immediately corrected, the instructor shall escort the participant out of the chamber/tent. Once outside, the mask will be refitted or replaced, and the individual will reenter the chamber/tent with the next group. This situation occurs in the first 10-15 seconds inside the chamber/tent.

(1) Instructors will have participants perform light exercises to instill confidence in mask and seal during movement. Participants will perform side-straddle hops, bend at waist and shake head side to side, and turn head right and left as far as possible.

(2) When it has been determined that all participants have a good seal, all participants will be directed to insert two fingers along one cheek of the mask, and on command, break the seal of the mask (taking a deep breath and closing their eyes before doing so). All participants shall keep the seal of the mask broken until told to "mask" by the chamber instructor.

(3) The seal will be broken for **NO LONGER** than 10-15 seconds. When the command, "mask" is given, all participants will remask, clear the mask, and check for a good seal. When all participants within the chamber have achieved a good seal, they will be directed to exit.

---

c. Chamber Duration Time

The total length of time in the chamber or tent should not take longer than fifteen minutes. Upon completion of the exercise, assistant instructors will be posted at the exit door and guide personnel out of the chamber in an orderly manner to prevent accidents and collisions. Once participants exit the chamber, they will remain masked. Participants will be directed to move away from the CS chamber or tent, and then told to unmask.

---

d. CS or Tearing Agent Replenish-ment

CS or tearing agent concentration is replenished (1 additional capsule per 10 participants), and the procedure is repeated for the next group of participants until all personnel have completed the exercise.

---

e. Chamber Clean-Up

Chambers should be swept and ventilated on a regular basis to prevent crystallized agent build-up and possible over-concentration of CS or tearing agents during IPECEs. Personnel cleaning the chamber or tent shall be in IPE, and practice caution at all times. Non-participating personnel should not be permitted in the immediate area during cleaning.

---

9. IPECE CONDUCTED IN AN OPEN AREA

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a. Safety Briefs

Safety briefings and appropriate exercise orientation briefings remain the same.

---

b. Weather Conditions

A smoke grenade can be used to check wind direction and agent cloud formation to assist in positioning troops.

---

c. Exposure Methods

Several methods may be used to meet the purpose of exposing participants to agent cloud while masked to check fit and functioning of the mask, and to instill confidence in the IPE. The following method is recommended.

(1) Participants are formed into one or more columns facing into the wind in front of a primary instructor.

(2) The assistant instructor ignites CS or a tearing agent grenade, participants don masks and move toward the primary instructor one at a time. The instructor will check each participant's mask while the participant breaks the seal and then reseals, and clears the mask.

(3) Each participant will then be guided out of the agent cloud and faced into the wind.

10. POST IPECE PROCEDURES

a. IPE Clean-up

Participants are reformed and instructed to air out their IPE for a couple of hours upon returning to their barracks/quarters.

b. Personal Hygiene

Participants will be instructed to take a shower upon returning to their barracks/ quarters.

(1) Individuals should start with a cool shower first, because an initial warm shower will activate the agent residue.

(2) Individuals will be informed they may feel agent effects when showering, but to continue showering because effects will last only a short time.

c. Caution

Participants shall not operate military or personal vehicles, due to eye tearing, for a minimum of two (2) hours, or until they have thoroughly showered.

APPENDIX G

OBSERVATION POSTS

Overview

This appendix provides details regarding the observation posts on board MCB, Camp Pendleton, and the procedures for their use.

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	G-3
2. Procedures for Use	G-3

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APPENDIX G

OBSERVATION POSTS

1. GENERAL

Listed below are the designated and identified observation posts (OPs) .

OP LOCATIONS	COORDINATES	REMARKS
A	636 900	Hand-held lasers allowed
B	640 904	Hand-held lasers allowed
C	642 919	Inactive
D	643 906	Hand-held lasers allowed
E	643 921	Marking for southern AFAs
F	666 926	Hand-held lasers allowed
I	649 968	Designation into the Zulu Impact Area is not authorized
J	596 995	Hand-held lasers allowed
K	566 938	Inactive
L	565 938	Inactive support R-218A
M	617 989	Marking for northern AFAs

2. PROCEDURES FOR USE

a. FAC-Controlled Aircraft Aircraft controlled by FACs on OP A and OP B shall not be cleared hot until the aircraft has entered the aviation-delivered ordnance area within the Zulu Impact Area, delineated by the blue-dotted line on the Camp Pendleton Military Installation Map, and defined in appendix B of this Manual.

b. Scheduling OPs shall be scheduled in the same manner as other training facilities.

---

c. Waivers Special requests to use other terrain for OPs shall be submitted to the Range Scheduling Office. Units shall identify the coordinates, intended purpose, and time periods.

APPENDIX H

COMMUNICATION

Overview

This appendix provides details regarding Range Control communication networks aboard MCB, Camp Pendleton, and the procedures for their use.

In This Appendix

The following topics are covered in this appendix.

Topic	See Page
1. General	H-3
2. Radio Communication	H-3
3. Wire Communication	H-6

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APPENDIX H

COMMUNICATION

1. GENERAL

All personnel shall establish and maintain communication with LONGRIFLE (UHF 301.9/255.2/249.9; VHF 123.2 or FM 49.00/30.35) if they are outside an area commander's area of responsibility, off asphalt roads, or operating within Camp Pendleton range airspace. Those having access to "Tango" net frequencies may communicate with LONGRIFLE on that net.

2. RADIO COMMUNICATION

a. Establishing Communi-cation

Units conducting live firing shall establish radio communication on range safety nets (including TACP/FAC(A) conducting live or simulated CAS missions) with LONGRIFLE before permission to commence firing will be granted. Units conducting training in the training areas, beaches, etc., shall also establish communication with LONGRIFLE before commencing training. A voice check shall be made every hour on the hour for units conducting training in all training areas and ranges. A voice check will be made with LONGRIFLE every 30 minutes while live-fire is in progress on ranges and LFAMs. If at any time communication with LONGRIFLE is interrupted, the RSO/OIC of Firing shall immediately order a "check-fire" and remain in "check-fire" status until positive communication has been reestablished. Units operating in Camp Pendleton training areas, airspace, ranges, and sea space are controlled and monitored through distinct communication networks as follows.

NETWORK	Base Ground Safety Net
AREA OF CONTROL	Ranges and Training Areas
HOURS OF OPERATION	24 hours per day/7 days per week
FREQUENCY (IES)	FM 49.00 (Primary)/FM 30.35 (Alternate) or UHF trunked hand-helds
CALLSIGN	LONGRIFLE
PURPOSE	Control/Monitor all live-fire ranges and maneuver areas

NETWORK	UHF Base Air Safety Net
AREA OF CONTROL	MCB, Camp Pendleton; Special Use Airspace
HOURS OF OPERATION	24 hours per day/7 days per week
FREQUENCY (IES)	301.9 UHF
CALLSIGN	LONGRIFLE
PURPOSE	Control/Monitor all air traffic aboard MCB, Camp Pendleton

NETWORK	Tactical Air Control Net
AREA OF CONTROL	Whiskey/Zulu Impact Areas
HOURS OF OPERATION	Activated during CAS operations, pattern work
FREQUENCY (IES)	249.9 UHF
CALLSIGN	LONGRIFLE
PURPOSE	Control/Monitor CAS operations, and help prevent frequency congestion

NETWORK	Tactical Air Control Net
AREA OF CONTROL	Whiskey/Zulu Impact Areas
HOURS OF OPERATION	Activated during CAS operations, pattern work
FREQUENCY (IES)	255.2 UHF
CALLSIGN	LONGRIFLE
PURPOSE	Control/Monitor CAS operations, and help prevent frequency congestion

NETWORK	VHF Air Safety Net
AREA OF CONTROL	MCB, Camp Pendleton Special Use Airspace
HOURS OF OPERATION	24 hours per day/7 days per week
FREQUENCY (IES)	123.2 VHF
CALLSIGN	LONGRIFLE
PURPOSE	Control/Monitor all air traffic aboard MCB, Camp Pendleton

b. Communication Requirements

(1) Units on ranges shall identify themselves by range number, rather than unit callsign, on range control nets.

(2) Units in training areas shall identify themselves by unit and training area. Net control shall always remain with LONGRIFLE.

c. CPAAA/ CPAVA

Units using the CPAAA are to maintain communication per FACSFACSDINST 3120.1 series. Units training in CPAVA or other training areas controlled by MCB, Camp Pendleton, who also have approval to train in the CPAAA, shall inform LONGRIFLE of their intention to move into the CPAAA. Units moving from the CPAAA into the CPAVA or other Camp Pendleton training areas shall inform LONGRIFLE of that movement.

d. Administrative Traffic

Administrative traffic shall not be transmitted over the Base Range Safety Nets. Units shall use other organic communication to accomplish administrative matters. These matters shall not conflict with Range Safety Nets. Any need to transmit urgent or emergency administrative traffic on the Range Safety Net may be done so only with permission from LONGRIFLE.

e. Large Exercises

The procedures listed below will be in effect during battalion size or larger exercises (e.g., artillery FIREXs, combined arms exercises, amphibious operations involving air and/or live-fire etc.), where a controlling agency (FDC/FSCC/DASC) or consolidated operations center has been established.

(1) The controlling agency shall establish and maintain positive communication with LONGRIFLE, at all times, during the entire operation. Units conducting training in the training areas, beaches, etc., shall also establish communication with LONGRIFLE before commencing training. A voice check, by the senior agency,

shall be made every hour on the hour for subordinate units conducting training in all training areas. A voice check by the scenario agency shall be made every 30 minutes during all live firing. All communication with LONGRIFLE shall be conducted by the senior exercise agency. However, subordinate units shall still monitor and maintain direct communication with LONGRIFLE at all times.

(2) After LONGRIFLE provides the initial approval to commence live-fire, the controlling agency shall keep LONGRIFLE informed, at all times, as to which ranges, artillery positions, and mortar positions are actually conducting live-fire operations.

(3) The controlling agency shall keep LONGRIFLE advised of all air operations taking place.

(4) The consolidated operations center shall keep LONGRIFLE advised of all subordinate unit locations and status throughout the exercise.

f. Safety

LONGRIFLE is the final authority on all matters pertaining to range safety, and may place units into a "check-fire" status, and cancel air operations in the interest of safety.

g. Radios

Each firing unit shall provide its own radio equipment to support range safety communication requirements

3. WIRE COMMUNICATION

Units may lay wire for temporary intra-unit communication (field telephones) as long as the wire does not interfere with other operations or units in the same area. All wire shall be removed from the area when the using unit secures. Temporary or semi-permanent field wire lines shall not be installed on Base telephone or electrical poles.

APPENDIX I

FORMS

Overview

This appendix provides examples of the forms mentioned throughout this Manual.

In This Appendix

The following forms are provided in this appendix.

Forms	See Page
Training Activity Request	I-3
FAC-CAS Brief Sheet	I-5
Ammunition Malfunction Report	I-7
Ammunition and Explosives Range Check List for Range Safety Officers	I-9
EOD Request Form	I-11
Operational Risk Management Worksheet	I-13

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TRAINING AREA REQUEST

TRAINING ACTIVITY REQUEST		**MARINE CORPS BASE CAMP PENDLETON, CA**	
ORGANIZATION:	**POC:**	**PHONE:** **FAX:**	**DATE SUBMITTED:**
DATE REQUESTED FROM: **TO:**	**TIME REQUESTED START:** **STOP:**	**# OF PERS:**	**CONTINUOUS:** **FIXED:**
RANGE/AREA REQUESTED:		**WEAPONS:**	
TYPE OF TRAINING:		**TYPE OF ORDNANCE:**	
VEHICLE(S):	**AIRCRAFT(S):**	**TYPE MARK FOR CAS:**	**AIRSPACE/IP:**
ES COORDINATION/NEPA CONDUCTED **YES NO**			
REMARKS:			
_____ **REQUESTER**			
NOTE: COMPLETE THE FORM AS DETAILED AS POSSIBLE. SUBMIT REQUEST AT LEAST 60 DAYS PRIOR TO EVENT. FAXED REQUESTS REQUIRE AT LEAST SEVEN (7) WORKING DAYS PRIOR TO THE PLANNED EVENT TO PROCESS. **RANGE SCHEDULING OFFICE: (760) 725-3510 DSN 365-4219** **FAX: (760) 725-4090 (COMMERCIAL ONLY)**			
RANGE SCHEDULING USE ONLY			

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FAC-CAS BRIEF SHEET

OP _____

DATE _____ FAC's NAME UNIT _____

TGT MARKING UNIT _____ LOCATION _____

CALLSIGN	A/C-TYPE	TOT	ORDNANCE ON BOARD

IP TO BE USED IP SONGS IP BRIDGE IP HORNO IP CASE OTHER _____

HOT IMPACT AREAS _____ HARD DECK MSL _____

WORKING FREQUENCY 249.9 UHF 255.2 UHF

FAC's CALLSIGN _____

SIGNATURE

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AMMUNITION MALFUNCTION REPORT

MALFUNCTION REPORT ROUGH
Ref: MCO 8025.1

Unit Identification: _____
Report Serial Number: _____

Point of Contact: _____
Telephone # DSN: _____ Comm: _____

Ammunition Data: _____
NSN: _____
DODIC: Nomenclature: Lot#: _____

(In case of a 155mm where the projectile with fuse, propellant charge, & primer are loaded into the weapons separately, the above blocks must be done for each item).

Description of Malfunction:
Provide a narrative of what occurred, whether there were any non-standard conditions:
_____
_____

Indicate the number of casualties:
Minor Injuries requiring outpatient care: _____
Major Injuries requiring hospitalization: _____
Fatalities: _____

Prevailing Conditions:
Time: _____
Date: _____
Weather Conditions: _____

MCBCP 8025/1 (Rev 2-92)

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AMMUNITION AND EXPLOSIVES RANGE CHECK LIST FOR RANGE SAFETY OFFICERS

	YES	NO
1. Ammunition is in a position to minimize the potential for ignition, explosion, and rapid burn?	____	____
2. Ammunition is issued to the firing units immediately before the scheduled training exercise?	____	____
3. Small arms ammunition is distributed to the troops only when they are on the ready or firing lines?	____	____
4. Ammunition is protected with a water-proof cover to guard against inclement weather and direct sun rays?	____	____
5. Proper ventilation (i.e., air circulation) is provided between the water-proof cover and ammunition?	____	____
6. Minimum ammunition (i.e., number of rounds) is unpacked at the firing line for an efficient firing exercise?	____	____
7. Packing material, propellant, and increments are retained until firing complete?	____	____
8. No packing material is burned on the range(s)?	____	____
9. No indiscriminate firing occurred to preclude returning ammunition to the Ammunition Supply Point?	____	____
10. Red range flag is flying at range(s) handling or firing ammunition, with road guards posted to deny access?	____	____
11. Matches, cigarette lighters, or other spark-producing items are not in or near explosive areas?	____	____
12. Precautions taken to prevent ammunition from contacting the ground or spark-producing substances?	____	____

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EOD REQUEST FORM

Please provide the following information:

Range:	Date EOD is Requested:	Time EOD is Needed:	Unit:	POC: Phone Number:

Note: If digging or placing stakes in an impact area, requesting unit will supply corpsman and safety vehicle.

Digging (If applicable)	YES ☐	NO ☐	Safety Vehicle (If applicable)	YES ☐	NO ☐	Corpsman (If applicable)	YES ☐	NO ☐

NATURE OF REQUEST	INFORMATION REQUIRED	
EOD ESCORT	DEPARTMENT	
	NUMBER OF PERSONNEL	
RANGE MAINT. OP.	NUMBER OF WORK GROUPS	
	NUMBER OF PERSONNEL IN WORK GROUPS	
	OTHER INFORMATION (Operational Plans can be attached separately)	
TARGET ESCORT	NUMBER OF WORK GROUPS	
	NUMBER OF PERSONNEL IN EACH GROUP	
	TYPE OF TARGETS	
	APPROVED BY RANGE CONTROL (Signed and Date Approved)	
	PLACEMENT OF TARGETS	
	APPROVED BY RANGE CONTROL (Signed and Date Approved)	
	DATE/TIME OF REMOVAL	

ADDITIONAL PERTINENT INFORMATION (Continue on reverse side if more space is required):

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OPERATIONAL RISK MANAGEMENT WORKSHEET

OPERATIONAL RISK MANAGEMENT MATRIX
MCB, CAMP PENDLETON

TRAINING EVOLUTION:	ORGANIZATION:	PREPARED BY:	DATE:

OPERATIONAL PHASE	HAZARD	CAUSES	INITIAL RAC	DEVELOP CONTROLS	RESIDUAL RAC	HOW TO IMPLEMENT	HOW TO SUPERVISE

HAZARD SEVERITY

I - CATASTROPHIC- Death, permanent disability, major property damage
II - CRITICAL - Permanent partial disability, major system or minor property damage
III - MARGINAL - Minor injury, minor system or property damage
IV - NEGLIGABLE - 1st aid, minor system repair

MISHAP PROBABILITY

A - FREQUENT
B - LIKELY
C - OCCASIONAL
D - UNLIKELY

RISK ASSESSMENT CODE (RAC)

1 - CRITICAL
2 - SERIOUS
3 - MODERATE
4 - MINOR
5 - NEGLIGABLE

RAC ASSESSMENT CODE MATRIX

HAZARD SEVERITY	MISHAP PROBABILITY A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

COMMAND REVIEW/APPROVAL

OIC: _____

XO: _____

CO: _____

RCO: _____

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