DEPARTMENT OF THE ARMY
HEADQUARTERS, 101st AIRBORNE DIVISION (AIR ASSAULT) AND FORT CAMPBELL
2700 Indiana Avenue, Fort Campbell, Kentucky 42223-5656
14 September 2007

Safety

SUSTAINABLE RANGE PROGRAM, SAFETY AND INTEGRATED TRAINING AREA MANAGEMENT

Contents (listed by paragraph and page number)

This regulation supersedes CAM Regulation 385-5 dated 3 May 1999.

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Chapter 1
General

1-1. Purpose

This regulation provides guidance for maximum realistic combat readiness training through the proper utilization of available terrain and facilities on the Fort Campbell military reservation. These guidelines are consistent with Department of the Army (DA) and Forces Command (FORSCOM) safety goals of providing tough, realistic training while preventing injury to personnel or damage to property. This regulation also addresses the Integrated Training Area Management Program (ITAM) which is managed by the Chief of Range Division.

1-2. Mission of Range Division

The mission of Range Division, DPTMS is to facilitate training by providing a safe environment, fully operational training facilities, and a proactive staff ready to assist unit commanders in getting this training accomplished. To accomplish this goal, Range Division will-

a. Establish and enforce range regulations.

b. Schedule, coordinate, and monitor the use of Fort Campbell training facilities controlled by Range Division, as described in paragraph 2-4.

c. Coordinate all maintenance and construction requirements involving range facilities and, as appropriate, other training facilities.

d. Impose precautions for the protection of life and property before, during, and after all range operations.

e. Program, stock, and issue range support equipment.

f. Maintain statistical data and submit reports pertaining to training area (TA) and range utilization.

g. Develop a long-range master plan designed to improve and modernize training facilities.

1-3. Uniform

a. The prescribed duty uniform for soldiers conducting training west of Market Garden Road is duty uniform plus helmet and IBA, eye protection, and gloves.

b. The commander of U.S. Army Special Operation Command (USASOC) units may prescribe the wearing of berets under certain conditions.

c. Units conducting the following training will wear Individual Body Armor (IBA) with Small Arms Protective Insert (SAPI) plates installed, eye protection, and gloves during:

(1) All live fire training utilizing the live fire shoot houses.
(2) All live fire training when attacking and clearing trench systems and bunkers.
(3) All live fire training when hand grenades are employed.
(4) All live fire training of M203, MK 19 HE and HEDP.
(5) All live fire training conducting convoy operations.
(6) Remote designation for Hellfire Missiles.
(7) All maneuver live fire exercises.

d. Hearing and eye protection is prescribed in the appropriate chapter of DA PAM 385-63 for the weapon and system being fired.

1-4. Applicability
This regulation applies to all units conducting training at Fort Campbell, Kentucky. The regulation states the procedures to be followed by all active and reserve component units operating within the reservation. **It will be used to supplement all pertinent Army regulations and applicable manuals. It does not restate, redefine, or overrule publications by higher headquarters.**

1-5. Requesting waiver/deviation and/or exception to policies
a. Units requesting waivers and exceptions to policy will process request IAW DA PAM 385-63 paragraph 1-5 and provide Range Division Safety a request for range waiver/exception to policy and a FC Form 6 with risk assessment, scenario and range fans not later than 30 days prior to training date.

b. All requests for range waivers/exceptions to policy will be signed off by the battalion and brigade commander prior to being submitted to Range Control. The coordination routing for range waivers/exceptions to policy will be through the battalion commander, brigade commander, Range Division, Command Safety, G3, Chief of Staff, Division Commander Officer (Operations) (DCO(O)) and CG. Some waivers may require coordination with Public Affairs Office (PAO) and/or Staff Judge Advocate (SJA).

1-6. Use
This regulation is a comprehensive document. All leaders and soldiers must be intimately familiar with the entire regulation to prevent confusion. Each chapter supports the others to provide a complete guide to training at Fort Campbell. Additionally, several appendixes contain information for quick reference or specific information which, if left in a chapter, would interrupt the flow of the regulation. These appendixes are-

a. Appendix A (References). Some chapters contain references pertaining to specific subject matter. This appendix places these references and their titles in an easy to read format.

b. Appendix B (Air Medical Evacuation (AEROMEDEVAC) Request Procedures). This appendix provides an easy to find MEDEVAC request guide for quick reference.

c. Appendix C (Range Waivers). Fort Campbell currently operates under four range waivers. This appendix provides a quick reference for units training on ranges limited by one or more waiver restrictions.

d. Appendix D (Wet Bulb Global Temperature (WBGT) Categories). This appendix provides a quick reference for units conducting training during the summer season.

e. Appendix E (Weather Warning Categories). This appendix provides quick reference for units when a weather warning code is published over the range safety radio nets.

f. Appendix F (Terms). This appendix provides a quick reference for terms that may not be familiar.

g. Appendix G (Central Vehicle Wash Facility Utilization). This appendix provides procedures for using the two wash facilities.

h. Appendix H (Local Notice to Airmen (NOTAMs)). Fort Campbell normally conducts numerous operations/activities which, if unpublished, could be harmful to nonparticipating units. This appendix provides information on dissemination and use of the local NOTAM system.

Chapter 2
Scheduling Policies and Procedures

2-1. Purpose
This chapter provides guidance on scheduling policies and procedures for all training facilities west of Market Garden Road to include Range 33, and Range B7. PZ1 is under the control of the Air Assault School and Stryker PZ is off limits to air operations but both can still be scheduled.

2-2. References (appendix A)
The primary Training Reference is CAM Regulation 350-1 (Fort Campbell Training Directive chapter 4) and Eagle Training Note 1. All using units must be familiar and comply with these primary training documents.

2-3. Training resource allocations
For the latest policy and procedures for resource allocations refer to CAM REG 350-1, chapter 4.

2-4. Scheduling Training Facilities
a. Range Division is solely responsible for scheduling training facilities west of Market Garden Road excluding ranges part of the Brigade Combat Teams (BCT) Multipurpose Qualification Training Ranges (MQTR). In

addition, Range Division will schedule the Central Vehicle Wash Facility (CVWF), located at Range 18 (near the intersection of Angels and Market Garden Roads), as well as the CVWF located at Range 8 (near Mabry and Stillwell Road). The CVWFs are open for normal operations during duty hours (0900-1700). Use after duty hours and on weekends must be scheduled on FC Form 253 or through electronic scheduling utilizing the Range Facility Management Support System (RFMSS). Wash facilities cannot be scheduled for normal duty hours.

b. All training facility requests will be submitted by the MUC (major unit command)/separate battalion S3 personnel designated by the MUC/separate battalion S3 on a DA 1687 (Signature Card) either using FC Form 253 or electronic scheduling utilizing RFMSS. An example of FC 253 is at Figure 1. Land Management/Remote Scheduling classes are held at Range Division the third Thursday of each month. Attendance at this class and being designated by the MUC/separate battalion S3 are requirements to request, cancel, or co-use training facilities.

c. Only one month of training will be submitted on each FC 253. Only ten facilities may be listed per FC 253. Requested dates will be listed in chronological order.

d. To schedule a training facility not scheduled during the TRC, FC Form 253 will be submitted not later than ten working days prior to the intended firing/training date. A memorandum of late request is required for all requests within the ten working day window. The memorandum may be signed by the commander of the unit conducting the training. FC 253 requiring a Notice to Airmen (NOTAM) must be submitted no later than ten working days prior to the date of training. Requests for NOTAM submitted within the ten working day window must have a "FLASH NOTAM" request attached. The memorandum requesting a flash NOTAM must be submitted to Air Traffic Control (ATC), Range Control Scheduling, G3 Aviation for concurrence, then submitted to the G3 for final approval.

e. The following information is required on all FC Form 253 (as applicable)

(1) Army Training and Evaluation Program (ARTEP) task number or brief description of training.

(2) Type of Weapon System and ammunition to be fired.

(3) If applicable, the words "live firing" and the designated impact area(s) at the bottom of the page.

(4) For airborne operations, assault landings, or close air support (CAS) live or dry operations.

(a) The words paradrop, containerized delivery system (CDS), heavy drop, bundles, assault landings, or CAS (with the type of aircraft) will appear in the description of training column.

(b) Personnel airborne drops will state static line, high altitude low opening (HALO), or high altitude high open (HAHO) as appropriate.

(c) CDS or heavy drop will be annotated as such with a description of the cargo to be dropped.

(d) Drop altitude, above ground level (AGL), will be specified after the type of drop.

(e) Last remark should be "REQUEST NOTAM PUBLICATION".

(f) FC Form 253 requests for ground use of Golden Eagle Landing Zone/Drop Zone (LZ/DZ), Bastogne, Sukchon, Corregidor and Veghel DZs will be granted only on a case by case basis. Airborne activities will take precedence over previously scheduled ground use of these LZ/DZs.

(g) Range Division will forward one copy of each FC 253 requiring a NOTAM to G3 Aviation not later than 9 working days prior to the date of the activity for NOTAM publication.

(5) Clearly indicate on the FC 253 if any facility is to be used as a rapid refuel or ammunition point.

(6) **Live Fire Ranges.** Because of the complicated and extensive conflict list, the North/South Live Fire Ranges will be allocated at the TRC. To schedule the North/South Live Fire Ranges not allocated at the TRC, a FC Form 253 must be submitted not later than ten working days prior to intended firing date.

(7) **Joint Utilization of Training Facilities.** The increasing number of units training year round at this installation will often require units to share a training facility. Units desiring to use training facilities currently scheduled by another unit must coordinate with the owning units's S3 prior to submitting FC Form 253 to Range Division. Owning units should consider any negative impact on their own training prior to authorizing joint use of a facility. Specific limitations must be placed on the unit requesting Joint usage (Time or Grid Coordinate limitations) or the unit granting the joint usage will be canceled from the facility. A "no limits" joint usage indicated the owning unit has no plans to utilize the facility. The FC Form 253 will contain both the signature of the owning unit's S3 representative and the date of approval. Joint usage cannot be rescinded.

(8**) Signature Cards.** Signature cards are required for all MUC/separate battalions. Unit S3's will indicate on a DA 1687 the individuals authorized to schedule, cancel or co-use training facilities. The signature will be kept on file at Range Division Scheduling.

(9) **Cancellations.** Cancellations should be submitted on the FC Form 253 (2nd page) as soon as possible but not later than 48 hours prior to training date. Telephonic cancellations are not accepted.

(10) **Hunting and Fishing.** Range Division Scheduling is responsible for releasing to the Fort Campbell Outdoor Recreation Division (ORD) ten (10) training areas per day per weekend. All other TAs not scheduled or

conflicted by training will be released to the Outdoor Recreation Division. Range Division will provide ORD a forecast of areas available for recreational use for the next week by 0900 on Wednesday. Range Division reserves the right to rescind the release of TAs for military training requirements.

2-5. Automated Scheduling. Range Division has initiated an automated scheduling system that enables unit S3 personnel to submit requests for training facilities from their office via the RFMSS 2002 remote program. This program is accessed using the Fort Campbell Network and CITRIX security software. Co-usage and cancellations will not be accepted using the automated system. For assistance in setting up an account on the RFMSS server, call Range Division Scheduling. Sample FC Form 253 Figure 2-1. FC Forms can be found on the Fort Campbell Intranet, Knowledge Share site, category, Fort Campbell Forms.

RANGE REQUIREMENTS
(The proponent of this form is ACofS, G3/PTM)

TO	FROM	DATE OF REQUEST	PAGE OF PAGES
G3/PTM ATTN: Range Division Ft Campbell, KY 42223-5335			

IAW CAM Reg 385-5, all units occupying Training Areas (TAs), Firing Points (FPs), Observation Posts (OPs), or Ranges (Rgs), will open with Range Division prior to setting up for operations and will close with Range Division prior to departure. CP grid coordinates will be reported at the time of opening. **NOTE: DO NOT BURY TRASH!**

RG, FP, OP, or TA	DATE	HOURS	TYPE OF WEAPONS	TYPE OF AMMO	ARTEP TASK TO BE PERFORMED	JOINT UTILIZATION
						TRAINING FACILITY DATE TIME/GRID COORD SPECIFIC LIMITATIONS SIGNATURE

FOR RANGE DIVISION USE ONLY

APPROVED FOR:	DISAPPROVED FOR:
RANGES:	RANGES:
TAs:	TAs:
OPs:	OPs:
FPs:	FPs:
DZs:	DZs:
OTHER:	OTHER:

REMARKS:

DATE OF ACTION	TELEPHONE
	5982

REQUESTER'S TYPED NAME, GRADE, AND BRANCH	REQUESTER'S SIGNATURE	SIGNATURE OF SCHEDULING PERSONNEL, RANGE DIVISION

FC FORM 253 (REV), JUN 2005 (Previous editions of this form are obsolete)

Figure 2-1. Sample FC Form 253

Chapter 3
Range Safety

3-1. General.

a. Persons in charge of or using ranges, maneuver areas, and training facilities are responsible for the compliance with the safety requirements of this regulation, AR 385-63, DA PAM 385-63, and the applicable TMs and FMs for the training to be conducted. Applicable FMs can be found at http://www.army.mil/usapa/doctrine/, also on the Fort Campbell Knowledge Share site under Category, Range, FMs.

b. Any incident or accident that occurs in any training facility, training area, or range will be processed IAW AR 385-40, Campbell Regulation 385-2. Range Division will investigate, report, and analyze all accidents and incidents for the primary purpose of accident prevention.

c. Report all accidents and incidents to Range Control immediately, no later then 30 minutes.

d. Range Division maintains a range firing control center 24 hours a day, 7 days a week. Range Division enforces range safety regulations, eliminates conflicts in training, checks Surface Danger Zone Diagram's (SDZD), operates the range safety FM radio nets, conducts entrance and exit inspections, and monitors training.

e. Should a safety violation occur, Range Operations will prepare a Range Incident Report and forwards it to the DPTMS Emergency Operation Center (EOC) and the Command Safety Office.

f. Figure 3-4, Range Safety Checklist, is provided to assist commanders, OICs, and RSOs. The checklist does not and can not cover all requirements provided for all conditions and situations. Commanders, OICs, and RSOs are responsible for requirements addressed in references provided in paragraph 3-1, a.

3-2. Commanders of units conducting training

a. Commanders are responsible for the safe operations of all ranges used by their unit.

b. Commanders of units firing ammunition, detonating explosive devices, or otherwise training in a designated training area/facility will comply with DA PAM 385-63, chapter one, and will designate an officer in charge (OIC) and safety officer (SO) with additional assistant SOs as necessary IAW DA PAM 385-63, para. 19-2, b, (4). OICs and SOs will be designated by rank IAW Table 1-1 of DA PAM 385-63.

c. Each battalion commander and separate company commander will establish a formal range certification program IAW DA PAM 385-63, chapter one, to ensure that their Range OICs and SOs are fully competent to perform their duties. The certification program will consist of both classroom and hands-on training. Range Division personnel will periodically inspect program. The OIC and SO are required to attend a briefing at Range Division once every two years. All battalion and brigade S3s are required to attend a range briefing on the procedures for unit range and land use. Each unit certification will include as a minimum, instruction in the following areas:

(1) Range Safety.
(2) Range procedures and personnel responsibilities.
(3) Weapons characteristics and usage.
(4) AR 385-63, DA PAM 385-63, and applicable FMs and TMs.
(5) Surface Danger Zone Diagrams from Appendix B, DA PAM 385-63.
(6) CAM Regulation 700-2 and ammunition accountability and handling procedures.
(7) Commanding General Training Guidance and Eagle Training Notes.
(8) Communication, to include communication with medical personnel.
(9) Composite Risk management (FM 5-19).

d. Battalion and separate company commanders will provide Range Division a current roster of personnel certified to perform the duty of OIC and SO, signed by commanders or acting commanders on valid assumption of command orders, stating the noted individuals are familiar with the above regulations and have been tested and certified by their battalion as the minimum requirement. The memorandum will include the date the certification expires. Expired certification will be when more than two years has passed since attending the Range Division briefing or when validating official (memo signature authority) has changed. The memorandum will be signed by the commander (Example memorandum Figure 3-1). Commanders will select persons for OIC and SOs not only based on rank requirements, but on weapon system qualifications, responsibility, and experience. OIC and RSO for aviation gunnery (not including laser only) will be in separate aircraft and an E-6 or above will act as assistant safety officer and be present at the range on the ground. The assistant SO has the same certification requirements as OIC and SO but does not need to be weapon system qualified.

e. Only those soldiers who are listed on the unit certification roster at Range Division will be authorized to open ranges.

f. When necessary, commanders will designate a responsible and qualified individual at the rank of sergeant (SGT) or above to serve as the DZSO (Drop Zone Safety Officer) and as malfunction NCO. The requirements above will apply.

g. Prior to any live fire exercise, commanders must conduct a risk assessment and complete FC Form 4162 (Risk Management Worksheet) in accordance with Eagle Training Notes. Ensure that the risk management worksheet prepared for range live fire exercises addresses all known hazards listed by METL task. The FC Form 4162, an in depth scenario for training, and range SDZD will be present at the live fire exercise site. Commanders should refer to FM 5-19, Composite Risk Management, and chapter 3-17 of this regulation.

3-3. Medical evacuation.

Units training at Fort Campbell will identify preferred means of medical evacuation for given training location(s). Planning factors should include anticipated response time for air evacuation and time required for ground evacuation to reach Blanchfield Army Community Hospital. Ambulance exchange points along the ground evacuation route should be identified to allow for transfer of patient care to a BACH ambulance, enabling more advanced treatment en route to the MTF. Units WILL rehearse ground evacuation routes and coordinate ambulance exchange points with BACH Emergency Medical Services prior to training. Units will take under consideration that air evacuation is conducted by civilian air ambulance without the aid of night vision devices. Units will have on hand the necessary equipment for white light illumination of a suitable air ambulance landing zone. The senior clinical provider on site will determine the method of evacuation and the need to conduct ambulance exchange as warranted.

a. **Assessment.** The unit commander, OIC, or SO is responsible for determining whether ground or air MEDEVAC will be used to transport an injured soldier, based on the advice of the senior medical person present.

b. **Contacting Procedures**. In the event of illness or injury to personnel requiring MEDEVAC, units will contact Range Division as follows:

(1) **Telephone.** Dial Range Division, 798-3001/4122; or dial the Medical Detachment (Ground MEDEVAC), 798-8400/6112.

(2) **FM Radio.** Call either Range Division on 75.25 primary and 48.50 alternate.

c. Be prepared to provide the following information:

*(1) Location of pickup site.
(2) Radio frequency, call sign and suffix, if necessary.
*(3) Number of patients by precedence.
*(4) Special equipment required.
*(5) Number of patients by type.
(6) Security of pickup zone, if necessary.
*(7) Method of marking pick-up zone.
(8) Patient nationality and status, if necessary.
(9) NBC contamination, if necessary.
* indicates essential information

d. Personnel reporting emergencies will not break communications with Range Division until released by Range Division.

3-4. Erratic firing

If a unit fires outside of or rounds are observed impacting outside of a designated impact area, or rounds are not observed at all, or rounds are fired above the red line in a Shoot House, the following procedures will be followed:

a. Personnel will execute a check fire freeze and everyone involved will move to the rear of the weapon, leave all settings on that weapon as they were fired until inspected by an investigating officer. A report of the incident will be made to Range Division immediately and the check fire freeze will remain in effect until lifted by the Fort Campbell Installation Range Officer.

b. The Range OIC will make an immediate check of the point of impact to ensure that no injuries or loss of life or property resulted from the incident. The results of this check will be reported to Range Division immediately. Shell craters will not be disturbed until a representative from Range Division has completed a crater analysis.

c. Any individual who observed the round will submit an Observer Report. Only one report is required from each site observing the round. The Observer Report should cover the following items:

(1) Date and time erratic round was observed.
(2) Injury to personnel, if any.
(3) Equipment damaged, if any.

(4) Number of rounds.
(5) Location of round.
(6) Air burst, estimated height (meters).
(7) Ground burst, crater available.
(8) Location of observer.
(9) Knowledge of source of erratic round.
(10) Name and unit of person reporting.

d. After reporting the incident, the firing unit OIC or SO will complete a Check Fire Freeze Report and immediately forward the information over one of the Range Division nets or hand the report to the Range Division on-site representative. The Check Fire Freeze Report should cover the following items:

(1) Firing point/unit.
(2) Time last round fired.
(3) Initial grid to target.
(4) Total subsequent corrections/observer target direction.
(5) Last shell-fuse combination fired.
(6) Azimuth of lay.
(7) Last deflection fired.
(8) Last range fired.
(9) Last quadrant fired.
(10) Last powder charge fired.
(11) Piece number last fired.
(12) Name of person verifying data.
(13) Any known nonstandard or improper procedure which could have caused an erratic round.

NOTE: Do not allow anyone to go near the crater. The following personnel have the authority to perform crater analysis: Range Division personnel, Battalion S3, Battalion XO, or the Battalion Commander.

3-5. Range fires

a. Units will report all fires in the Training Area (TA) or Impact area immediately to Range Division. When reporting a fire, provide the following information:

(1) Location and type.
(2) Name and telephone number of person reporting.
(3) How fire started.
(4) Unit or person starting fire.
(5) Direction fire is spreading.

b. Fire prevention guidelines are in Table 3-2.

c. Commanders of units using ranges or TAs will fight fires observed in their areas within their capabilities. No one will enter impact areas for the purpose of fighting fires without the approval of the Installation Range Officer.

d. Range Division will notify the Fort Campbell Forester of the fire. The Forester and/or the Installation Range Officer will decide whether to activate the fire department. When the fire department is activated, the Fire Marshal becomes responsible for the fire fighting effort. The OIC of firing/training will render all possible assistance.

e. Range Division will notify Command Safety of equipment fires listed below (in accordance with AR 385-40, paragraph 2-4h):

(1) Wheeled vehicles.
(2) Tracked vehicles.
(3) Aircraft (ground).
(4) Ammunition/explosives fires.
(5) Missiles to include subsystems.
(6) Tents.
(7) Space heaters.
(8) Generators.

f. Unit reporting a fire will maintain communication with Range Division.

g. Campbell Regulation 420-24, Fire Prevention, provides detailed information and guidance for fire prevention procedures.

3-6. Lost soldier

Units will --

a. Report lost soldiers immediately to Range Division and include the following information:

(1) Name, rank, unit, and social security number of the lost soldier.

(2) Date, time, and location the soldier was last seen.

(3) Type of training being conducted at the time the soldier disappeared.

(4) Description of the soldier

(5) Any known medical condition.

b. Conduct a search of the surrounding area.

c. Request assistance from Range Division as necessary.

d. Maintain communication with Range Division.

3-7. Other lost persons

Units will --

a. Contact Range Division immediately and provide pertinent essential information from paragraph 3-6 above. Range Division will contact the Military Police (MPs).

b. Maintain communication with Range Division.

3-8. Foot march safety

Dismounted Foot Marches.

a. All formations marching along any primary road west of Ashau Valley Road will be in a tactical formation using the extreme right and left shoulders of the road and off the paved surface. The use of Angels Road, Market Garden Road and Mabry Road will be considered to be High RISK for possible Vehicle to Pedestrian type accidents during periods of limited visibility unless marching on the established foot march route.

b. Formations will march "WITH TRAFFIC". On roads where the speed limit exceeds 35 MPH, units will use lead and trail vehicles with flashing lights and signs stating, "CAUTION TROOPS AHEAD".

c. All marchers will wear a reflective belt or vest where it is visible from the front and rear and not covered by any article of clothing or equipment. All formations will have the four corners of the formation marked by wearing reflective vests, (not reflective belts), and using front and rear road guards wearing reflective vests, (not reflective belts). Flashlights must be used by road guards and other personnel designated by the leaders during periods of limited visibility.

d. Leaders will do a comprehensive risk assessment. The hazards and control measures will be included in the briefing of the guidelines prior to the road march and ensure compliance is followed throughout the duration of the event.

e. Individual movement rucksack marchers and walkers will use-off-road areas such as sidewalks, firebreaks, unimproved roads, and road shoulders. Marchers will not walk on the hard surface of roads except to cross at right angles only as necessary. Individuals will walk, march, or run "FACING TRAFFIC" and at least three feet off the edge of the hard surface of the roadway.

f. The use of headphones, earphones, or cell phones while walking, jogging, skating, or bicycling on the installation is prohibited.

g. Vehicle traffic will slow to a speed no greater than 10 MPH when passing formations, individual marchers, runners, bikers, and walkers on the installation.

h. Composite Risk Management dependant, units will conduct road marches during physical training hours when practical. During Physical training hours, units will comply with established routes listed in CAM Reg 350-1. For units conducting foot marches outside of established PT hours, guidance within this paragraph will be followed.

3-9. Driving safety

a. Blackout Drive. (TC 21-305-2, Training Program for Night Vision Goggle Driving Operations)

(1) The area west of the light line formed by Woodlawn Road, Boiling Springs Road, Mabry Road, and On-the-Line Road is reserved for blackout drive only from 1 hour after sunset until 1 hour prior to sunrise.

(2) The only exception to the blackout drive is the use of service drive or headlights on all paved roads, Indian Mound Road, the section of Big Rock Road south of Jordan Springs Road, Patton Road, and West Perimeter Road. Blackout drive is not authorized on these roads except during crossing operations.

(3) When crossing service drive roads, road guards with reflective vests and red filtered lights will be positioned 50 meters on the flanks of the crossing point to warn traffic.

(4) Blackout drive speeds will be consistent with weather, terrain, and nocturnal light conditions. Blackout drive speeds will not exceed 15 mph.

(5) Blackout drive intervals of 15 to 20 meters should be observed if conditions permit.

b. Safe Driving on Patton/Perimeter Roads. The following measures apply to Patton/Perimeter Roads:

(1) Speed for single vehicles will be restricted to 25 mph. Convoys (two or more) will not exceed 20 mph. Follow doctrinal convoy interval procedures.

(2) In planning, all convoys will include "dust" as a risk to be considered and controlled.

(3) Patton/Perimeter Roads are white light roads, day and night, whether or not the roads appear dusty.

(4) Yield to civilian traffic at all times.

(5) Stopping, troop off-loading, and scheduled halts will not occur on these roads. If you must stop, move off the gravel road surface onto a side fire break. Vehicles halted by breakdown will be marked with reflector triangles and red electric light (not chem-lights), day and night.

(6) Commanders are authorized to implement more restrictive measures based on prudent risk management procedures.

c. Movement of Tracked Vehicles.

(1) Tracked vehicles may operate freely on all dirt roads on the Fort Campbell reservation. All tracked vehicles operating on hard surface roads will travel down the center of the road or as close to the center of the road as possible to limit the damage to the shoulder of the road. A front and a rear guide are required when traveling on named gravel or paved roads. Ground guides are required while operating in motor pools, bivouac sites, and congested areas.

(2) Tracked vehicles are not authorized in Training Areas (TAs) AB3, 1, 2, 3, 4, 6, 7, 8A, 8B, 15, 16, 26, 27, 28, 30, and Indian Mound. Tactical training and maneuvers in other TAs are authorized, but driving over trees, use of neutral steer, driving through cemeteries, and all other maneuvers that unnecessarily degrade TA's and vegetation are prohibited. If possible, maneuvers should be avoided in cultivated areas during the growing season (1 May through 31 October). All bridges west of Market Garden Road are not rated for tanks. Ensure a good route reconnaissance is done to ensure that tracked vehicles do not cross a bridge or culver crossing that is not rated for tracked vehicles.

d. Speed Limits.

(1) No tactical vehicles will travel faster than 30 mph. The following speed limits are the maximum for all other vehicles authorized on roads, fire breaks, and trails:

Road Description	Maximum Speed Limits
Hard surface roads	As posted
Named gravel roads (e.g., Hellcat Trail, Patton Road)	As posted
All non-posted roads, fire breaks and trails	Reasonable and prudent speed, but not to exceed 20 mph

(2) The above speed limits will be adhered to by drivers of all vehicles. Light and weather conditions may dictate a more prudent and reasonable speed limit.

e. Driving in Mission-Oriented Protection Posture (MOPP) 4.

(1) Vehicle operators will not wear protective masks while conducting convoy or single vehicle operations on service drive roads.

(2) On blackout drive roads, vehicle operators and commanders may wear full MOPP 4 based on unit commander's training objectives.

(3) Vehicle operators that encounter a riot control agent on service drive roads should stop vehicle, don protective mask, and proceed with caution.

(4) Incidents will be reported to Range Division immediately.

3-10. Intoxicants and controlled substances

a. The unauthorized use, possession, or transportation of controlled substances is prohibited on or in the vicinity of all Fort Campbell ranges, TAs, and facilities.

b. The use of intoxicants is prohibited except as authorized by the Commanding General or his representative.

3-11. Access to areas on the reservation

a. Entry into or use of any range, TA, or impact area for any reason must be approved in advance by Range Division. The true size and shape of impact zones and danger areas may change daily, depending upon the size and types of weapons being fired. Within the North/South Impact Area (Figure 3-2) varying concentrations of duds have accumulated.

b. Active duty personnel are prohibited from driving their POVs on the training facilities west of Market Garden Road. All POVs will remain on hard surface roads whenever west of Market Garden Road and on the reservation.

c. Civilian employees of U.S. Government agencies and non-DOD civilians required to perform work in the TAs will procure information regarding safe routes from Range Division in person prior to entry to the TA.

d. Any POV found off a hard surface road may be stopped by the MPs or Range Division Inspectors. Drivers will be asked to produce a pass from Range Division or a post permit from the post Hunting and Fishing Office. If a pass is not presented, Range Division will notify Rear Area MPs. Additional information about POVs can be found in paragraph 8-4.

3-12. Medical requirements

a. Units firing on ranges within the Small Arms Impact Area are required to have, as a minimum, Eagle First Responder or a Combat Lifesaver with an aid bag (complete) on the range (excluding ranges 17A,27A,24,25A, and 38).

b. All other live fire ranges, assault landings, and demolition TAs are required to have medic ("91" series MOS) with aid bag (complete), litters, and Front Line Ambulance (FLA). Emergency Medical Technicians (EMT's) alone will not provide medical support unless the soldier is a medic IAW the training standards set forth by TRADOC.

c. All airborne operations will have medical support in accordance with the 101st Airborne Army Strategic Objectives Plan (ASOP) or USASOC Regulation 350-2.

d. Communication with medical personnel is mandatory if unit will maneuver outside the line-of-site of support equipment. Medical person's will be familiar with and participate in the scenario through all phases, crawl, walk, and run.

d. Hearing protection will be worn by all personnel on or near the firing line.

3-13. Surface Danger Zone Diagrams (SDZD)

a. SDZDs will be prepared for all weapons and explosives except on those ranges where limit markers are employed.

b. Commanders will ensure that SDZDs are prepared and submitted to Range Division for approval not later than 10 working days prior to the day of firing. The SDZDs will conform to DA PAM 385-63, appendix C, and this regulation.

c. SDZDs will be prepared in duplicate by the OIC or SO only. After approval, the original will be maintained at Range Division and the copy will be returned to the unit to be maintained by the OIC or fire direction center as applicable. OICs/SOs may prepare SDZDs at Range Division if desired.

d. SDZDs will be prepared to the scale of 1:25,000.

e. Units without approved SDZDs will not be allowed to open or fire on any range, firing point (FP) or observation point (OP).

f. Units requesting waivers/exceptions to policy will refer to paragraph 1-5.

3-14. Inadvertent over-flight of aircraft

a. Small Arms Impact Area: An immediate check fire will be imposed whenever an aircraft is spotted approaching the trajectory of firing. Firing can be resumed as soon as the aircraft has departed Range Fan Area.

b. North/South Impact Area:

(1) An immediate check fire will be imposed whenever an aircraft is spotted approaching the trajectory of firing

(2) Contact Range Control and report incident.

(3) Range Control will issue a check fire time and check fire initials.

(4) Report type of aircraft, approximate altitude, direction of flight, and approximate speed.

(5) Range Control will notify other affected ranges.

(6) Range Control will notify Eagle Radio.

(7) Once Range Control has been notified by Eagle Radio that the aircraft is clear of the North/South Impact Area, Range Control will contact Ranges and give the OICs new "Hot" time and "Hot" initials.

3-15. Assigned responsibilities concerning impact area warning signs (IAW DA PAM 385-63, chapter 2)

a. Responsibilities.

(1) Directorate of Public Works (DEW) will --

(a) Prepare impact area warning signs as requested by Chief, Range Division, as soon as possible.

(b) Maintain areas surrounding impact area warning signs to ensure visibility, (for example, mowing and removing growing plants), to include restoring and cutting fire breaks.

(2) Range Division will --

(a) Conduct a monthly 100 percent check of all impact area warning signs to ensure presence, visibility, and legibility.

(b) Ensure range clearing procedures include a check of the impact area warning signs.

(c) Annually review the placement and wording of the signs with Staff Judge Advocate (SJA) to ensure no new precedence has been established which could expose the government and Fort Campbell to a lawsuit.

(d) Stress to units during the range scheduling conference and Range Briefing, impact area warning signs are not to be tampered with, obscured, or removed.

(e) Coordinate/mark the placement of impact area warning signs with DPW and SJA.

(3) **SJA** will advise and assist Range Division in developing the placement and wording of impact area warning signs. Inform Range Division as soon as possible if changes in either the law or regulations require rewording the warning statements on the signs.

(4) **Public Affairs Office (PAO)** will ensure soldiers, family members, and members of the general public are educated on the hazards of trespassing and handling unexploded munitions through periodic press releases to post and local community newspapers. Copy of a presentation can be found on the Fort Campbell Knowledge Share Web site under the safety section.

(5) **Command Safety Office** will coordinate with local schools, both on and off post, to educate children on the hazards of trespassing and handling unexploded munitions through the use of the **Project Beware Program**.

(6) **Human Resources Business Center** will use members and facilities of Outdoor Recreation Division to educate sportsmen, using Fort Campbell property for hunting or fishing, on the location of the impact areas and the methods by which these areas are marked.

b. **Additional Instructions**.

(1) Range Division has the lead in the endeavor to preserve life and limb from injuries that can occur by accidentally entering the impact area.

(2) All actions regarding the maintenance, visibility, and presence of the impact area warning signs will be documented and maintained in an appropriate file and retained for at least 5 years.

(3) Agencies assigned a training mission should consider using Explosive Ordnance Detachment (EOD) assets in developing educational programs.

(4) All unit commanders must emphasize to unit personnel that impact area warning signs must not be removed or destroyed.

(5) Figure 3-3 indicates location of impact area boundaries for the Small Arms and North/South Impact Areas.

3-16. General guidelines for Range Road Guards

a. Range Road Guards are required on all live fire maneuver ranges, indirect firing points, demolition areas, and aerial gunnery ranges. Road guards are **not** required at the entrance to **small arms ranges around the Small Arms Impact Area except Ranges 3A, 17, 24, 25, 27, and 38 are live fire maneuver areas and require guards.**

b. Unit may be required to post road guards for specific live fire ranges around the North and South Impact Area. Instructions pertaining to where and when to post the road guards will be listed on the range safety fan.

c. Range OIC and RSO will ensure --

(1) Guards receive a briefing and a map orientation of the area to be guarded.

(2) General and special orders are explained to and understood by the guards. Guards will wear reflective vests and during night live fire roadblocks have flashlights to assist in stopping and/or directing traffic.

(3) Guards have operational communications with OIC/RSO prior to being posted and throughout the tour of duty. Hourly communications checks will be conducted.

(4) Guards will report any ordnance or ammunition impacting outside of the designated impact area.

(5) Guards, unsure of any problem or incident, will report the situation to the OIC/RSO and request assistance or guidance.

(6) Road guards have the authority to call a cease fire if personnel or equipment is about to be injured or damaged.

d. Soldiers performing road guard duties can provide the following information to personnel attempting to enter the range fan or impact area: "My unit is conducting a live fire exercise today. We are blocking these roads to protect the safety of those not involved in the exercise. We apologize for any inconvenience. If you have further questions please contact my Commander or Range Control."

3-17. Composite Risk management (FM 5-19)

a. General. Effective risk management enables tough, realistic training to be conducted, whether on our ranges or deployed elsewhere, and to execute combat missions while saving lives. Risk management is force protection in the most fundamental sense.

b. Responsibilities.

(1) Commanders will --

(a) Ensure that the risk management guidance provided in this section and Eagle Training Notes are implemented.

(b) Use the FC Form 4162 as a standardized tool for conducting and documenting the risk management process *thoroughly*. This form is required for all operations (for example, convoys of six or more vehicles, field training exercises, ranges, live fires, aerial gunnery, and air assault training).

(c) Use an informal mental or verbal process for every operation even when levels of risk have been assessed as low. This will ensure that changes that could cause the level of risk to increase, such as weather, soldier experience levels, condition of vehicles, etc., are monitored for the requirement for the written worksheet.

(d) Ensure that a copy of the completed, signed FC Form 4162 is on location for each range and field operation. Ensure the unit provides a copy of the FC Form 4162 to Range Division not later than 10 days prior to the operations. Units may use the same FC Form 4162 previously used, provided that no further hazards have been identified. The signature of the present commander and command approval, however, is required. Units should maintain both a hard and electronic disk copy of the completed FC Form 4162.

(2) Range Division will include the risk management requirements of this regulation into the range briefing.

c. Process. The concepts of risk management apply from the initial planning stage to the after action review. It is a process that gives leaders a systematic framework to deconstruct, evaluate, adjust, and then reconstruct operations, adding controls to reduce unnecessary hazards to their soldiers and equipment. The key to the system remains the alert, experienced leader.

(1) The five step process for risk management includes:

(a) Identify hazards.

(b) Assess the risk of each hazard.

(c) Make risk decisions and develop controls.

(d) Implement controls.

(e) Supervise and evaluate.

(2) Effective risk management is multi-echeloned. Once an element of risk is identified and assessed in the overall mission, subordinate commanders conduct their separate risk assessments and implement measures to control, manage, and reduce the risk in their part of the operation.

(3) The process of risk management is dynamic. Mission, Enemy, Terrain, Troops and Time Available (METT-T), weather, and resources will cause adjustments to the training plan or the operation. Leaders must continually review, evaluate, and amend their risk assessment when tasks and conditions change. The same task conducted at night has different risks. Commanders must reassess and validate their command reviews of the affected operations.

d. Standards. Effective risk management relies on two tenets - leader training and "arms-length" review.

(1) Train leaders first. The following courses are mandatory training for leaders.

(a) Executive Risk Management Course for brigade and battalion commanders, executive officers, division staff officers and command sergeants major (CSMs).

(b) Operation Planners Risk Management Course for Division, brigade, and battalion staff operations planners (for example, S3s, S4s, division chiefs, operations NCOICs).

(c) Company Commanders and First Sergeants Course and NCO professional development (NCOPDs) and officer professional development (OPDs).

(d) The above courses are recommended for Range OICs and SOs. However, risk management doctrine is now integrated into officer and NCO professional development courses throughout the Army. This training is also acceptable for the required documentation (Figure 3-1) for Range OICs and SOs.

(2) "Arms-length" command review (certified when the leader signs Block 12 of the FC Form 4162) is essential to effective risk management. It reinforces practices used in combat and provides the best forum for the commander to teach and coach subordinate leaders. The command review provides that critical second set of eyes to avoid the bias of ownership.

(a) Risk management - identifying the hazards through implementing the controls - resides at each level of execution. In training, as in combat, a platoon leader will conduct the initial risk assessment of his platoon operation; likewise, the squad leader for squad missions or the company commander for company level operations. Brigades and battalions develop, assess, and choose tactical courses of action considering risks to the force.

(b) The commander at least one level above the level of execution possesses the requisite expertise and experience to objectively evaluate the mitigating effects of the hazard controls. While the commander may not be totally removed from the plan, this separation, combined with training experience, provides the necessary buffer for objectivity. Though the chart below allows brigade and battalion commanders to review/approve some brigade/battalion level missions, they should avoid reviewing their own echelon-level missions.

(c) Table 3-1 provides the minimal thresholds of command review required for given operations, regardless of the echelon executing the training.

(d) All live fire exercises will be conducted in accordance with Eagle Training Note #1. Live fire exercises are our most valuable and critical training events. They replicate most closely battlefield situations and conditions. Multi-ship air assaults, and non-standard, non-maneuver live fire ranges (for example, hand grenade or non-standard demolition ranges), and maneuver live fire ranges are at least medium risk and must be reviewed by the battalion commander.

(e) Brigade and battalion commanders may delegate low risk mission review/approval authority to the first green tab leader (platoon leaders) in the chain. This authority is based on the experience level, performance, and proven judgment of the designated leader. Delegation must be in writing by name and activity. No one may review or approve his or her own operation. The principles of formal leader training and arms-length review will be used to delegate this important responsibility.

(3) The command review provides essential leader training. When done right, 90 percent of the valuable training happens before the event. Whenever possible, this training should be conducted on the ground with leaders present. The commander verifies the tactical and administrative soundness of the plan; checks the preparation and thought processes of the executing leader; ensures the control measures and hazard mitigation controls are effective and tactically sensible; and coaches the subordinate in the nuances of the collective task at hand. It is in this environment on the ground, minus soldiers and routine distractions, one on one that the true teaching learning occurs.

(4) Knowledge gathered from training should be shared with peers and other units. A re-submittal to Range Control of post-operation risk management worksheet with changes can accomplish this goal.

e. Goals and Objectives. Effective risk management enhances both training and operational competence. Leaders who understand and employ its underlying principles expand their capabilities by discovering their strengths and their limits. The payoff is threefold:

(1) Increase training realism.

(2) Enhanced operational agility.

(3) Conservation of the most precious resource - soldiers - whether in training or combat.

Type Mission	**Minimum Assessed Category of Risk**	**Minimum Level of Command Approval Authority**
Seats-out air assault operations	Extremely High	Commanding General
Waterborne training	Extremely High	Appropriate Assistant Division Commander
Any mission (not listed above)	Extremely High	CG or designated representative
FRIES	High	Brigade Commander(for Pathfinder & RSTA, Scout Plt)
CALFEX	High	Brigade Commander
Brigade air assault	High	Brigade Commander [para 3-17d(2)(b) above]
Any mission (not listed above)	High	Brigade Commander
Multi-ship air assault (Bn level or below)	Medium	Battalion Commander) [para 3-17d(2)(b) above]
Maneuver live fire ranges	Medium	Battalion Commander
Non-standard, non-maneuver live fire ranges (e.g. hand grenade, non-std demolition ranges)	Medium	Battalion Commander [para 3-17d(2)(b) above]
Any mission (not listed above)	Medium	Battalion Commander
Single ship mission	Low	Designated Mission Briefer(per AR 95-1)
Static, non-maneuver live fire ranges, small arms, .50 cal. And below, zero, qualification and familiarization	Low	Company Commander
Any mission (not listed above)	Low	Company Commander/1SG or Bde/BN commanders may delegate review/approval authority to the first green tab leader (platoon leader) in chain. [para 3-17d(2)(e) above]

Table 3-1. Minimal thresholds of command approval

Classification	Condition	Restrictions			
		South and North Impact Areas	Ranges	Training Areas	Demo Areas
Class I	Burn index 0-4	None	None	None	None
Class II	Burn index 5-9	None	None	None	None
Class III	Burn index 10-19	None	None	None	None
Class IV	Burn index 20-39 Winds less than 10 knots	HE or ball only	Ball only except ranges 10, 11, 26, 31, and 36A	Extreme caution when using blank ammunition and pyrotechnics	None
Class V	Burn index 20-39 Winds greater than 10 knots	HE or ball only Powder charges or increments may only be burned on a hard surface No 20mm or 40mm HE.	Ball only except ranges 10, 11, 26, 31, and 36A	No open fires No pyrotechnics No blank ammunition	None
Class VI	Burn index 40-100 Winds less than 20 knots	HE or ball only	No tracers	Same as class V	No firing
Class VII	Burn index 40-100 Winds greater than 20 knots	No firing	No firing	Same as class V	No firing

AERIAL GUNNERY: All targets will be a minimum of 1 km inside the impact area when firing missiles during class VI days.

Table 3-2. Fire prevention guidelines

AFZB-KI-CO 25 July 2005

MEMORANDUM FOR Range Division, ATTN: Range Safety, Fort Campbell, Kentucky 42223

SUBJECT: Range/Drop Zone Certified Personnel for 326th BTB

1. The following soldiers have met the requirements of AR 385-63 and CAM REG 385-5 to perform the duties on ranges and drop zones. They were tested and met the requirements for the weapons systems and operations listed below. Certification is good for two years from the date of the test or two years from the date of attendance at Division Range Briefing, whichever expires first.

Rank	Name	Unit	Last 4	Small Arms	M203	Hand Grenades	MK19	AT4	Demo	Chemical	Rappel Master	Certified EXPIRES
SFC	Anderson, Gerald	HHC	xxxx	A	B	C	B1	D				12 July 07
1LT	Ball, Benjamin	A Co	xxxx	A	B	C	B1	D	G/G1			22-Dec-07
SSG	Bentley, Mark E.	B Co	xxxx	A	B	C	B1	D				18 Mar-07
2LT	Brice, Patrick	A Co	xxxx	A	B	C	B1	D	G/G1			02 Mar 07
SSG	Buras, Kevin P.	A Co	xxxx	A	B	C	B1	D				02-Mar-07
1SG	Campos, Oscar	C Co	xxxx	A	B	C	B1	D				17-Aug-06
SSG	Collins, Steven M.	B Co	xxxx	A	B	C	B1	D				18 Mar 07
1LT	Cunningham, John	HHC	xxxx	A	B	C	B1	D	G/G1	T		21-Apr-06
SSG	Davenport, Tammy D	HHC	xxxx	A	B	C	B1	D				08 Apr 07
1LT	DeMayo, Michael	A Co	xxxx	A	B	C	B1	D	G/G1	T		17-Aug-06
SSG	Ferguson, Robert W	A CO	xxxx	A	B	C	B1	D		T		26-Mar-06
2LT	Fisk, Sarah J	C Co	xxxx	A	B	C	B1	D				18-Aug-06
1SG	Foy, William A.	A Co	xxxx	A	B	C	B1	D	G/G1			27-May-06

2. Point of contact is SFC Lamaster at 798-XXXX or via email at Jack.lamaster@us.army.mil.

BARRY M. KNUCKLES
LTC, EN
Commanding

A – Small Arms (.50 Cal & Below)
B – M203
B1 – Mk-19
C – Hand Grenade
D – LAW/AT-4/M202/90mm/RAAWS/SMAW
E – Dragon
F – TOW
G – Demolitions
G1 – Claymore Mines
H – Mortars (81mm & 60mm)
I - Mortars
J – Artillery J1 - Observer
L – Aerial Gunnery
K - CALFEX
M – DZSO/DZST
N – Malfunctions NCO
P - CCT
Q - Vulcan
R - Stinger
S – Smoke
T - Chemical
U – Aircraft Spray
V – USAF CAS
W – Laser
X – Tank Gunnery
Y - Spies
Z – Fast Rope OIC
Z1 – Fast Rope Master
Z2 – Rappel Master
H1 – Mortars (120mm)
X1 – Bradley 25mm

Figure 3-1. Range/drop zone certification list (sample)

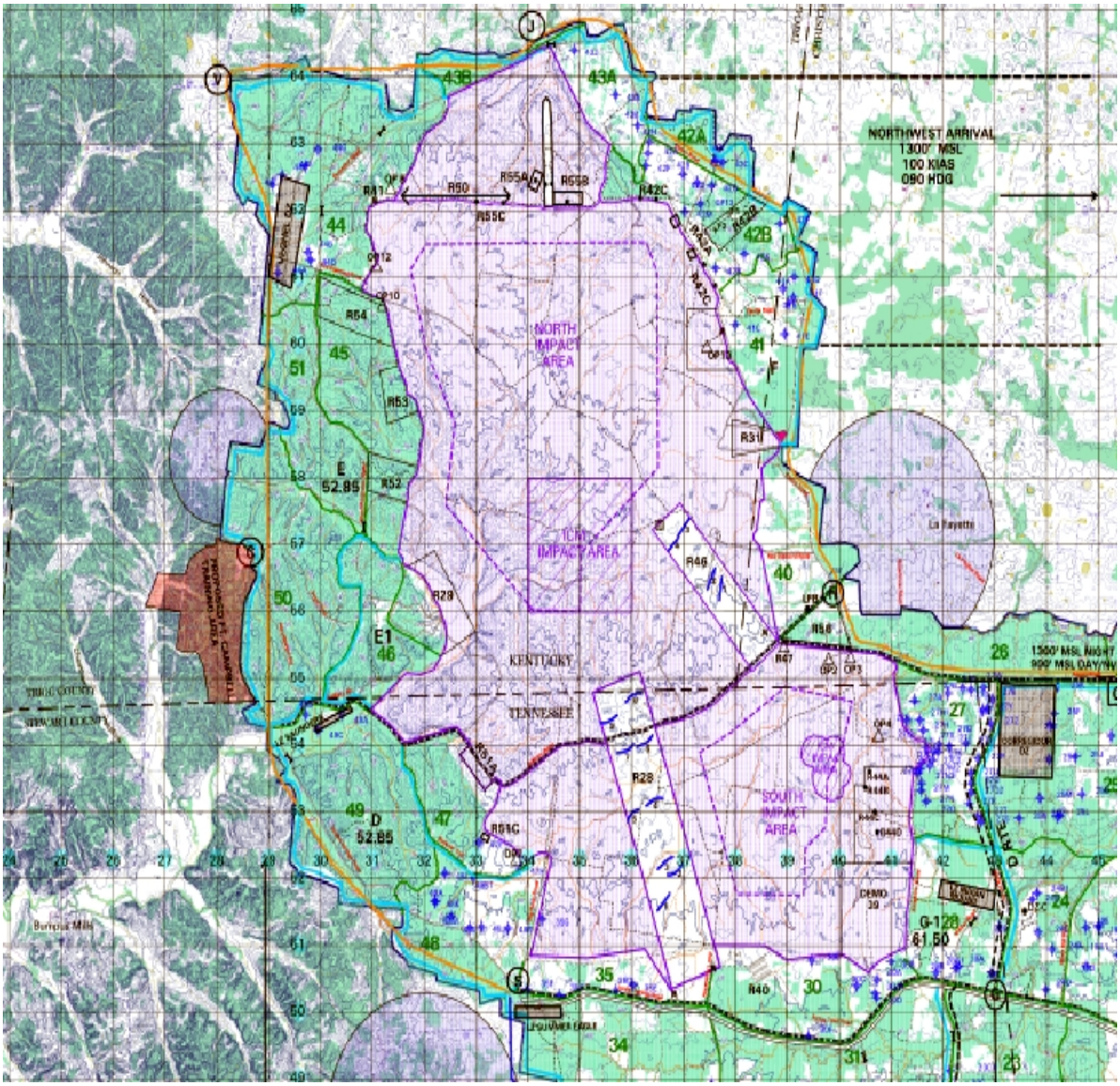


Figure 3-2. North and south impact areas

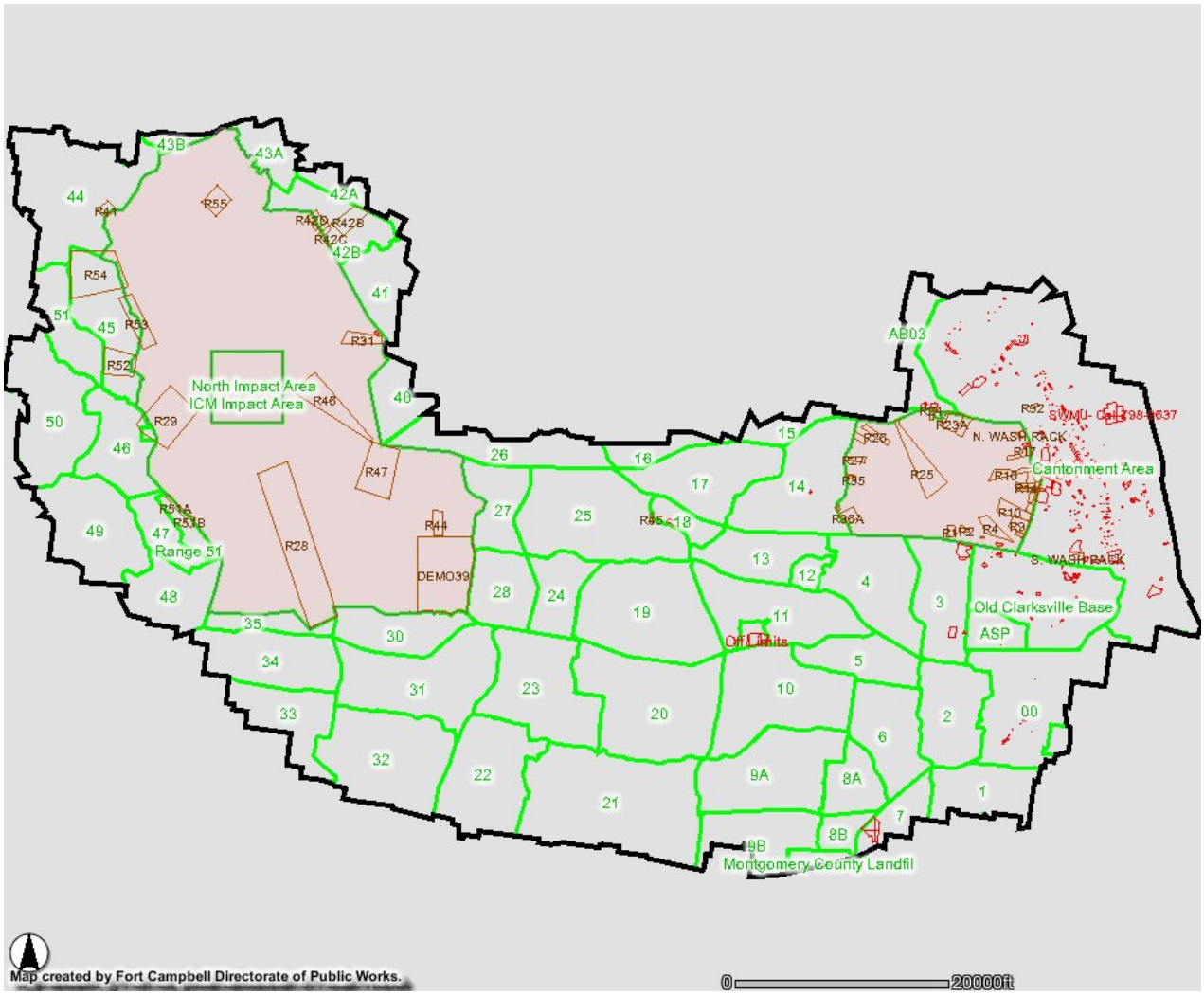


Figure 3-3. Impact area boundaries

RANGE SAFETY CHECKLIST

The following checklist is to assist commanders in ensuring the safe conduct of Range Operations IAW CAM Reg 385-5 and Eagle Training Note 1. Commanders need to conduct a good risk assessment using the Risk Management Worksheet FC Form 4162 (REV), NOV 02 to identify any other hazards (FM's/TM's) and implement the countermeasures for the weapon(s) being fired.

- ☐ Range OIC (E-7 or above). Range OIC must be (E-6 or above) for small arms and machine gun ranges "zero and qualification" only.
- ☐ Range Safety Officer-RSO (weapon system qualified E-6 or above).
- ☐ OIC & RSO attended range safety briefing and certified by BN CO.
- ☐ RSO is not assigned any additional duties or responsibilities other than supervision of weapon firing and safety.
- ☐ All safeties knowledgeable of weapon system being fired and the safety requirements.
- ☐ Adequate number of safeties, and their only duty. (One for 4 firing points).
- ☐ All surface danger zones developed for the specific range.
- ☐ OIC, RSO & Safeties trained on loading, clearing and reducing a stoppage for all weapons being fired.
- ☐ OIC, RSO & Safeties trained in using multi-piece cleaning rod.
- ☐ Same RSO utilized for all iterations; dry, blank, live day and night.
- ☐ Written Risk Management Worksheet FC form 4162 (REV), NOV 02 present at the range IAW CAM Reg 385-5 and Eagle Training Note 1.
- ☐ Risk Management Worksheet signed by the appropriate level. "All maneuver, non-standard, and non-maneuver live fire ranges are MEDIUM risk minimum" requires BN CO signature. Static, non-maneuver live fire ranges, small arms, .50 Cal and below, zero, qualification and familiarization ranges are LOW risk requiring Company CO signature.
- ☐ All safety countermeasures are appropriate, implemented, and effective firing control are maintained.
- ☐ OIC, RSO & Safeties aware of FC Form 4162?
- ☐ Place road guards/signs to prohibit or warn personnel from entering a hazard area if required.
- ☐ Written live-fire scenario IAW Eagle Training Note 1 for maneuver ranges present at the range.
- ☐ Have a copy of current TM's for the weapons being fired on the range.
- ☐ Two means off commo with range control. **FM Radio: RG Div. 75.25 (primary) 48.50 (alternate). Telephone: RG Div. 798-3001/4122, all MEDEVAC must go through Range Control.**
- ☐ Briefed all personnel on MEDEVAC procedures, cease-fire procedures, DUDS, prohibited areas, adjoining ranges and facilities.
- ☐ Copies of FC Form 253 and SDZ's present on the range.
- ☐ A red smoke grenade is available for use in case of air MEDEVAC (will not be required in the small arm area).
- ☐ Medical personnel with vehicle and equipment, i.e. aid bag, litter, ect. IAW CAM Reg 385-5 is present and briefed as to the best route to the nearest hospital or LZ for air MEDEVAC and MEDEVAC procedures IAW Eagle Training Note.
- ☐ RTO's are trained to standard, to operate radios and call for help. The MEDEVAC cards are readily available for an emergency. Maintain commo at all times and conduct hourly commo checks w/ RG control.
- ☐ Attach red range flag to range flagpole (day), red blinking light (night).
- ☐ Report all accident/incidents to Range Control within 30 minutes.
- ☐ Request permission to open the range and go **"HOT"**.
- ☐ No personnel are allowed forward of the firing line.
- ☐ All personnel are using required and appropriate protective equipment.
- ☐ A "Cease Fire" is in order when: 1) Commo with RG Control is lost. 2) Weapon or ammunition malfunction occurs. 3) A safety violation, accident or incident occurs. 4) A fire is started. 5) Rounds land or detonate, or are suspected of landing or detonating outside the impact area / safety limits. 6) When RG Control directs a Cease Fire. 7) Aircraft are observed downrange.
- ☐ Fuel and ammo are stored a minimum of 300 meters apart.
- ☐ Ammo is positioned to minimize potential for ignition, burning or degradation due to weather.
- ☐ Only unpack enough ammo for efficient firing.
- ☐ Repack ammo in original containers and return to the ASP.

- ☐ Fire extinguishers on site (2 ea.) by ammo point. Ensure they are charged with safety pin, safety seal, and monthly inspection.
- ☐ Ammo NCO (E-5 or above in charge of ammo point).
- ☐ OIC ensures all weapons are cleared of ammo after using the range.
- ☐ OIC's ensure a shakedown is conducted on all personnel prior to leaving the range.
- ☐ OIC's ensure the range is cleared and restored to the original condition and inspected/approved by the Range Inspector.

NOTES:

Figure 3-4. Range Safety Checklist

Chapter 4
Training Facility Utilization

4-1. General

a. This chapter provides guidance for training facility usage.

b. Based upon the latest land use requirement study, Fort Campbell has only 50 percent of the maneuver land and impact areas required to meet existing training demands. Therefore, all training facilities must be utilized to the maximum extent possible. It is difficult for combat support (CS) and combat service support (CSS) units to receive adequate training facilities unless maneuver unit commanders insist on only requesting the facilities their units will actually use. Cancellations should be submitted the moment a unit recognizes they will not use a facility.

c. Training land utilization is a special item of interest for the General Accounting Office in Washington, DC, FORSCOM, and the Commanding General. Utilization statistics are reported to the Chief of Staff on a monthly basis and briefed to the Commanding General during each Command Performance Evaluation Briefing.

d. The installation standard for range and training area utilization is 85 percent.

4-2. Opening and closing of training facilities

a. Units scheduled for occupation of any training area will contact Range Division by a personal visit, telephone, or FM radio to open their facility.

(1) All units scheduled to use a facility, to include joint users, are responsible for opening and closing their facility.

(2) Units failing to open their facility through Range Division will be carried in a "no show" status.

b. All units occupying a training facility will contact Range Division to open their facility, or the OIC or RSO can personally go to the Range Safety Office and provide the required opening information on the **Shortened Range Opening Procedures form.** This procedure is recommended in order to minimize radio traffic and expedite opening procedures. For a sample form see figure 4-1. Occupation can be done by secondary means of communication (ie, cell or telephone line) but "HOT" status will be done on FM radio. Range OIC must open all ranges. Range OICs must transmit the following information to Range Control before the range will be opened:

(1) Location and Unit.
(2) Range OIC (name, rank, and last four numbers of social security number (SSN).
(3) Type of weapon and ammunition unit is cleared to fire.
(4) Number of personnel training, number of vehicles, and training activity.
(5) Two means of communication (e.g., FM frequency and/or telephone number for alternate).
(6) Verification of range card/fan data and special restrictions.
(7) Impact area being used (Mortar/Artillery).
(8) Maximum and minimum ordinates (Mortar/Artillery) and forward observer (FO) location.

c. All unit OICs closing a training facilities should be prepared to provide the following information:

(1) All personnel and equipment.

(2) Number of personnel trained and **munition/rounds** fired by ***type*** and Department of Defense Identification Code (***DODIC)***.

(3) Number of duds (with location) and misfires.

d. Range Division will provide unit with a closing time and initials.

ALL UNITS ARE STILL REQUIRED TO HAVE A CERTIFIED RANGE SAFETY OFFICER AND MEDICAL SUPPORT FOR THEIR RANGE. HOWEVER, RANGE CONTROL WILL NOT ASK FOR MEDICAL INFORMATION.

e. All initial opening data will be read back to ensure transmitted information is correct. All communication checks will include the designation of each "HOT" FIRING POINT (e.g., "Range Control, this is 2-320th TOC, commo check: Firing Points 27A, 27C, and 27L, over").

f. All training facilities must be closed with Range Division prior to the unit leaving the facility. The OIC of live fire ranges will call Range Division Firing Desk and request an inspection and clearance.

4-3. Police

a. Commanders of using units are responsible for policing Fort Campbell training and range facilities.

b. Upon completion of training, the commander's representative will supervise a thorough police. All non-permanent targets will be removed from the range and stored in a location away from any engagement/live fire area as designated by the range manager. Clean all common use areas such as mess areas, latrines, towers, and entrance roads. No trash, ammunition, ammunition boxes, brass, tactical wire, barrier materials, or other debris will be left in the area. All emplacements, demolition craters, tank ditches, weapons positions, foxholes, and any other excavations will be filled by the using unit so that the training facility's appearance returns to its original state prior to requesting a range inspection.

c. Hazardous material, such as blank and live ammunition or coils of concertina wire, will not be placed in dumpsters.

d. Task Force commanders should insist on a good restoration effort by slice elements and co-users prior to end of exercise (ENDEX). Should a unit occupy an area which was not properly restored by a previous unit, call Range Division immediately. Range Division will contact the responsible unit and have them return and correct the deficiencies.

e. Fort Campbell Digging Management Policy.

(1) Units are not authorized to randomly dig anywhere on post.

(2) Fort Campbell has significant archeological sites and wetlands that are regulated by Federal and state law.

(3) Units that require mechanical digging and berming during their training must request a dig permit through Range Division/ITAM. Upon approval the unit will receive a digital photo map and clearance for the digging.

(4) MUCs are required to allocate engineer assets to recover any mechanically dug holes or berms.

(5) Units will obtain grass seed from Range Control/ ITAM.

(6) Digging and training in cemeteries is not authorized.

f. To fix responsibility for poor restoration efforts, the last unit scheduled for the facility will be held accountable.

4-4. Portable latrines on live fire ranges

All Ranges around the Small Arms Impact area have portable latrines that are contracted and coordinated by Range Division. All units conducting training around the north and south impact area live fire ranges will request and have portable latrines on site due to environmental and sanitation requirements. CAM Regulation 420-14 establishes policies, responsibilities, and procedures for use of field latrines on post and in training areas. It applies to all units and groups, military or civilian, using the Fort Campbell military reservation. Latrines that are found with munition in them are subject to being locked and/or removed from the range and the using unit will be required to coordinate for their own latrine support through DPW.

IMSE-CAM-PLT Date(s) of training:

_____

MEMORANDUM FOR RECORD

SUBJECT: Shortened Range Opening Procedures

1. Range, OP, or Firing Point (circle one) _____

2. OIC: Unit _____Last Name _____Rank_____
Last Four of SSN _____Certification Date_____
Certification Code (for type weapon) _____

3. RSO: Unit _____Last Name _____Rank_____
Last Four of SSN _____Certification Date_____
Certification Code (for type weapon) _____

4. I _____ (print name), affirm that I am the OIC or RSO of RNG/OP or FP#_____. I understand that I must personally call Range Control from the RG/OP or FP in order to OPEN and obtain a HOT status. If an OIC or RSO changeover becomes necessary, I will personally call Range Control to provide the data necessary to certify another OIC or RSO.

5. I understand that I am not authorized to make changes to the range packet unless coordinated with Range Division Safety. All non standard use of ranges, i.e. quick fire, stress fire, placement of vehicles, barriers or any other type material on a range, will require approval from range safety/operations personnel.
I further understand that I will be asked by Range Control if any data has changed or been modified within my range packet, surface danger zone, or weapons systems prior to receiving a "HOT STATUS." During closing procedures I will be asked for the total amount of rounds fired by type and DODIC number. I will compile this information prior to calling Range Control for a closing time.

NOTE: I will ensure that the DOWN RANGE area is CLEAR and that all ROAD GUARDS are emplaced prior to being put in a HOT status by Range Control.

Additional OIC/RSO
Name: _____Last Four _____Rank: _____Certification Code: ____Certification Date: _____
Name: _____Last Four _____Rank: _____Certification Code: ____Certification Date: _____
Name: _____Last Four _____Rank: _____Certification Code: ____Certification Date: _____
Name: _____Last Four _____Rank: _____Certification Code: ____Certification Date: _____

_____
OIC or RSO Signature and Date

_____
Range Safety Signature and Date

For Firing Desk personnel only:
Type of secondary means of communication: FM radio or Cell phone _____
Type Weapon: _____
Type Training: _____
Type Ammunition: _____

Figure 4-1

Chapter 5
Range Division Communication System

5-1. General

a. The Range Division communication radio is a range safety net. It handles heavy traffic loads; therefore, unauthorized traffic, such as the testing of radios in garrison and personal calls, will not be permitted. The systems operate 24 hours a day, 7 days a week.

b. The call sign for Range Division for all wire and radio nets is "Range Control." Unit call signs will consist of the range or training facility number.

c. The primary duty of Range Division communications personnel is to coordinate the firing of live ammunition into all ranges and impact areas, monitor training facility usage, advise Eagle Radio of hazards to flight, and relay requests for MEDEVAC/ambulance service.

d. Units should report their command post (CP) locations to Range Division to facilitate routine and emergency situations.

e. Live firing units will monitor the range communication net continuously. In the event of a breakdown of communications between a firing range (position) and Range Division, a mandatory cease fire will be self imposed until communications are reestablished. Communications checks from ranges/live fire areas will be made with Range Division once every hour.

f. Units firing on ranges equipped with "Class C" phones will use these phones as their secondary means of communication with Range Division.

5-2. Range radio system

The FM frequencies are as follows: Primary 75.25, Retrans 32.50; alternate – 48.50, Retrans 40.15. The OE254 antenna systems are required when operating from the western portion of the reservation.

5-3. Cellular phones

a. Cellular phones do not meet the communication requirements for opening and closing training facilities west of Grant Road and Indian Mound Road. All cellular phones that are used east of Grant Road and Indian Mound Road for alternate means of communications will be used for this purpose only. After the Range Control RTO has checked certification of OIC, the Range Control RTO will call the unit OIC to verify that the cellular phone is operational and the number. Prior to Range Control giving the OIC a HOT time, the Range Control RTO must inform the OIC that the phone will be used only for Range Control purposes and the OIC must keep the phone line open at all times.

b. If additional cell towers are installed and cell phone communication quality improves, Range Division may amend the NO CELL PHONE policy. If cell phones use does become authorized it will only be used as a secondary means of communication.

Chapter 6
Multipurpose Qualification Training Range (MQTR) Procedures and Range Inventory

6-1. Purpose

This chapter provides guidance and procedures for the MQTR and all training facilities west of Market Garden Road to include Range 33, and Range B7.

6-2. Reference

TC 25-8 (Training Ranges)
CAM Regulation 350-1 (Fort Campbell Training Directive).

6-3. Training resource allocations

For the latest policy and procedures for resource priorities and allocations refer to CAM REG 350-1, chapter 4.

6-4. Training Facilities

a. MQTR are designed to provide Brigade Combat Teams (BCT) resources in the small arms impact area to train and qualify soldiers in a safe and efficient manner. Each MQTR will provide a Modified Record Fire (MRF) range to qualify with the M4/M16, Combat Pistol Qualification Course (CPQC), Multipurpose Machine Gun (MPMG), zero ranges for 5.56 and 7.62 calibers, and a grenade launcher range M203 Target Practice Training (TPT).

b. Safety is first and foremost, figures 6-1 thru 6-6 provide users at all levels a graphic depiction of the intense concentration and congestion within the small arms impact area. Because of this concentration and the Surface Danger Zone (SDZ) requirements in AR and DA PAM 385-63, Range Control will retain positive control of all training facilities West of Market Garden Road and ensure soldiers and civilians are provided a safe environment. No soldier or civilian will proceed past the firing line/point (not including 10 and 25 meter zero ranges) without coordinating with the firing desk, Range Control. All units, whether they are participating on ranges associated with a MQTR, or separate non MQTR facility, will comply with requirements in chapter three and four of this regulation.

6-5. MQTR A Consists of Ranges 7, 9, 10, 12A, 44A, and 44B

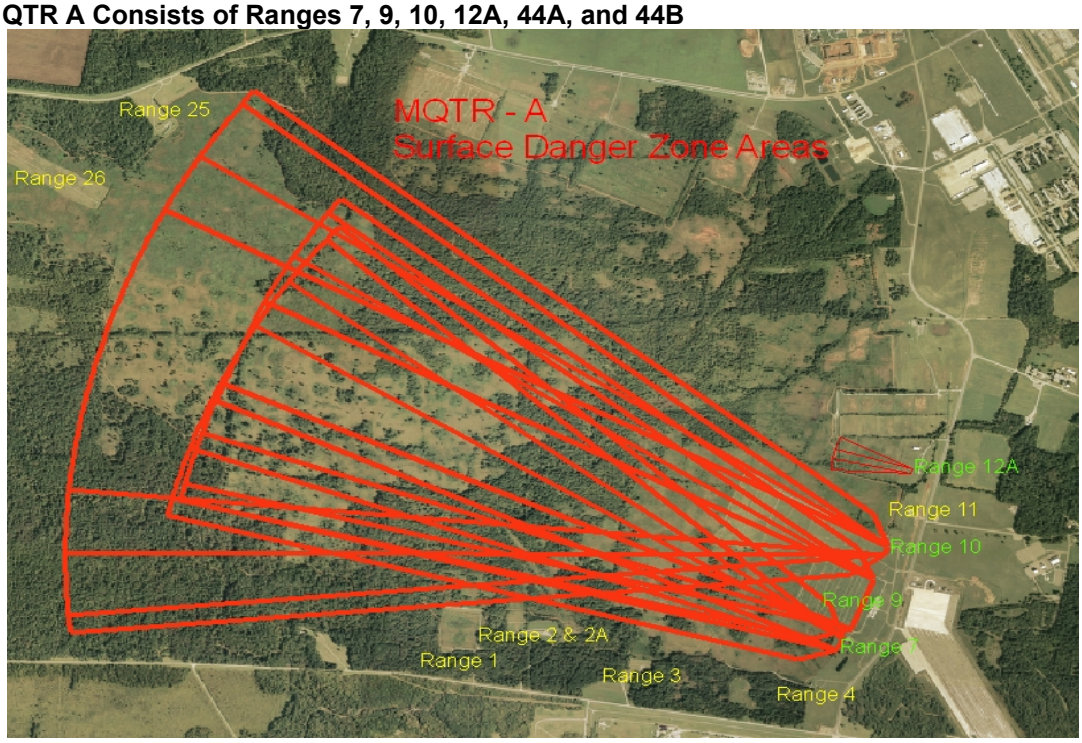


Figure 6-1, MQTR – A, Surface Danger Zone Area

Range 7

Type of Range: Basic 25 Meter Range (Zero)
Type of Weapons to be Fired: M16, M4, M9, and quickfire.
Location: Market Garden (DF 5700 5350).
Number of Firing Points: 30 Foxholes.
Number of Targets and Type: 25 Meter zero holding frames.
Azimuth of Firing Line: 3613 mils.
Principle Direction of Fire: 5350 mils.
Type of Communications and Location: None
Facilities: Latrine, Ammunition Point, OIC Stand, and Bleachers.
Special Equipment Unit Provides: PA system, Staple Gun, and Radios.
Communication Requirements: FM/FM or cellular phone secondary

Range 9 Complex (Qualification)

Type of Range: Computerized Modified Record Fire Range. (MRF Range), and Combat Pistol Qualification Course (CPQC)
Type of Weapons to be Fired: M16/M4 Rifle, M9, .45/.22/.38 cal pistols.
Type of Qualifications: Field Fire, Record Fire, NBC Fire, and Night Fire.
Location: Market Garden (DF 5700 5380).
Number of Firing Points: 16 Foxholes on the MRF and eight firing points on the CPQC.

Number and Type of Targets: Electrical Pop-up Targets at a distance of 50,75,100,150,175,200,250 and 300 meters on MRF, and battery operated pop-ups on pistol.
Azimuth of Firing Line: 3610 mils.
Principle Direction of Fire: 5221 mils.
Type of Communication: None
Facilities: Tower, Latrine, Ammunition Point, Class Room, Bleachers and PA system. Special Equipment Unit Provides: Radios.
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE: Unit must notify the Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).

Range 10

Type of Range: Multi-Purpose Machine Gun Transition and Machine Gun 10 Meter Range.
Type of Weapons to be Fired: M60 machine gun, M249 SAW, M240B, M14, M21, and M24.
Location: Market Garden (DF 5705 5382).
Number of Firing Points: 5 Transition, 5 Zero/ Qual, 5 Night.
Number of Targets and Type: 70 pop-ups (RETS) silhouettes at a distance of 100, 200, 300, 400, 450, 500, 550, 600, 650, 700 and 800 meters. 5 wooden frames for zero/ qualification.
Azimuth of Firing Line: 3585 mils.
Principle Direction of Fire: 5189 mils.
Type Communications and Location: None.
Facilities: Tower, Latrine, Bleachers, PA System and Ammunition Point.
Special Equipment Unit Provides: Radios and Binoculars.
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE: Unit must notify the Range Operations and Maintenance Contractor 2 days prior for computer operator.

Range 12A

Type of Range: Grenade Launcher Range.
Type of Weapons to be Fired: M203 Grenade Launcher (40mm TPT ONLY).
Location of Range: Market Garden (DF5540 5622).
Number of Firing Points: 4 Per Range.
Number of Targets and Type: Concrete Culverts, Zero Panels, Window Frames, and Mortar Pits, and Troops in the Open.
Azimuth of Firing Line: 5169mils.
Principle Direction of Fire: 3621mils.
Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point, OIC Stands and Bleachers.
Special Equipment Unit Provides: Radios and PA System.
Communication Requirements: FM/FM or cellular phone secondary

NOTE 1: UNIT AMMUNITION MUST BE INSPECTED PRIOR TO UNIT GOING INTO A HOT STATUS.
NOTE 2: RANGE 12 IS THREE SEPARATE RANGES
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

Range 44A/B

Type of Range: Live Fire Shoot House Flat Range.
Type of Weapons to be Fired: M4, M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun 6-9 bird shot.
Location: Off Jordan Springs Road (44A-DF4060 5358, 44C-DF4068 5300).
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.

NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses. See Range Manager for direct coordination.

6-6. MQTR B Consists of Ranges 11, 12B, 13/14, 15, 17, and 17A

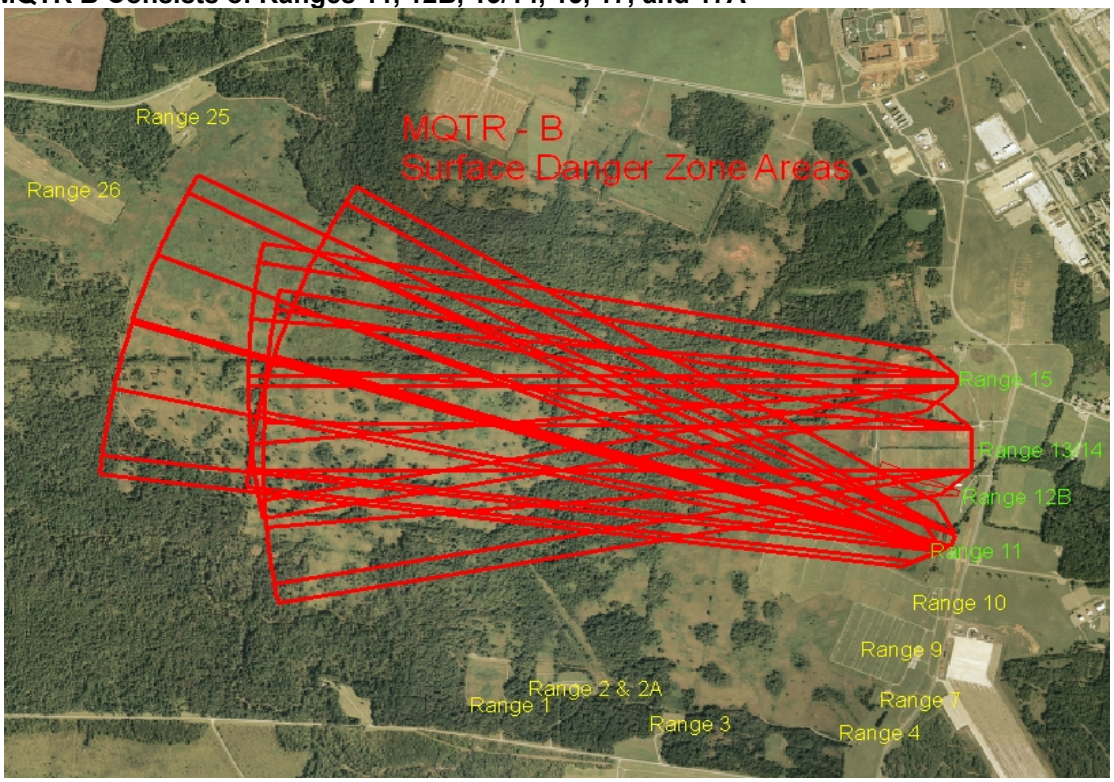


Figure 6-2, MQTR – B Surface Danger Area Requirements

Range 11

Type of Range: Basic 25 Meter Firing (Zero). 10 meter machine gun zero and MPMG.
Type of Weapon to be Fired: M16, M4, 9mm and quickfire.
Location: Market Garden (DF 5720 5400).
Number of Firing Points: 24 foxholes on the 25 meter zero, 5 points on the 10 meter zero, and 3 points on the MPMG.
Azimuth of Firing Line: 3456 mils.
Principle Direction of Fire: 4965 mils.
Type Communications and Location: None.
Facilities: Latrine, ammunition point, OIC Stand and bleachers.
Special Equipment Unit Provides: PA System, staple gun, and radios.
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE 1: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).
NOTE 2: Unit on Range 11, the ten meter zero and 25 meter zero can not be hot at the same time.

Range 12B

Type of Range: Grenade Launcher Range.
Type of Weapons to be Fired: M203 Grenade Launcher (40mm TPT ONLY).
Location of Range: Market Garden (DF5540 5622).
Number of Firing Points: 4 Per Range.
Number of Targets and Type: Concrete Culverts, Zero Panels, Window Frames, and Mortar Pits, and Troops in the Open.
Azimuth of Firing Line: 5169mils.
Principle Direction of Fire: 3621mils.

Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point, OIC Stands and Bleachers.
Special Equipment Unit Provides: Radios and PA System.
Communication Requirements: FM/FM or cellular phone secondary
NOTE 1: UNIT AMMUNITION MUST BE INSPECTED PRIOR TO UNIT GOING INTO A HOT STATUS.
NOTE 2: RANGE 12 IS THREE SEPARATE RANGES
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

Range 13/14
Type of Range: Computerized Modified Record Fire Range. (MRF Range), and Combat Pistol Qualification Course (CPQC), and Known Distance (KD) Range.
Type of Weapons to be Fired: M16, M4, M9, and .45/.22/.38 cal pistols. M14, M21, M24 will be fired on the Known Distance Range (KD) only.
Type of Qualifications: Field Fire, Record Fire, NBC Fire, and Night Fire.
Location: Market Garden (DF 5700 5380).
Number of Firing Points: 14 Foxholes on the MRF and eight on the CPQC.
Number and Type of Targets: Electrical Pop-up Targets at a distance of 50,75,100,150,175,200,250 and 300 meters.
Type of Communication: None
Facilities: Tower, Ammunition Point, Bleachers and PA system.
Azimuth of Firing Line: 3043 mils.
Principle Direction of Fire: 4643.
Type Communications and Location: None.
Facilities: Ammunition point, and bleachers.
Special Equipment Unit Provides: PA system and radios.
Range Waiver: On file (see appendix C).
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE: Unit must notify the Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).

Range 15
Type of Range: Basic 25 Meter Range (Zero).
Type of Weapons to be Fired: M16, M4, M9, and quickfire.
Location: Market Garden (DF 5723 5488).
Number of Firing Points: 20 foxholes
Number of Targets and Type: 25 Meter zero holding frames.
Azimuth of Firing Line: 3200 mils.
Principle Direction of Fire: 4810 mils. 270 degrees.
Type Communications and Location: None.
Facilities: Latrine.
Special Equipment Unit Provides: PA system, Staple Gun, and Radios.
Communication Requirements: FM/FM or cellular phone secondary

Range 17
Type of Range: Squad Battle Course: React To Contact Live Fire.
Type of Weapon to be Fired: M16A2, M4, M249, M203 TPT.
Location: Market Garden (DF 5720 5550).
Principle Direction of Fire: 4662 mils.
Type Communications and Location: None
Facilities: AAR site, porta potty, ammunition point and bleachers.
Special Equipment Unit Provides: 2 radios

NOTE: Range 17 Complex and battery request must be provided to Range Manager, 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.

Range 17A
Type of Range: Live Fire Shoot House
Type of Weapons to be Fired: M4, M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun 6-9 bird shot.
Location: Market Garden Road (DF 5707 5555).
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.

NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses. See range manager for direct coordination a minimum of 15 working days prior.

6-7. MQTR C Consists of Ranges 22D, 23A, 23B, 26, 27, and 27A

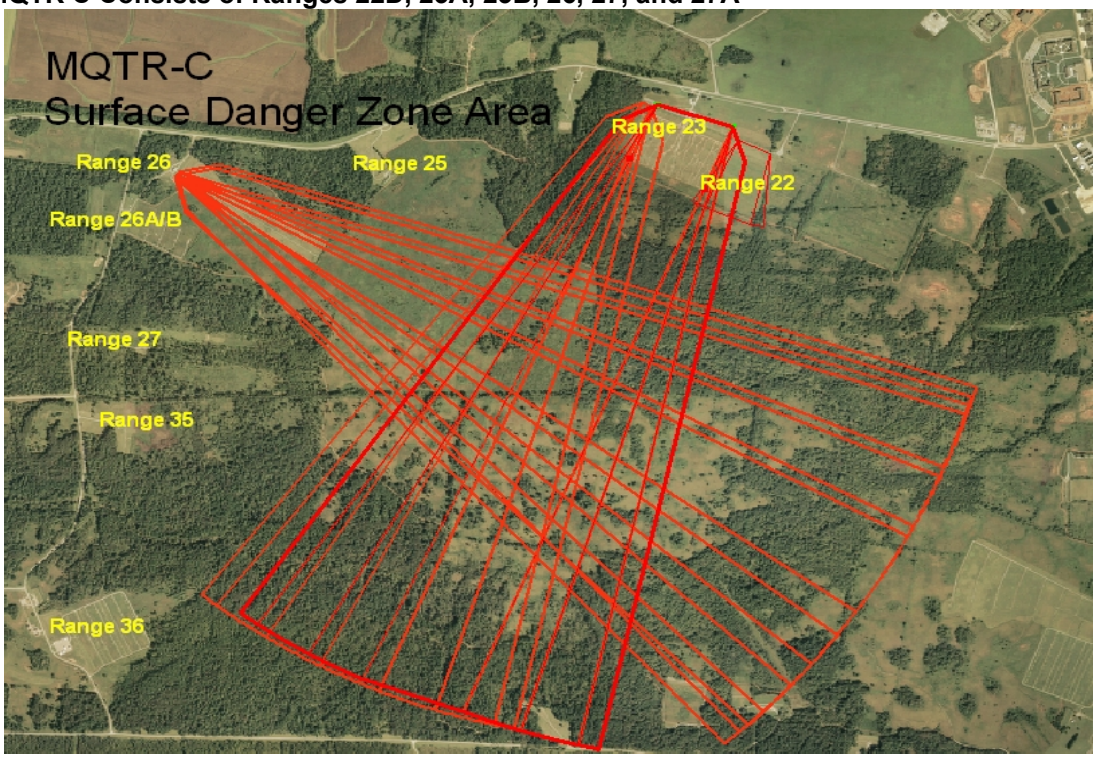


Figure 6-3, MQTR – C, Surface Danger Zone Requirements

Ranges 22 D
Type of Range: Grenade Launcher Range.
Type of Weapons to be Fired: M203 Grenade Launcher (40mm TPT ONLY).
Location of Range: Angels Road (DF5540 5622).
Number of Firing Points: 4 Per Range.
Number of Targets and Type: Metal Silhouettes, Zero Panels, Window Frames, Mortar Pits, and Troops in the Open.
Azimuth of Firing Line: 5169mils.
Principle Direction of Fire: 3621mils.
Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point, OIC Stands and Bleachers.
Special Equipment Unit Provides: Radios and PA System.
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE 1: UNIT AMMUNITION MUST BE INSPECTED PRIOR TO UNIT GOING INTO A HOT STATUS.
NOTE 2: RANGE 22 IS FOUR SEPARATE RANGES (22A, 22B, 22C, 22D) Only 22D is part of this MQTR.

Range 23A
Type of Range: Computerized Modified Record Fire Range (MRF Range), and Combat Pistol Qualification Course (CPQC).
Type of Weapon to be Fired: M16 and M4 Rifle, M9, and .45/.22/.38 cal pistols.
Type of Qualification: Field Fire, Record Fire, NBC Fire, and Night Fire. All Targets are Thermal Capable.
Location: Angels Road (DF 5492 5668).
Number of Firing Points: 14 Foxholes on the MRF and 8 firing points on the CPQC.
Number of Targets and Type: Pneumatic pop-up silhouettes at ranges of 50, 75, 100, 150, 175, 200, 250, and 300 meters on MRF, and battery operated pop-ups on pistol.
Azimuth of Firing Line: 5177 mils.
Principle Direction of Fire: 3528 mils.
Type Communications and Location: None.
Facilities: Tower, Latrine, Ammunition Point, PA System, and Bleachers.
Special Equipment Unit Provides: Radios.
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE 1: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).
NOTE 2: Unit must provide an air guard while live firing.

Range 23B
Type of Range: Basic 25 Meter Range.
Type of Weapons to be Fired: M16 and M4 Rifle.
Location: Angels Road (DF5492 5662).
Number of Firing Points and Type: 25 Meter Zero Holding Frames.
Number of Firing Points: 16 Foxholes.
Azimuth of Firing Line: 5177 mils.
Principle Direction of Fire: 3528 mils.
Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point, OIC Stand, and Bleachers.
Special Equipment Unit Provides: Radios, Staple Gun, and PA System.
Communication Requirements: FM/FM or cellular phone secondary
NOTE: Unit must provide air guard while live firing.

Range 26
Type of Range: Multipurpose Machine Gun Transition Range and Machine Gun 10-Meter Range.
Type of Weapons to be Fired: M60 machine gun, M240B, and M249 SAW, M14, M21, M24.
Location: Angels Road (DF 5249 5618).
Principal Direction of Fire: 2300 mils.
Type Communications and Location: None.
Facilities: Tower, Latrine, Ammunition Point, PA System, and Bleachers.
Number of Firing Points: 3 Field Fire Points, 5 10 Meter Zero/ Qual Points, and 3 25 Meter Night Fire Points.
Number of Targets and Type: 28 (RETS) E-type silhouettes at a distance of 100, 200, 300, 400, 450, 500, 550, 600, 650, 700, and 800 meters. 5 wooden frames for zero/ qualification.
Special Equipment Unit Provides: Binoculars and FM Radios.
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.
NOTE: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).

Range 27
Type of Range: Squad Battle Course: React To Contact Live Fire Range and 25 Meter Flat Range.
Type of Weapons to be Fired: M16, M4, M249, M203 TPT.
Location: On-the-Line Road (DF 5235 5502).

Number of Firing Points: 9 at the 25 meter zero range.
Principle Direction of Fire: 1800mils.
Type Communications and Location: None
Facilities: AAR site, ammunition point and bleachers.
Unit must provide: 2 radios.
Communication Requirements: FM/FM or cellular phone secondary

NOTE: Range 27 Complex and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.

Range 27A
Type of Range: Live Fire Shoot House
Type of Weapons to be Fired: M4, M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun 6-9 bird shot.
Location: On-the-Line Road (DF 5233 5507).
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.
Communication Requirements: FM/FM or cellular phone secondary

NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses. See range manager for direct coordination a minimum of 15 days prior.

6-8. MQTR D Consists of Ranges 36A, 36B, 36C, 36D, 38, and 38A

Range 36 Complex
Type of Range: Computerized Modified Record Fire Range. (MRF Range), Combat Pistol Qualification Course (CPQC), Multipurpose Machine Gun Transition Range
Type of Weapons to be Fired: M16 and M4 Rifle, M14, M240, M249, M21, M24, pistol.
Location: On-the-Line Road (DF 5185 5371).
Number of Firing Points: 16 Foxholes on MRF, 8 Combat Pistol, and 3 Machine Gun.
Number of Targets and Type: Electrical pop-up targets at 50, 75,100,150, 175, 200, 250, and 300 meters. Battery operated pop-ups for machine gun and pistol qualifications.
Principle Direction of Fire: 1400 mils.
Type Communications and Location: None.
Facilities: Tower, Bleachers, Ammunition Point, Class Room, PA System and Latrine.
Special Equipment Unit Provides: Radios.
Communication Requirements: FM/FM or cellular phone secondary

NOTE: Range 36A consists of three different ranges.
NOTE: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator (798-3414).
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

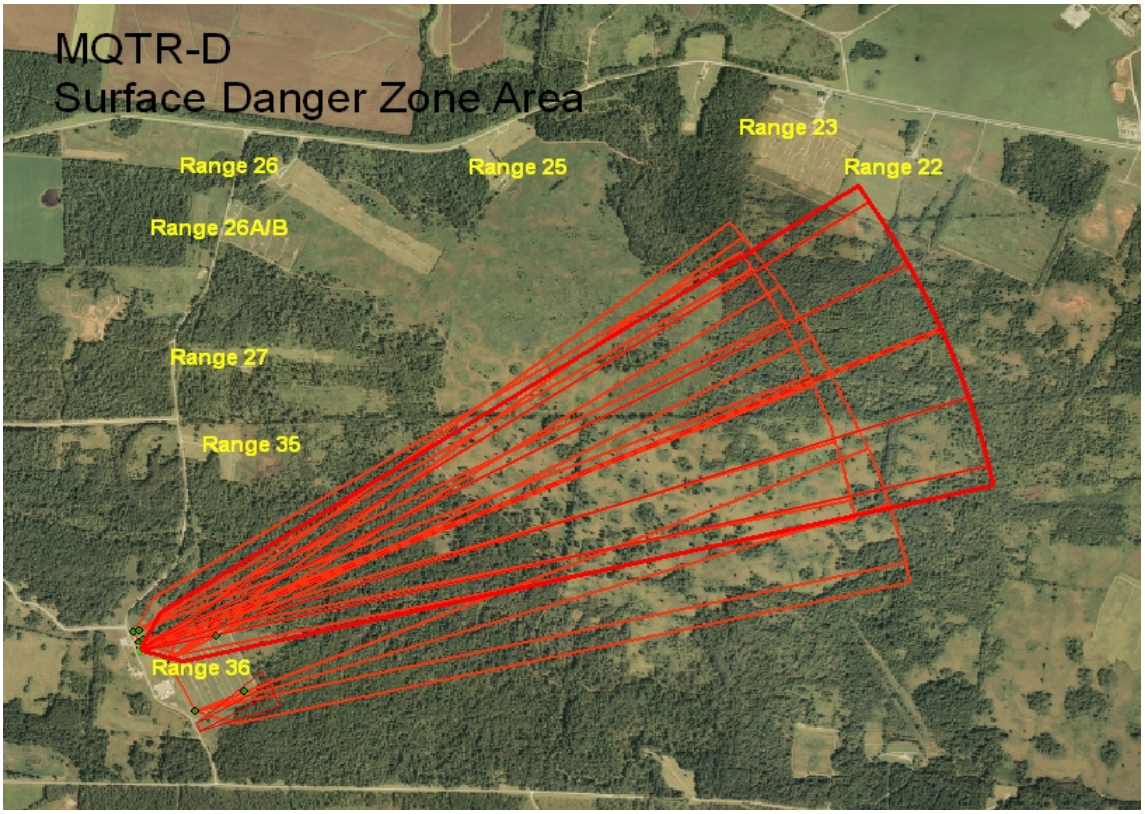


Figure 6-4, MQTR – D, Surface Danger Zone Requirements

Range 36B (Zero)
Type of Range: Basic 25-Meter (Zero).
Type of Weapons to be Fired: M16 and M4 Rifle.
Location: On-the-Line Road (DF 51785 5390).
Number of Firing Points: 20 Foxholes.
Number of Targets and Type: 20 25 meter wooden frames.
Azimuth of Firing Line: 6200 mils.
Principle Direction of Fire: 1220 mils.
Type Communications: None.
Facilities: Latrine, Ammunition Point.
Special Equipment Unit Provides: PA system, staple gun, and radios.
Communication Requirements: FM/FM or cellular phone secondary

Range 36C (10 meter)
Type of Range: Machine Gun 10-Meter Range
Type of Weapons to be Fired: M60 machine gun, M240B, and M249 SAW, and M14.
Location: On-the-Line Road (DF 5182 5384).
Number of Firing Points: 5 firing points.
Number of Targets and Type: 5 10 meter wooden frames.
Azimuth of Firing Line: 5854 mils.
Principle Direction of Fire: 1300 mils.
Type Communications: None.
Facilities: Latrine, Ammunition Point and OIC stand.
Special Equipment Unit Provides: PA system, staple gun, and radios.
Communication Requirements: FM/FM or cellular phone secondary

Range 36D
Type of Range: Grenade Launcher Range.
Type of Weapons to be Fired: M203 Grenade Launcher (40mm TPT ONLY).
Location of Range: On the Line Road (DF5209 5346).
Number of Firing Points: 4.
Number of Targets and Type: Zero APC, Window Frames, Mortar Pits, and Troops in the Open.
Azimuth of Firing Line: 5854 mils.
Principle Direction of Fire: 1300 mils.
Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point.
Special Equipment Unit Provides: Radios and PA System.
Communication Requirements: FM/FM or cellular phone secondary

NOTE 1: UNIT AMMUNITION MUST BE INSPECTED PRIOR TO UNIT GOING INTO A HOT STATUS.
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

Range 38 and 38A (Shoot House and Flat Range)
Type of Range: Live Fire Shoot House
Type of Weapons to be Fired: M4, M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun 6-9 bird shot.
Location: On the Line Road (DF 5187 5411)
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.
Communication Requirements: FM/FM or cellular phone secondary

NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses. See range manager for direct coordination a minimum of 15 days prior.

6-9. MQTR Non Inclusive Ranges

Range 1
Type of Range: Light Anti-armor Weapons.
Type of Weapons to be Fired: M72 LAW and AT4 (sub caliber only).
Location: Mabry Road (DF 5491 5320).
Number of Firing Points: 4 firing points.
Number of Targets and Type: Armored targets, personnel, and bunkers.
Azimuth of Firing Line: 4925 mils.
Principle Direction of Fire: 0065 mils.
Type Communications and Location: None.
Facilities: Bleachers, Latrine, OIC Stand and ammunition point.
Special Equipment Unit Provides: PA system and radios.
Communication Requirements: FM/FM or cellular phone secondary

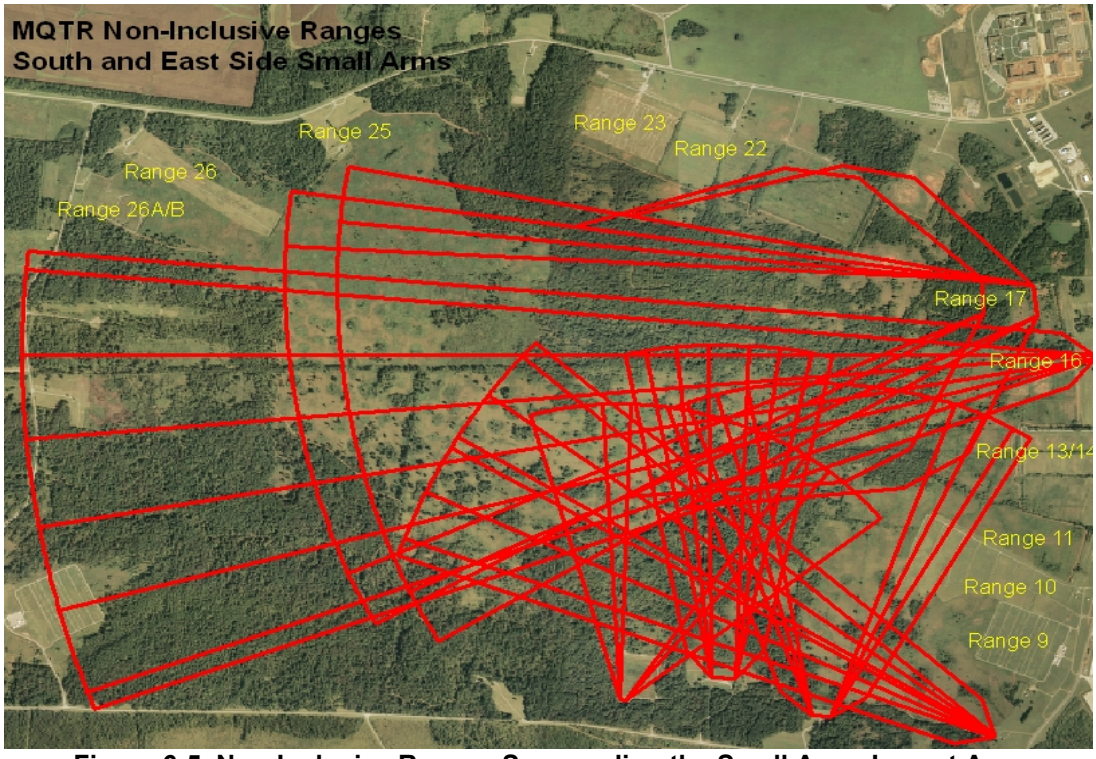


Figure 6-5, Non-Inclusive Ranges Surrounding the Small Arms Impact Area

Range 2

Type of Range: Combat Pistol.
Type of Weapons to be Fired: 9mm, .45, .38, and .22 caliber pistols.
Location: Mabry Road (DF 5540 5315).
Number of Targets and Type: 25 E-Type Silhouettes.
Azimuth of Firing Line: 4684 mils.
Principal Direction of Fire: 6275 mils.
Type Communications and Location: None.
Facilities: latrine, ammunition point, and bleachers.

Note: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator 798-3414.
Special Equipment Unit Provides: PA system, staple gun, and radios.
Communication Requirements: FM/FM or cellular phone secondary

Range 2A (160th Range)

Type of Range: Combat Pistol.
Type of Weapons to be Fired: M4, M16, 9mm, .45, .38, and .22 caliber pistols.
Location: Mabry Road (DF 5540 5315).
Number of Targets and Type: 25 E-Type Silhouettes.
Azimuth of Firing Line: 4684 mils.
Principal Direction of Fire: 6275 mils.
Type Communications and Location: None.
Facilities: Covered firing line, latrine, ammunition point, and bleachers.
Special Equipment Unit Provides: PA system, staple gun, and radios.
Communication Requirements: FM/FM or cellular phone secondary

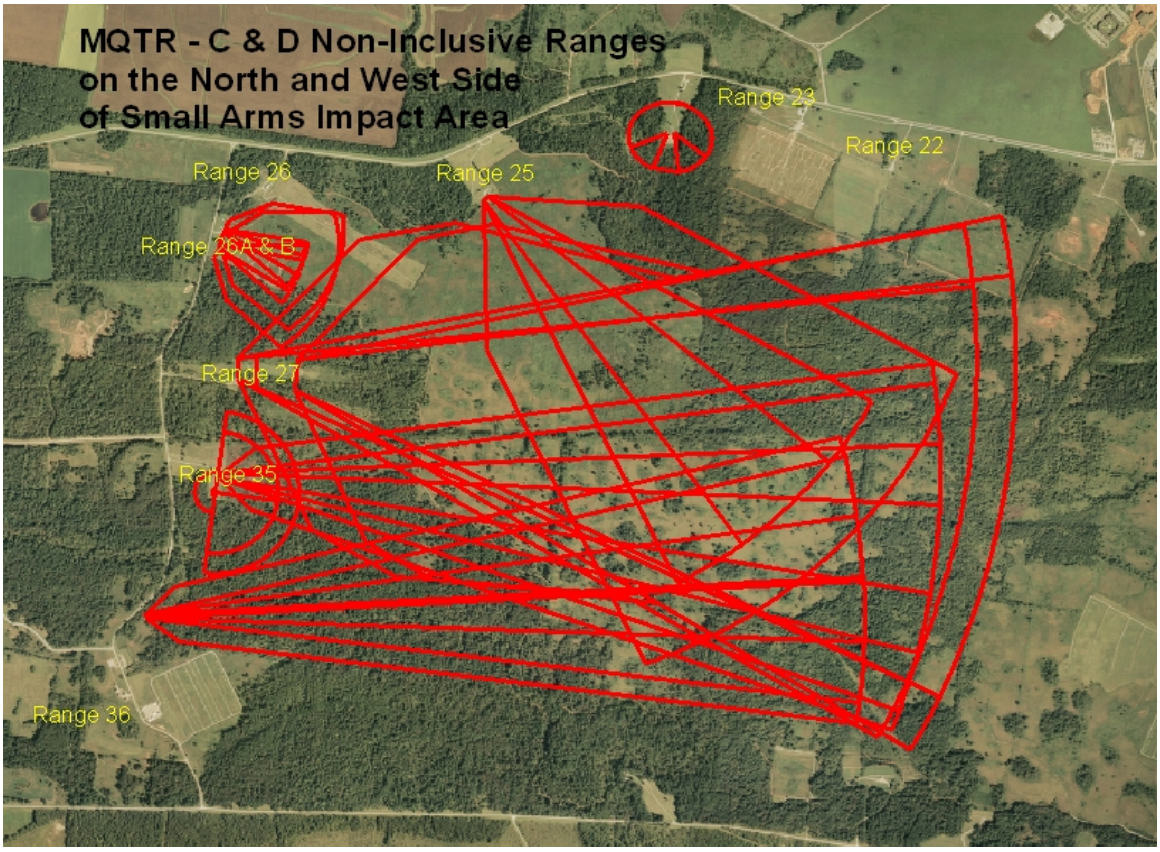


Figure 6-6, Non-Inclusive Ranges Surrounding the Small Arms Impact Area

Range 3

Type of Range: Combat Pistol.
Type of Weapons to be Fired: 9mm, .45, .38, and .22 caliber pistol.
Location: Mabry Road (DF 5590 5300).
Number of Firing Points: 10 points at a range of 7 to 31 meters.
Number of Targets and Type: 70 pop-ups silhouettes (Pneumatic).
Azimuth of Firing Line: 4842 mils.
Principle Direction of Fire: 0200 mils.
Type Communications and Location: None.
Facilities: Tower, ammunition point, latrine, PA System, and bleachers.
Special Equipment Unit Provides: Radios.
Note: Unit must notify Range Operations and Maintenance Contractor 2 days prior for computer operator 798-3414.
Communication Requirements: FM/FM or cellular phone secondary

Range 4

Type of Range: Sniper Field Fire Tower.
Type of Weapons to be Fired: M14, M16, M21, M24, SR-25, M4, M16.
Location: Market Garden (DF 5300 5685).
Number of targets and type: Steel framed E-type silhouettes at a distance from 100 meters to 1000 meters.
Azimuth of firing line: 3969 mils.
Principle direction of fire: 1960 mils.
Type of communications and location: None.
Number of firing points: All firing will be from the tower
Facilities: Latrine
Special Equipment Unit Provides: Radios and PA System.
Range waiver: On file (See appendix C).
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Unit and maintenance personnel will not go down range.

Range 8
Type of Range: Centralized Wheel Vehicle Wash Facility.
Type of Vehicles to be Washed: All military wheel vehicles, NO POVs.
Location: Stilwell Road (DF 5880 5240).
Number of Wash Points: 10.
Facilities: Latrine.
Special Equipment Unit Provides: Garden hose. WARNING: DO NOT DRINK THE WATER.
General: No detergents will be used. No maintenance cleaning will be performed.

Range 16
Type of Range: Sniper Field-Fire Range and Personal Weapons Range (POW).
Type of Weapons to be Fired: M4, M16, pistol, shotgun, M21 and M24. No .50 caliber rifles will be fired on range 16, however up to .54 caliber black powder is authorized.
Location: Market Garden (DF 5725 5530).
Number of Firing Points: 7.
Number of Targets and Type:
a. For sniper field-fire – Iron Maiden type targets 200, 300, 400, 500, 600, 700, 800 meters. Maintenance of targets beyond the 100 meter mark will be coordinated directly with Range Control Safety.
b. Type silhouettes at 25, 50, and 100 meters, for personal weapons range.
c. Azimuth of Firing Line: 3000 mils. Principle Direction of Fire: 4600 mils.
Type Communications and Location: None.
Facilities: Issue shack and porta potties.
Special Equipment Unit Provides: 2 FM radios.
General: Recreational firers must be active duty, reserve, retired military, military dependant, DOD civilian employee of Ft. Campbell and attend a range safety brief for handguns and shoulder-fired privately owned weapons given by Range OIC on Range 16. All weapons will be registered with the provost marshals.
Range Waiver: On file (see appendix C).
Communication Requirements: FM/FM or cellular phone secondary

WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

Range 18
Type of Range: Centralized Vehicle (Track and Wheel) Wash Facility.
Type of Vehicles to be Washed: All military track and wheel vehicles. NO POVs.
Location: Angels Road (DF 5690 5620).
Number of Wash Points: 14 and 2 Bird Baths (tank vehicle soak pond).
Facilities: Latrine.
Special Equipment Units Provide: Garden hoses. WARNING: DO NOT DRINK THE WATER.
General: No detergents will be used. No maintenance cleaning will be performed.

Ranges 22 A/B/C
Type of Range: Grenade Launcher Range.
Type of Weapons to be Fired: M203 Grenade Launcher (40mm TPT ONLY).
Location of Range: Angels Road (DF5540 5622).
Number of Firing Points: 4 Per Range.
Number of Targets and Type: Silhouettes, Zero Panels, Window Frames, and Mortar Pits, and Troops in the Open.
Azimuth of Firing Line: 5169mils.
Principle Direction of Fire: 3621mils.
Type of Communications and Location: None.
Facilities: Latrine, Ammunition Point, OIC Stands and Bleachers.
Special Equipment Unit Provides: Radios and PA System.
Communication Requirements: FM/FM or cellular phone secondary
NOTE 1: UNIT AMMUNITION MUST BE INSPECTED PRIOR TO UNIT GOING INTO A HOT STATUS.
NOTE 2: RANGE 22 IS FOUR SEPARATE RANGES (A/B/C/D)
WARNING: Maintenance personnel will notify Range Control Safety prior to going down range.

Range 24
Type of Range: Hand Grenade Familiarization Range.
Type of Weapons to Be Fired: Practice and live hand grenades.
Location: Angels Road (DF 5451 5677).
Number of Firing Points: 3 concrete bunkers.
Number of Targets and Type: None.
Azimuth of Firing line: 5910 mils. Principle Direction of Fire: 3310 mils.
Type Communications and Location: None.
RANGE CONTROL INSPECTOR MUST BRIEF THE RANGE OIC BEFORE UNIT GOES INTO A HOT STATUS.
Special Equipment Unit Provides: 2 FM radios.
General: Using units will fill grenade craters following each range use. Units will stop and fill holes after throwing no more then 75 grenades to prevent creating large holes.
Communication Requirements: FM/FM or cellular phone secondary
WARNING: A 100% accountability of all grenades must be accomplished by the Range OIC prior to filling any craters. Only one grenade will be thrown at a time. If a dud occurs, the OIC will command a check fire, Range Division and EOD will be immediately notified. Training will not proceed until the dud has been eliminated by EOD.

Range 25A
Type of Range: Anti-armor and MK19 Live Fire Range.
Type of Weapons to be Fired: M202 flash (66mm), and Dragon (inert and HEAT ammunition), AT4, LAW, RPG, MK19.
Location: Angels Road (DF 5335 5616).
Number of Firing Points: 4.
Number of Targets and Type: Hard targets.
Azimuth of Firing Line: 4100 mils.
Principle Direction of Fire: 2500 mils.
Left limit - 2200 mils; right limit - 2800 mils.
Dragon Live Fire, MK19.
Number of Firing Points: 2.
Number of Targets and Type: Hard targets.
Azimuth of Fire:
a. Inert rounds: Left limit 2160 mils; right limit - 3030 mils.
b. HEAT rounds: Left limit - 2580 mils; right limit - 3030 mils.
Type Communications and Location: None.
Facilities: Latrine, Ammunition Point, and Bleachers .
General: Each weapon must be fired from the top of the berm.
Special equipment unit provides: 2 FM radios.
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Unit and maintenance personnel will not go down range.

Range 26A
Type of Range: Grenade Launcher Range.
Type of Weapon to be Fired: M203 Grenade Launcher. (HE/ TPT/HEDP)
Location: On-the-Line Road (DF 5227 5602).
Number of Firing Points: 4.
Number of Targets and Type: Metal silhouettes, zero panel, window frame, and hard targets.
Principle Direction of Fire: 2100 mils.
Type Communications and Location: None.
Facilities: Latrine, Ammunition Point, and bleachers.
Special Equipment Unit Provides: PA system and FM radios.
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Unit and maintenance personnel will not go down range

Range 26B
Type of Range: Grenade Launcher Range.
Type of Weapon to be Fired: M203 Grenade Launcher. (HE/TPT/HEDP)
Location: On-the-Line Road (DF5220 5570).
Number of Firing Points: 4.
Number of Targets and Type: Metal silhouettes, zero panel, window frame, and hard targets.
Principle Direction of Fire: 2100 mils.
Type Communications and Location: None.
Facilities: Latrine, Ammunition point, OIC Stand, and bleachers.
Special Equipment Unit Provides: PA system and FM radios.
Communication Requirements: FM/FM or cellular phone secondary
WARNING: Unit and maintenance personnel will not go down range.

Range 33
Type of Range: Rifle Bayonet Assault Course.
Type of Weapons to be used: Plastic M16A1/2 (Ultra-lites) with bayonet.
Type of Ammunition: None.
Location: DF 5760 5660.
Type Communications: None.
Facilities: None.
Special Equipment Unit Provides: Plastic M16's from TASC, bullhorn, and 1 radio, also secondary means of communication.
General:
a. The Rifle Bayonet Assault Course is a range. The using unit must meet all requirements for running a range as stated in this regulation. An OIC and SO are required.
b. All bayonets will be fixed and unfixed on command from a primary or assistant instructor.
Communication Requirements: FM/FM or cellular phone secondary

Range 35
Type of Range: Claymore Range and 25 Meter Zero.
Type of Weapons to be Fired: M18A1 Claymores, M4, M16, pistol, shotgun.
Location: On-the-Line Road (DF 5227 5480).
Number of Firing Points: 4 Claymore and 10 at the 25 meter.
Number of Targets and Type: Ten 25 Meter zero holding frames.
Azimuth of Firing Line: 0004 mils.
Principle Direction of Fire: 1604 mils.
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.
Communication Requirements: FM/FM or cellular phone secondary
NOTE: Range Control Inspector will brief Range OIC before unit can go into a hot status for Claymore.
WARNING: Unit and maintenance personnel will not go down range

Range 37 MOUT (DF 5179 5372)
The Range 37 Urban Combat Training Facility consists of six buildings made of concrete blocks. This MOUT facility is designed to accommodate blank, Simunition (Soap), and provides realistic problem solving situations for leaders and soldiers. The scheduling, use, care, and maintenance of the Range 37 Facility are the responsibility of Range Division. Units will primarily schedule the use of the facility through the Training Resource Conference. Any Active, Reserve, National Guard, or other agency may schedule this MOUT facility as any other facility on Fort Campbell.
NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses. See range manager for direct coordination a minimum of 15 days prior.
Communication Requirements: FM/FM or cellular phone secondary

6-10. Ranges Surrounding the North/South Impact Area

Range 28

Type of Range: Multi Purpose Range Complex (Light).
Type of Weapons to be Fired: All organic weapons (non-dud producing ammunition only).
Location: Intersection of Jordan Springs Road and Normandy Loop Road (DF 3690 5020).
Number of Firing Points: NA.
Number of Targets and Type: 9 AMTCs, 37 THMTGs, 45 IMTCs, and 154 ITMs.
Azimuth of Firing Line: 4500 mils.
Principle Direction of Fire: 6080 mils.
Type Communications and Location: "Class C" phone in tower.
Facilities: Tower, bleachers, enclosed vehicle parking lot, latrine, ammunition loading dock, classroom, mess area, and storage building.
Special Equipment Unit Provides: Binoculars, 2 radio, and protective eye wear for all soldiers when lasers are employed.
General:

a. Range OIC, RSO, and all range personnel will receive an on-site range briefing from Range Division personnel prior to opening this facility.

b. Follow the MPRC (Light) Range SOP provided by Range Division.

NOTE: Range 28 requires Range Fans, Risk Assessment and a Written Scenario of training will be provided to Range Safety 10 working days before training starts.
NOTE: Range OIC and RSO are required to coordinate with Range Manager a minimum of 15 days prior.

Range 29

Type of Range: SOCOM Training Complex.
Type of Weapons to be Fired: All weapons for which the surface danger zone will fit the limits of the impact area.
Location: DF 3210 5600.
Number of Firing Points: NA.
Number of Targets and Type: Assortment.
Azimuth of Firing Line: NA.
Principle Direction of Fire: Determined according to type of weapon.
Type Communications and Location: "Class C" phone in tower.
Facilities: Tower and latrine.
Special Equipment Unit Provides: Determined by type of firing being conducted. Minimum of 2 FM radios.
General:

a. Requests for this range must indicate the type of weapon to be fired before approval will be granted. Safety fans will be submitted to Range Division Safety not later than 10 working days prior to opening the range.

b. The coordinates of the safety maneuver box for Army helicopters are DF 31605663, DF 32105681, DF 3297 5561, and DF 3229 5513. The using unit will mark the right and left sides of this maneuver box and ensure that all firing is conducted inside these limits.

c. Firing may be conducted from any point between the grid coordinates above.

d. Units must conduct a range clearance operation with EOD personnel if they intend to use the maneuver box not later than 72 hours prior to the intended date of use (see AR/DA PAM 385-63).

e. Request for use of this range will be coordinated first with the S3, 160th Special Operations Aviation Regiment (Airborne), then with Range Division, Scheduling Section.

Range 31

Type of Range: Multipurpose Machine Gun Transition Range M60, M240 MG/ 50Cal MG
Type of Weapons to be Fired: M60 , M240, 50 Cal, M21, M24, M14.
Location: Patton Road (DF 3875 5860).
Number of Firing Points: 4-10 Meter Zero Firing Points and 2-Transition Firing Points.
Number of Targets and Type: Basic machine gun marksmanship targets.
NOTE: Range OIC and RSO are required to coordinate with Range Manager a minimum of 15 days prior.
Azimuth of Firing Line: 6320 mils.
Principle Direction of Fire: 4900 mils.
Type Communications: None

Special equipment unit must provide: 2 FM radios.

Range 31B
Type of Range: Multipurpose Machine Gun Transition Range .50 Caliber MG. (same as Range 31).

Range 31 South
Location: DF 3870 5870
100 X 300 meter flat range supports up to 5.56 caliber ammunition. Primarily used for long range zero and supports up to 20 target board positions.
Special Equipment Unit Provides: 2 radios.

Range 40 The Radiator (Forward Area Refuel/Rearm Point)
Location: DF 38505050.
Facilities: 3 concrete re-arm pads, 1 concrete refuel point, and a latrine. Covered Ammo Storage Point (ASP)
Special Equipment Unit Provides: 2 radios.
Type Communications: None

Range 40A
Location: DF 3930 5050
100 X 300 meter flat range supports up to 5.56 caliber ammunition. Primarily used for long range zero and supports up to 20 target board positions.
Special Equipment Unit Provides: 2 radios.

Range 41
Type of Range: Aerial Gunnery.
Type of Weapons to be Fired: 7.62mm door guns; 20mm, 30mm, 50 Cal; 2.75" rockets. TOW inert live fire range.
Location: West Perimeter Road (DF 3100 6210).
Number of Firing Points: NA.
Number of Targets and Type: Hard targets.
Azimuth of Firing Line: NA.
Principle Direction of Fire: 2400 mils.
Type Communications: None.
Facilities: Unit must provide Portable Latrines prior to occupying the range. 4 concrete arming pads; tower; and VIP helicopter pad.
Special Equipment Unit Provides: 2 radios.
General: Special safety instructions for the use of this range are listed in chapter 13 (Aerial Gunnery). It is imperative that strict compliance with the safety criteria for operating this range is ensured. Failure to comply could cause serious injury to personnel on adjacent ranges. Unit provides protective eye wear for all soldiers when lasers are employed.

Range 42 A/B/C Infantry Platoon Battle Course Complex.
Type of Range: 42A Platoon Defense, 42B, Movement to Contact, 42C Convoy Live Fire Type of Weapons to be Fired: Infantry platoon organic weapons (except 40mm HE and HEDP) and selected support systems (i.e., attack helicopter weapons systems, DS artillery, etc.).
Location: Patton Road (DF 3750 6150).
Number of Firing Points: NA.
Number of Targets and Type: Hard targets; portable infantry targets available from Range Division on request.
Azimuth of Firing Line: NA.
Principle Direction of Fire: All firing will be oriented down range on a general azimuth of 3800 mils.
Type Communications: None.
Facilities: AAR site. Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: Radios and protective eye wear for all soldiers when lasers are employed.
General:

a. It is imperative that strict compliance with AR/DA PAM 385-63, chapter 19 (Live Fire Exercise), is ensured. Failure to comply could cause serious injury to personnel on adjacent ranges.

b. All machine guns fired in support of maneuvering troops will employ limiting stakes and have an SDZD approved by Range Division 10 working days prior to use.

c. Firing may be conducted from any point within the maneuver box provided all projectiles fall within the SDZD.

Range OIC and RSO see range manager for direct coordination a minimum of 15 days prior.

Range 44

Type of Range: Assault Course.
Type of Weapons to be Fired: M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun.
Location: Killebrew Road (DF 4057 5352).
Number of Firing Stations: 5
Type of Targets: Electrical pop-up targets (portable).
Principle Direction of Fire: This course consists of eight firing stations each having a different azimuth of fire. Left and right boundaries are marked for each firing station.
Type Communications: None.
Facilities: AAR site. Unit must provide Portable Latrines prior to occupying the range. Quick Fire Range, Vault and Fight Range, Destiny Doorway Range, Rendezvous Challenge Range, Shooting House.
Special Equipment Unit Provides: 2 FM radios.
General:

a. All units using Range 44 must make arrangements for the Range OIC and SO to receive a safety briefing from Range Manager not later than 15 working days prior to using Range 44/44A. Range 44 Complex and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.

Range 44C/D

Type of Range: Live Fire Shoot House Flat Range.
Type of Weapons to be Fired: M4, M16, M249 SAW, M60 MG (blank fire only), pistol, and shotgun 6-9 bird shot.
Location: Off Killebrew Road (44C-DF4068 5300).
Type Communications and Location: None.
Facilities: Latrine and Ammunition point.
Special Equipment Unit Provides: PA system and FM radios.
NOTE: Range OIC and RSO are required to read and comply with Range Instructions for Live Fire Shoot Houses.
Range OIC and RSO see range manager for direct coordination a minimum of 15 days prior.

Range 44F

Location: DF 4145 5220
100 X 300 meter flat range supports up to 5.56 caliber ammunition. Primarily used for long range zero and supports up to 20 target board positions.
Special Equipment Unit Provides: 2 radios.

Range 45

Type of Range: MOUT Collective Training Facility (Craig Village).
Type of Weapons to Be Used: All weapons organic to an infantry company.
Type of Ammunition: Blanks and simmunition only.
Location: Mabry Road (DF 46515360). Craig Village also includes the part of Training Area 25 east of Piney Fork Creek and South.
Number of Firing Points: NA.
Number of Buildings and Type: 15 buildings, to include jails, schools, churches, banks, apartment houses, and barracks.
Facilities: None.
Special Equipment Unit Provides: 2 FM radios.
General:

a. Opening Procedures. Not later than 24 hours prior to use, the unit OIC will go to Range Division during duty hours (0730-1600) to accompany an inspector on an initial inspection of Craig Village. Units may contact

b. Range Division inspectors at 798-3414 to coordinate an initial inspection time. The inspection will include all buildings and the area 100 meters from the buildings. All items will be inventoried and the condition of the items will be noted. Upon occupying the facility, the OIC will contact Range Control by telephone or radio and request to open the facility.

c. Closing Procedures. Craig Village must be closed with Range Division prior to the unit leaving the facility. The OIC will call Range Division and request an inspection and clearance.

d. Training Aids/Munitions. Units are encouraged to make maximum use of training aids/munitions in Craig Village for the conduct of MOUT training. However, certain restrictions will apply:

(1) No firing ports or "mouse holes' will be constructed by the using unit. Firing ports and "mouse holes" are already precut. If additional firing ports/mouse holes are desired, they will be coordinated with Range Division.

(2) Only scrub foliage or saplings less than 4 inches in diameter of the following types of trees may be used for camouflage: sassafras, sumac foliage, eastern red cedar, and pines. No other trees will be cut or damaged without prior approval of Range Division and the Fort Campbell Forester.

Range 46

Type of Range: Multipurpose Training Range Tank Gunnery (TP)/TOW inert/.50 Caliber Machine Gun Qualification.
Type of Weapons to be Fired: TOW and tank (all systems) and machine gun up to .50 caliber.
Type of Ammunition: TP projectiles employing inert warheads.
Location: Artillery Road (DF 38505567).
Number of Firing Points: 4.
Number of Targets and Type: 3 AMTCs, 14 stationary targets, 16 portable.
Facilities: Tower, latrine, and ammo loading dock. Range 46 Complex and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.
Special Equipment Unit Provides: Armor units will provide engineer equipment to restore berms and roads (dozer, dump truck, front loader, etc.), 2 FM radios.
General: All units using Range 46 will coordinate with Range Division Live Fire 7 to monitor their training and provide briefings on the equipment 10 working days prior to use.
Range Waivers: On file (see appendix C).
Range OIC and RSO see range manager for direct coordination a minimum of 15 days prior.

Range 47

Type of Range: Multipurpose Gunnery (MK19).
Type of Weapons to be Fired: MK19/MK47 machine gun.
Type of Ammunition: TPT, HE, HEDP
Location: Artillery Road (DF 38925548).
Number and Type of Targets: 20 (hard).
Principle Direction of Fire: 3500 mils.
Facilities: Ammunition Point.
Special Equipment Unit Provides: 2 FM radios and PA system.
NOTE: Do not train with combat ammo at ranges less than 310 meters.

Range 51 (5th Special Forces Group) Complex

Type of Range: Breaching Facility, Steel and Ballistic Rubber Shoot House, and Flat Range.
Type of Weapons to be Fired: M16, M4, M249, M240, M60, M2, M203 (TPT ONLY).
Location: Buckner Trail. TA 47 (DF 33105382).
Number of Firing Points: 25 meter to 100 meter Flat Range has 30 firing points.
Type Communications: None.
Shoot House is a two story, eight room, two hallway, three staircase, two roof entries, and multiple repelling stations on the roof training facility.
Breaching Facility consists of heavy wall breaching bay, fence and gate breaching bay, door and window bay, and light wall breaching bay.
Future ranges are 1500 meter Unknown Distance Range, 1000 meter Known Distance Range, Sniper Tower, and a 25 meter zero range.

Range 52
Type of Range: Movement to Contact Course (Platoon).
Type of Weapons to be Fired: May employ all organic platoon weapons, except HEAT rockets and 40mm HE grenades.
Location: West Perimeter and Red Diamond Road. TA 45 (DF 31005810).
Number of Firing Points: NA.
Number of Targets and Type: TOMI style targets. Range 52 Complex and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.
Characteristics: 1,000m in length.
Principle Direction of Fire: 1600 Mils.
Type Communications: None.
Facilities: AAR site. Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: 2 radios.
General: Strict compliance with AR/DA PAM 385-63.

Range 53
Type of Range: Mini MOUT.
Type of Weapons to be Fired: M4, M16, M249, M240MG, M60MG, M203TPT, AT-4 sub-caliber.
Location: West Perimeter and Red Diamond Road. TA 45 (DF 31205940).
Number of Firing Points: NA
Number of Targets: Throw Downs
Range 53 Complex, vehicle and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.
Characteristics:
Principle Direction of Fire: 1600 Mils
Type Communications and Location: None
Facilities: Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: 2 radios.
General: Strict compliance with AR/DA PAM 385-63.

Range 54
Type of Range: Movement to Contact.
Type of Weapons to be Fired: All organic squad/platoon weapons, except HEAT rockets and 40mm HE grenades.
Location: West Perimeter and Red Diamond Road. TA 45 (DF 30106070).
Number of Firing Points: NA.
Number of Targets and Type: TOMI style system and Caswell targets.
Range 54 Complex and battery request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager personnel for coordination. Range fans, scenarios and risk assessment must be provided to range safety not later than 10 working days prior to training.
Characteristics: 1,500m in length, may be fought along two approaches:

a. Grenade capable bunkers.
b. Grenade capable ammunition bunker.

Principle Direction of Fire: 1900 Mils.
Type Communications: None.
Facilities: AAR site. Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: 2 radios.
General: Strict compliance with AR/DA PAM 385-63.

Range 55A/B
Type of Range: 55A Deliberate Attack Trench System, 55B Deliberate Attack Trench System.
Type of Weapons to be Fired: All organic company weapons, except HEAT rockets and 40mm HE grenades. May employ DES. Grenade capable bunkers, CALFEX capable.

Location: West Perimeter Road. Range 55 (DF 34306300).
Number of Firing Points: NA.
Number of Targets and Type: TOMI Target System.
Range 55 battery requests must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager for coordination. Range fans, scenarios and risk assessment must be provided to Range Safety not later than 10 working days prior to training.
Range 55 has a trench system with grenade capable bunkers.
Principle Direction of Fire: 3100 Mils
Type Communications: None.
Facilities: AAR site. Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: FM 2 radios.
General: Strict compliance with AR/DA PAM 385-63.

Range 55C
Location: DF 3440 6220
100 X 300 meter flat range supports up to 5.56 caliber ammunition. Primarily used for long range zero and supports up to 20 target board positions.
Special Equipment Unit Provides: 2 radios.

Range 56
Type of Range: Multinational Force Observance Training Site, staging and AAR Convoy Live Fire site.
Type of Weapons to be Fired: None.
Location: Intersection of Angels, Patton, and Artillery Roads. TA 40 (DF 39755580)
Number of Firing Points: None.
Type Communications: None.
Facilities: Unit must provide Portable Latrines prior to occupying the range.
Special Equipment Unit Provides: 2 FM Radios.

Demo 11 (Inactive)

Demo 39
Type of Range: Demolition Training Range.
Type of Munitions: Mines and demolition items.
Location: Jordan Springs Road. TA 30 (DF 40505150).
Type Communications: None.
General:
a. Maximum explosives to be used in one detonation is 200 pounds.
b. At night, each detonation is restricted to 40 pounds of explosives.
Special Equipment Unit Provides: 2 radios and road guards.
Demo 39 request must be provided to Range Manager 15 working days prior to date of firing. Range OIC/Safety must conduct a range walk with Range Manager for coordination. Range fans, scenarios and risk assessment must be provided to Range Safety not later than 10 working days prior to training.
c. Units requesting to conduct subsurface demolition must have heavy equipment on hand to cover craters and to restore area to its original state.

Range B-7
Type of Range: Multipurpose NBC Range/Area.
Type of Weapons to be Used: CS powder.
Location: DF 58505430.
Number of Firing Points: None.
Facilities: 2 CS chambers, CS tank filling storage galvanized steel culvert, administrative building, "Class C" phone, bleachers, latrine, parking area, and 4 dirt and sand bagged bunkers.
Special Equipment Unit Provides: One FM radio.
General: Coordination for the chamber will be done at Range Division Safety at building 6087. The OIC of the facility will be an E-6 or above and the chamber NCO will be NBC MOS qualified. Completion of a shortened opening procedures form by the OIC is required.

Leineweber Tactical Unmanned Aerial Vehicle Facility (LTUAVF)

Location: DF 45212 53201 in training area 19 and air sector G.

The Leineweber Tactical Unmanned Aerial Vehicle Facility (LTUAVF) consists of one building, admin office area and hanger/bay area, parking or fenced area, and taxiway/runway areas to include 100 meters outside these areas. This facility is designed for use by one unit at a time with limited amount of both admin/office and hanger/bay areas.

The scheduling, use, care, and maintenance of the Leineweber TUAVF are the responsibility of Range Division. Units will primarily schedule the use of the facility through the Training Resource Conference. Any Active, Reserve, National Guard, or other agency may schedule this facility as any other facility on Fort Campbell. Coordination will be accomplished a minimum of 10 working days prior to training. Range OIC and or RSO will be required to clear the facility with range division. LTUAVF SOP will provide procedures in detail.

Chapter 7
Range Maintenance and Modernization

7-1. Purpose

This chapter outlines both unit and installation staff responsibilities for range maintenance, modification, modernization and construction.

7-2. References. AR 350-19 (Army Sustainable Range Program).

7-3. Range Maintenance Responsibilities

a. Range Division. Range Division will:

(1) Ensure all Fort Campbell training facilities are operational.

(2) Schedule DS/GS maintenance for all ranges. The Range Scheduling Office will be responsible for scheduling maintenance dates. These dates can be obtained from Range Division Scheduling, which will be input into RFMMS. Additionally, scheduled range maintenance days will be identified to units at least 180 days in advance.

(3) Report unscheduled maintenance requirements as they occur and their impact on training to the ACoS G3.

b. Range Contractor. The Contractor will:

(1) Schedule and perform all organizational and direct support/general support (DS/GS) target maintenance.

(2) Inspect all ranges daily for cleanliness and damage. Ranges used during the day will be inspected prior to the unit being cleared from the range.

(3) Provide materials required to repair structures in response to Range Division requests.

(4) Accomplish all grass maintenance requirements for ranges within the Small Arms Impact Area (except on target berms and ditch banks which cannot be safely mowed) and also around the North and South Impact Areas.

7-4. Range Modernization/Construction responsibilities

a. Range Modernization is a continuous and challenging process that requires proactive management and comprehensive planning to effectively develop and improve Fort Campbell's ranges.

(1) Fort Campbell's Range Modernization Process (RMP) planning requires continuous coordination among members of the Commander, 101st ABN DIV (AASLT) and Fort Campbell, KY staff, Garrison staff, and tenant units. ACoS G3 leads a steering committee to support range modernization which includes but is not limited to personnel from: ACoS G3, DRMO/GRMO, DPTMS, Range Division, DPW, DOIM, Command Safety, and tenant units.

(2) The RMP consists of a Range Development Plan (RDP) and the Mission Resource Board (MRB).

- Fort Campbell's RDP is a prioritized list of projects, most likely long term requiring substantial funding.
- Fort Campbell's MRB is a resourcing strategy board made up of Fort Campbell Commanders who prioritize training resources, most likely internally funded projects. G3 Training conducts a semi-annual board to prioritize live, virtual, and constructive training requirements.

(a) **Range Modernization Process Checklist** - Fort Campbell's process is organized to clearly identify and define the significant details (training, design, funding, time) of projected ranges (Table 7-1).

General	Training
Requesting Unit, Agency, or Organization	Requirement Reviewed and Validated
Date of Original Submission (MMM/YR)	New Capability, Replace Existing, Revitalization
Prioritization and / or Fiscal Start Year	Alternative Analysis conducted
Design and Funding	Army Standard Range / Category Code
Confirm and Validate Location	**Sustainment and Time**
Approximate Cost to Design - $k to $k	Personnel required to operate range
Approximate Cost of Project - $k to $k	Sustain $ and / or World-wide Contr. Logistic Spt $
Funding Type (MCA/UMMCA/OPA/OMA/SRM)	Length of time to acquire / build - # of months
1391 Required? 1391 Completed (MMM/YR)	Projected Start and Completion Date MMM/YR

Table 7-1 MRB Checklist

(b) **Semi-Annual Range Status Report** - Range Division will provide the DPTMS and ACoS G3 an up-to-date submission of the information contained in a spreadsheet, Table7-2, at the beginning of each semi-annual period NLT the first week of JAN and JUL. The data will allow the range steering committee to understand the current range status and the implications on range-related projects and funding.

Semi-Annual Range Status Report
Range # and Status (Green, amber, red)
Type of Range
Primary User / Area
Total # of FPs and Total # of Operational FPs
Limitations if any / other notes
Range Usage FYXX (RFMMS) %
of Personnel Required to Operate
Previous Construction - MMM/YR
Item(s) constructed / replaced / revitalized
Projected Construction - MMM/YR
Recommended construction / replacement / revitalization
Projected Annual Maintenance - $k

Table 7-2 Semi-Annual Range Status Report

(c) **Range Steering Committee (RSC)** - The RSC serves to provide input to the Senior Mission Commander (SMC) on the future composition and capabilities of Fort Campbell Ranges. The RSC is comprised of representatives from all MSCs on the installation as well as the Installation Range Officer, and any other interested agencies. All brigade-size or larger units will nominate two individuals (normally one field grade officer and one senior NCO) from their units to serve as members. The RSC meets monthly or when necessary, and is co-chaired by ACoS G3-Training and Chief, Range Division.

(d) **Range Requirements Nomination** - Fort Campbell units or organizations will identify requirements for new range construction or significant range modifications by submitting an FC Form 6 to the RSC with the below information, Table 7-3.

Range Nomination FC Form 6
Requesting Unit, Agency, or Organization and Date
Type of range or Capability Requested
Training Requirement
New Capability, Replace Existing or Revitalization
Enduring Capability
Approximate cost of resource, if known - $k
Future Site, if chosen

Table 7-3 Range Nomination

(e) **MRB Process** - G3 will ensure that all subordinate units and installation tenant elements play an integral part in defining the requirements for range modernization (flowchart 7-4).

1. RSC - Review and validate the nominated requirement. The RSC if necessary will develop the concept of the range project to fulfill the requirement and compare the requirement to existing doctrinal range requirements published by the Army Training Support Center (ATSC). The RSC recommends prioritization of various projects to the SMC / Installation Commander.

2. ACoS G3 - Evaluate nominated resource with existing and future resources on the MRB. Validate resource and consider USRs, QTBs and future deployments.

4. DPTMS - Review for effectiveness / economical purposes - sustainment costs. Range Division validate design, and approve requested site with SDZs or selects location with SDZs.

5. Garrison Resource Management Office (GRMO) and Division RMO - Validate required funding for the nominated resource and categorize funding as either Sustainment, Restoration, and Modernization (SRM); Operation and Maintenance, Army (OMA); Other Procurement, Army (OPA); Unspecified Minor Military Construction, Army (UMMCA); or Military Construction, Army (MCA).

6. Directorate of Public Works - Process the proposed site through the Siting Board (environmental, safety, etc) and if project is UMMCA or MCA develop 1391 for Garrison Commander's approval.

7. ACoS G3 - Concur / Non-concur.

8. Garrison Commander - Concur / Non-concur and Approve / Disapprove 1391.

9. Chief of Staff - Concur / Non-concur.

10. DCG(O) or CG - Approve or disapprove, if approved place resource in MRB.

(3) **Annual Range Modernization Process, 7 Steps** - The RMP is continuous effort throughout the year, however all ranges to include projected and proposed are thoroughly reviewed annually o/a JUL-AUG for the RDP submission/update. Range and training land modernization requirements analysis process is divided into seven sequential steps with corresponding sections.

(a) Doctrinal Analysis - Step 1
(b) Operational Analysis - Step 2
(c) Sustainability Analysis - Step 3
(d) Range Complex Master Plan - Step 4
(e) Alternative Analysis - Step 5
(f) Range Development Plan - Step 6
(h) Funding - Step 7

Step 1. Doctrinal Analysis. G3 Training calculates the installation load and applies drivers and standards to determine the total doctrinal requirement for all Fort Campbell users. Installation load or throughput determined by TC25-1, TC 25-8, and TC 25-8. Drivers will include the Combined Arms Training Strategy, service school programs of instruction (POI), projected reserve component usage, effects of unit deployments, METL, and standards in training.

Step 2. Operational Analysis. DPTMS and G3 Training are responsible for determining the unconstrained operational requirements for ranges and training land on the installation. The following are key components to the operational analysis to be updated semi-annually (Table 7-2): Identification of assets, Condition, Utilization and assets delta (shortfalls), which is the difference in our total doctrinal requirements and our current assets. The operational analysis determines the difference between the doctrinal requirements provided by G3 Training in Step 1. Range Division will provide current range and training land assets, and condition of those assets and their utilization rates (Table 7-2). G3 Training analyzes and applies information derived from the USR, QTB/ITB, and Training Surveys.

Step 3. Sustainability Analysis. The DPTMS, DPW, and G3 are responsible for applying constraints into the planning process, using operational overlays to analyze elements not considered during the doctrinal or operational analysis. Specific considerations will include but not limited to requirements generated from environmental, safety, munitions, and facility management plans:

- Real Property Master Plan (RPMP)
- Integrated Natural Resources Management Plan (INRMP)
- Integrated Cultural Resources Management Plan (ICRMP)
- Rare, Threatened, and Endangered Species Management Plan
- Range security assessments, Aviation safety, Economic impacts
- Utility and infrastructure, Information technology, Encroachment

Step 4. Range Complex Master Plan. The RCMP depicts Fort Campbell's current range and training land assets, general siting of future range complex project requirements, training requirements, and constraints provided that may impact ranges or training lands. The RCMP provides source data for the installation RPMP and RDP. It is used annually to review and update range and training land assets and category codes reflected in the installation's real property data base.

Step 5. Analysis of Alternatives Study. RSC applies AAS to ensure full utilization of the ranges before initiating or attempting to justify new requirements. An AAS will be conducted for each range modernization and land acquisition project identified in the unconstrained operational requirement. The purpose of an AAS is to evaluate alternatives to new construction and land acquisition and to correct overages and shortages. Each AAS will describe the proposed action and include a list of alternatives. A separate AAS will be prepared for land acquisition.

Step 6. Range Development Plan. Fort Campbell's RDP is a prioritized list of range modernization and land acquisition projects required to support training requirements of all units assigned to Fort Campbell. All range modernization/ land acquisition projects in the RDP will include an AAS. Annually, the SMC will review and approve the RDP and forward it to FORSCOM Commander for validation prior to a new FY. The RDP will be given to the DPW to be incorporated into the Real Property Master Plan. The Garrison Commander will forward the approved plan through the appropriate region to HQ IMA. All new requirements or projects will be appropriately staffed.

Step 7. Funding.

a. Projects listed in the RDP will most likely meet the MCA dollar threshold. MCA requirements that require validation in the Army Master Range Plan are classified as either New Mission or Revitalization and are allocated against one of two Program Executive Groups (PEG) for funding. The RTLP Mandatory Center of Expertise (MCX) will provide cost estimates for UXO clearance associated with range modernization projects as part of the planning charrette process.

b. Monitoring, reporting and briefing the Range Modernization Process is a continuous, methodical, and collaborative effort.

(1) Requests will occur throughout the year and it is important to follow the aforementioned nomination process in order to inform the Commanders and staff of projects requiring timely decisions.

(2) Reporting the Range Modernization Process will occur throughout year. The MRB will be briefed two times a year through the Mission Resource Board. The Mission Resource Board will be briefed in OCT and MAY and the Range Development Plan will be briefed in AUG and sent to FORSCOM for validation. The future projects on Table 7-1 and semi-annual range status updates on Table 7-2 are the foundation of these reports and briefings.

Chapter 8
Small Arms, Grenades, and Light Anti-Armor Weapons

8-1. References

a. AR/DA PAM 385-63 (Range Safety).
b. CAM Regulation 700-2 (Conventional Ammunition).
c. FM 23-11 (90mm Recoilless Rifle, M67).
d. FM 3-23.25 (Light Antiarmor Weapons).
e. FM 3-22.27 (MK19 40mm Grenade Machine Gun MOD)
f. FM 3-23.30 (Grenades and Pyrotechnic Signals).
g. FM 3-22.31 (40mm Grenade Launcher M203).

8-2. General

a. Report all accidents and incidents to Range Control immediately when able, but no later then 30 minutes.

b. This chapter outlines the policies and procedures to be followed by Range OICs and SOs when operating firing ranges at Fort Campbell. It does not supersede or replace any requirements delineated by other Fort Campbell, FORSCOM, or Army regulations.

8-3. Commanders

The firing unit commander is responsible for safety during all phases of a firing exercise under his control. Commanders, battalion level and above of units using small arms, grenades, or light anti-armor weapons ranges, will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC and RSO to Range Division. An example of a certification list is at Figure 3-1. This list will be updated as required.

8-4. Range Officer in Charge (OIC) procedures

a. Before Operating a Range, OICs will be thoroughly familiar with DA PAM 385-63 chapters 3 – 7, and 19 and:

(1) Submit all target fabrication requests to Range Division (ATTN: Carpentry Shop) not later than 10 working days prior to the date of intended use. All requests will be dealt with on a first-come-first-served basis. Request any portable electrical targets, accessories, and/or target carriers from Range Division, contract maintenance branch, not later than 10 working days prior to the date of intended use.

(2) Contact the battalion S3 or unit training NCO, and verify that Range Division Safety has an updated unit certification roster and the OIC and their RSO are certified to run the range.

(3) Ensure troop and transportation resources are available to pick up and install requested items from Range Division.

(4) Sign for and pick up all required range operation equipment (paddles, clearance sheet, flag, etc.) from Range Division, contract maintenance branch, one working day prior to the date of intended range use.

(5) Ensure units schedule a computer operator 10 days prior to range.

b. During Operation of the Range, OICs will --

(1) Ensure they have the proper regulations and Surface Danger Zone Diagram (SDZD) on hand.

(2) Request permission to open the range through range safety firing desk.

(3) Ensure the range communications net (radio and phone) is monitored continuously.

IN THE EVENT OF A COMMUNICATIONS BREAKDOWN BETWEEN THEIR RANGE AND RANGE CONTROL, OIC's WILL INSTITUTE A MANDATORY CEASE FIRE/CHECK FIRE IMMEDIATELY UNTIL COMMUNICATIONS ARE REESTABLISHED. CELLULAR PHONES WILL NOT BE USED WEST OF GRANT ROAD AND INDIAN MOUND ROAD AS THE PRIMARY OR ALTERNATE MEANS OF COMMUNICATION WITH RANGE CONTROL.

(4) Ensure a communications check is made with Range Control (radio frequency 75.25/48.50) every hour. Incoming or outgoing calls with Range Control may be considered an effective communications check in lieu of calling during any one-hour period.

(5) Ensure helmets and hearing conservation devices are worn by all personnel on or near the firing line.

(6) Personnel will not use Privately Owned Vehicles (POVs) to travel to and from or visit training at Fort Campbell training areas or small arms ranges west of Market Garden Road. All civilians and range workers must use government vehicles while on the range or in the training areas. The only exceptions for POV usage are:

(a) 5th Special Forces Group (SFG) for UW training and 160th Special Operations Aviation Regiment for Range 29 training as auxiliary transportation. Units will notify Range Division 24 hours prior to conducting training requiring POVs and/or rental vehicles on a range/training facility.

(b) Units participating in the Saturday Proficiency Jump Program. G3 Air will notify Range Division prior to training being conducted, with the approximate number and location of vehicles.

(c) Contract personnel will only be authorized POV usage when government vehicles are not available and only to conduct official business. The contracting agency will provide a memorandum for record detailing location, number of vehicles, and personnel by name that the passes are to be issued to. Passes will be issued by Range Division Safety 24 hours a day if memorandum is on file.

(d) Recreational activities (i.e., hunting, trail riding, etc.) in designated areas only and with the appropriate pass from MAR, Hunting and Fishing Branch.

(e) Civilian vehicle traffic is authorized to transit through the training areas on named roads only. Civilian vehicle traffic going to and from work (i.e., soldiers/civilians living in Dover or Boiling Springs that use paved back roads) is authorized. Additionally, farm vehicles are authorized as long as the farmer is traveling to and from the Agricultural Lease (AGLEASE) fields. Civilian vehicle traffic on secondary roads is prohibited.

(f) The Combat Aviation Brigades have approval to conduct SERE training using a UW scenario with no more than five POVs. The senior instructor/OIC of the training exercise will control POV usage. The senior instructor will notify Range Division five working days prior to each event of the date and time group (DTG) of use.

(7) Remember that Range Control computer operators are the only authorized personnel to operate computers.

(8) SUSPEND FIRE IMMEDIATELY WHEN AN UNSAFE ACT OR CONDITION OCCURS.

(9) Conduct range operations in accordance with appropriate regulations, AR 385-63, DA PAM 385-63, Cam Regulation 700-2, FMs, TMs, and unit range SOP.

c. When Closing the Range, OICs will --

(1) IAW AR 710-2 chapter 2, section VIII, Ensure that all ammunition and residue are returned to the ammunition supply point (ASP). Inspect all personnel for ammunition and residue before they leave the range.

(2) Contact Range Control and request an inspector. If the range is to be closed after normal duty hours, coordinate an inspection for early the following day. Ensure that all of the items listed on the range inspection sheet are ready for inspection.

(3) Conduct a joint clearance inspection with the Range Inspector. Correct any deficiencies noted on the FC Form 1501 (Range Packet) and ensure the inspector signs it.

(4) Turn in all targets, target accessories, and other range items to Range Division once the inspector signs the FC Form 2496 relieving the OIC of responsibility for the range. If the range is cleared after normal duty hours, OICs will ensure their hand receipts are cleared not later than the first working day after completion of range firing.

8-5. Range Safety Officer (RSO) requirements

The RSO will be thoroughly familiar with DA PAM 385-63 chapters 3 – 7, and 19. He will also ensure:

a. A copy of AR 385-63, DA PAM 385-63, CAM Regulation 700-2, FC Form 4162, the appropriate FM/TM pertaining to the weapons being fired, the unit range SOP, and this regulation are on hand. Additional checklist can be found in TC 25-8 (Training Ranges) appendix C.

b. There is a memo on file at Range Division giving the name of the OIC and RSO. Verify they have been certified by the battalion commander.

c. All personnel on the range are briefed on range safety, operation of the range, and ammunition handling.

d. There is a minimum of one assistant safety NCO for every four firing points and all assistants are briefed on their duties. The assistant safety NCOs will also be familiar with the safety regulations.

e. All personnel wear helmets and earplugs and for simmunition wear all appropriate protective equipment at all times.

f. A eagle first responder, qualified combat lifesaver or medic as appropriate, with a medical aid kit and appropriate communication equipment is present.

g. An ambulance or similar evacuation vehicle(s) with communication equipment as required, and assigned driver(s) are present at each firing range except ranges within the Small Arms Impact Area. Ranges in the Small Arms Impact Area will receive ambulance assistance from Blanchfield Army Community Hospital (BACH).

h. All soldiers are cautioned that poisonous snakes, poisonous spiders, wasps, bees, ticks, scorpions, and other dangerous animals and insects may be found on any range during the warm weather months.

i. The impact area is clear of personnel and equipment prior to opening fire.

j. Each weapon is inspected by a designated individual to see that chambers and barrels (tubes) are free from obstructions.

k. No one goes forward of the firing line during firing.

l. Weapons are pointed up and down range at all times when on the firing line.

m. The right and left limits of the range are visible and the troops are made aware of their locations.

n. Only those targets in the firer's lane are engaged by an individual. Firing across lanes or in another lane is prohibited.

o. Ammunition is properly stored and handled and there is no smoking around ammunition, explosives, or flammables. A fire extinguisher will be readily available (refer to AR 385-64, DA PAM 385-64, and CAM Reg 700-2).

p. The range flag, supplemented by a blinking red light after sunset, is properly displayed. A red smoke grenade is available for use in case of air MEDEVAC. (Range flag and targets are issued by contracted range maintenance) A red smoke grenade will not be required for ranges in the Small Arms Impact Area.

q. Road guards, properly instructed in their duties and/or appropriate barriers with signs, are posted to cover all normal approaches to a hot range.

r. Dual means of communications are established and maintained with Range Control.

s. Permission to open (fire) is obtained from Range Division Safety Firing Desk. Relay a "DRY" status to Range Division if a cease fire of 30 minutes or more is anticipated.

8-6. Hand grenades

(DA PAM 385-63, chapter 7) (FM 3-23.30)

a. Fragmentary and offensive hand grenades will normally be fired at Range 24 (Grenade Qualification Range) and Ranges 17, 27, 42, 52, 54, and 55 (in designated grenade bunkers and only one grenade will be thrown at a time).

b. An immediate check fire will be initiated for a dud/misfired hand grenade and Range Control and EOD will be notified. The range will stay in check fire status until the dud/misfire is cleared by EOD.

c. All personnel within 150 meters of the target area must wear helmets and flak vests.

d. OIC's and SO's will be briefed and sign statement that they have read and understand the procedures outlined on the Hand Grenade checklist (Figure 8-1).

8-7. 40MM grenades - M203/MK19/MK47/M79

(FM 23-31/FM 23-27)(DA PAM 385-63, chapter 7)

a. Due to the high dud rate, M203 and M79 (HE/HEDP) grenades can only be fired on Ranges 26A and 26B on Fort Campbell. The range OIC and RSO will ensure targets closer than 130 meters will not be engaged with 40mm HE/HEDP ammunition.

b. M203 (TP) grenades can be fired into all impact areas, provided safety fans are constructed in accordance with DA PAM 385-63 are submitted to Range Control at least 10 working days prior to the date of use.

c. MK 19 grenades may be fired on Range 25A and Range 47. Targets will be engaged only at ranges greater than 310 meters with HE ammunition. Comply with firing restrictions in DA Pam 385-63, chapter 7.

8-8. Light anti-armor weapons

(FM 3-23.25) (DA PAM 385-63, chapter 8)

a. Range 1 is a light anti-armor qualification range for the 9mm and 35 mm sub caliber device.

b. Range 25A is a light anti-armor familiarization, M72 LAW, AT-4 HE, MK19, 83mm, and sub-caliber range.

c. Range 35 is a M18A1 Claymore Range. All mines will be fired on the right side of the range.

d. Light anti-armor weapons may be fired into the North or South Impact Areas provided a safety fan constructed in accordance with DA PAM 385-63 is submitted 10 working days prior to firing date.

8-9. Armor piercing incendiary

No armor-piercing incendiary (API) will be fired on ranges that employ mechanical target mechanisms. API is restricted to hard targets to avoid excess damage and to avoid range repair cost.

Chapter 9
Anti-Tank Guided Missiles

9-1. Purpose

This chapter defines and emphasizes portions of the references in paragraph 9-2.

9-2. References

a. AR 385-63, DA PAM 385-63 (Range Safety).
b. CAM Regulation 95-1 (Fort Campbell Aviation Policies and Procedures).
c. CAM Regulation 700-2 (Conventional Ammunition).
d. FM 3-23.25 (Light Antiarmor Weapons).
e. FM 23-34 (TOW Weapon System).
f. TC 23-24 (Dragon Medium Antitank/Assault Weapon System M47).

9-3. General

a. Report all accidents and incidents to Range Control immediately when able, but no later then 30 minutes.

b. Range Division equipment (Range Packets) will be picked up and returned during normal operating hours. Equipment may be signed for and picked up one working day (24 hours) in advance (Monday-Friday). Equipment will be turned in within 24 hours of completion or the next normal working day (Monday-Friday).

c. The range communications net will be monitored continuously. In the event of a communications breakdown between firing range/position and Range Division, a mandatory cease fire will be initiated until communications are reestablished. Communications checks will be made with Range Division once every hour. Incoming or outgoing calls may be considered an effective communications check in lieu of calling Range Division during any one-hour period.

9-4. Responsibilities

a. Commanders. The firing unit commander is responsible for safety during all phases of a firing exercise under his/her control. Commanders (battalion level and above) of units equipped with anti-tank guided missile systems, will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC and RSO to Range Division. This list will be updated as required.

b. Range OIC and RSO. For all Anti-Tank Guided Missile ranges firing TP/TP-T or HE the required Range OIC will be at the rank of SFC or above. The Range SO will be at the rank of SSG or above. Range OICs and SOs will ensure--

(1) Command certified safety personnel in accordance with AR/DA PAM 385-63 determine safety limits for firing data and develop Surface Danger Zone Diagram (SDZD) 10 working days prior to firing.

(2) All target locations are within prescribed limits of fire.

(3) A current copy of AR/DA PAM 385-63, CAM Regulation 700-2, the appropriate FMs/TMs pertaining to the weapon(s) being fired, a risk management worksheet for a specific range operation and this regulation are on hand.

(4) A memorandum is on file at Range Division (stating the name of the OIC and RSO and verifying that they are command safety certified) and signed by their battalion commander. An example memorandum is at Figure 3-1.

(5) Personnel on the range have been briefed on firing safety, operation of the firing position, misfire/hang fire procedures, and ammunition handling.

(6) All personnel have earplugs prior to firing, and that they wear them during firing.

(7) A qualified medic with a medical kit is present.

(8) An ambulance or similar evacuation vehicle(s) and its assigned driver(s) will be present at each firing point. If multiple firing points are being used by the same unit, a centralized aid man with vehicular evacuation capability will suffice for evacuation purposes provided all firing positions are located within a 2000 meter radius.

(9) A scarlet streamer (flag) is flown when firing. A red flashing warning light will be positioned in the vicinity of the guns or firing points after sunset.

(10) All road guards are properly instructed in their duties and/or appropriate barriers with signs are posted to cover all normal approaches to a hot firing point or range (refer to para 3-15).

(11) Dual means of communications are established and maintained with Range Division.

(12) Helmets are worn by all personnel within 50 meters of the firing line.

9-5. Hellfire missiles

Hellfire missiles can only be fired under the most stringent controls due to the size of the surface danger zone requirements. Prior to firing Hellfire missiles, firing procedures will be developed and published as a memorandum of instruction (MOI). Hellfire missiles can be fired in the vicinity of Range 40 into the North and South Impact Areas provided there is adherence to the safety precautions outlined in AR 385-63, DA PAM 385-63, and Current Safety of Use Messages (SOUM).

9-6. Tow missiles

The TOW (Inert) can be fired into the North Impact Area on Ranges 28 TI, 41 TI, 42 TI, and 46 TI. TOW (HE) cannot be fired on Fort Campbell because of restrictions on firing the missiles from unhardened weapons platforms.

9-7. Javelin missiles

Javelin missiles can be fired on Range 55 in the North/South Impact Area provided there is adherence to the safety precautions outlined in DA PAM 385-63, chapter 15.

9-8. Ammunition care, handling, and safety

a. Safety precautions contained in DA PAM 385-64 (Ammunition and Explosive Safety Standards), AR 190-11 (Physical Security of Ammunition), CAM REG 190-11, and CAM Regulation 700-2 will apply at all FPs/ranges.

b. A serviceable fire extinguisher will be present at the ammunition point at all times.

9-9. Scheduling procedures
To schedule a range not scheduled during the TRC, an FC Form 253 (four copies) will be submitted to Range Division scheduling not later than 10 working days prior to the intended firing date.

9-10. Additional safety restrictions and instructions
a. Units will submit Surface Danger Zone Diagrams (SDZD) to Range Safety for approval not later than 10 working days prior to firing date. SDZD will be drawn on overlays using 1:25,000 scale maps as required.

b. Erratic rounds.

(1) **WHENEVER A ROUND IS FIRED OR REPORTED IMPACTING OUTSIDE AN ESTABLISHED IMPACT AREA, ALL UNITS WILL BE PLACED UNDER A MANDATORY CHECK FIRE FREEZE.** Units will check firing immediately, remove all personnel from their weapons, and ensure the aiming point for the weapon is not changed.

(2) Units will immediately notify Range Division of the reason for the check fire freeze.

9-11. Special instructions
a. Using unit(s) will police the range of all debris and wire and request an inspection by Range Division at the end of each firing day.

b. **DO NOT HANDLE DUDS!**

Chapter 10
Mortars

10-1. Purpose
This chapter defines and emphasizes portions of the references in paragraph 10-2.

10-2. Reference
a. AR/DA PAM 385-63 (Range Safety).
b. FM 3-22.90 (Mortars).
c. FM 3-22.91 (Mortar Gunnery).
d. CAM Regulation 700-2 (Conventional Ammunition).
e. TM-0001-28 (Army Ammunition Data Sheets Artillery Ammunition).
f. TB 9-1300-385-1(Munitions: Suspended or Restricted).
g. TB 9-1300-385-2 (Munitions: Permanently Suspended or Restricted).

10-3. General
a. Report all accidents and incidents to Range Control immediately when able, no later then 30 minutes.

b. For the location of mortar FPs and OPs on Fort Campbell, see chapter 11.

c. Range Division equipment will be picked up and returned during normal operating hours. Equipment may be signed for and picked up one working day (24 hours) in advance (Monday- Friday). Equipment will be turned in within 24 hours of completion or the next normal working day (Monday-Friday). All Range OICs will pick up equipment for Ranges, OPs and FPs around the north/south impact area at Range 46 (Live Fire Base).

d. The range communications net (radio and phone) will be monitored continuously. In the event of a communications breakdown between firing range (position) and Range Division, a mandatory cease (check) fire will be initiated until communications are reestablished. Communications checks will be made with Range Division once every hour. Incoming or outgoing calls may be considered an effective communications check in lieu of calling Range Division during any one-hour period.

10-4. Responsibilities
a. Commanders. The mortar unit commander/platoon leader is responsible for safety during all phases of a firing exercise under his control. Commanders battalion level and above of units containing mortar platoons, will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC and RSO to Range Division. This list will be updated as required. An example memorandum is at Figure 3-1.

b. The OIC and RSO will ensure --

(1) Command certified safety personnel determine safety limits for firing data and develop Surface Danger Zone Diagrams (SDZD) in accordance with AR/DA PAM 385-63. After the first mission is fired, the safety data and the safety diagrams will be updated to reflect current meteorological and registration data.

(2) All firing data is within prescribed safety limits prior to transmission to the firing sections and record all minimum and maximum quadrant elevations, all right and left deflection limits, and all minimum fuze settings.

(3) Current copies of AR/DA PAM 385-63, CAM Regulation 700-2, a risk management worksheet for a specific range operation and this regulation are on hand at the firing site. Also ensure that the appropriate FMs/TMs pertaining to the weapon(s) being fired are on hand.

(4) Names of the OIC and RSO are on the Unit Command Safety Certified memorandum on file at Range Division.

(5) Personnel on the range have been briefed on firing safety, operation of the firing position, misfire/hang fire procedures, and ammunition handling.

(6) All personnel have hearing protection prior to firing and that they wear them during firing.

(7) A qualified medic with a medical kit is present.

(8) An ambulance or similar evacuation vehicle(s) and its assigned driver(s) will be present at each FP. If multiple FPs are being used, a centralized aid man with vehicular evacuation capability will suffice for evacuation purposes, provided all firing positions are located within a 2000-meter radius.

(9) A scarlet steamer (flag) is flown when firing from an OP and that red flashing warning lights are operated in the vicinity of the guns or FPs after sunset.

(10) All road guards are properly instructed in their duties and/or appropriate barriers with signs are posted to cover all normal approaches to a hot FP or OP (refer to para 3-15).

(11) Dual means of communications are established and maintained with Range Division.

(12) Helmets are worn by all personnel within 50 meters of the firing line.

(13) Range Control Safety has given permission to fire before conducting any live fire missions.

10-5. Mortar live fire safety instructions

a. Firing 60mm, 81mm, or 120mm mortars over the heads of unprotected troops is prohibited. Firing instructions published in TM 43-0001-28 and restrictions and suspensions published in TB 9-1300-385-1 and TB 9-1300385-2 for rounds being fired will be followed.

b. The first fire mission fired from a new position will always be either an adjust fire or registration mission to the approximate center of the sector. The OIC of firing must receive an observer's report that the initial round has been observed safe in the desired impact area prior to continuing the mission.

c. For surface danger areas for mortars, see DA PAM 385-63, chapter 10.

d. An immediate check fire will be imposed when an aircraft is spotted approaching the trajectory of fire or passing within 1000 meters of the firing battery/unit.

e. Units will report violations of their airspace to Range Division to include type of aircraft, tail number, direction of flight, and any other available information.

f. Unit OIC and RSO will supervise the proper handling, storage, firing, and turning in of ammunition. Correct all mishandling and improper procedures involving ammunition as specified in the pertinent FMs/TMs.

10-6. Ammunition care, handling, and safety

a. Safety precautions contained in FM 6-50, DA PAM 385-64 (Ammunition and Explosive Safety Standards), AR 190-11,(Physical Security of Ammunition), CAM REG 190-11, and CAM Regulation 700-2 will apply at all FPs, also AR 710-2 for ammunition accountability.

b. Excess propellant will be placed in a plastic lined box and stored 50 meters to the rear of each gun. This box must have a closeable lid. The excess propellant box may be located at the mortar position while making propellant adjustments from a given mission. The box will remain closed except when placing excess propellant inside. When all rounds have been prepared, the box containing the excess propellant will be moved to the storage location 50 meters to the rear of each gun.

c. Unpack only the number of rounds needed to complete the next mission. During propellant removal procedures, exercise extreme care to prevent the striker from being driven into the ignition cartridge. This will result in premature ignition of the propellant. At no time should any device be used to strike the round during this operation.

d. A serviceable fire extinguisher will be present at the ammunition point at all times.

10-7. Powder burning

a. Unused powder increments should be burned daily in accordance with the applicable FM.

b. The RSO will not attempt to burn supplemental charges. These charges, which are removed whenever VT fuses are used, will be returned to the ammunition section, which will turn them in to the ASP.

10-8. Scheduling procedures

To schedule an FP not scheduled as a result of the TRC, FC Form 253 (four copies) will be submitted to Range Division Scheduling at least 10 working days prior to the intended firing date. The following information is required on the form:

a. Collective METL task.

b. Type of weapon system and ammunition to be fired.

c. The words "live firing" and the designated impact area(s) at the bottom of the page.

10-9. Additional safety restrictions and instructions

a. Units will submit Surface Danger Zone Diagrams (SDZD) to Range Safety for approval not later than 10 working days prior to the initial date of firing. Safety fans will be drawn on overlays using 1:25,000 scale maps as appropriate.

b. Firing units are responsible for ensuring that all projectiles impact within the SDZD on file at Range Division.

c. Erratic rounds.

(1) **WHENEVER A ROUND IS OBSERVED OR REPORTED IMPACTING OUTSIDE AN ESTABLISHED IMPACT AREA, THE OIC OR RSO WILL PLACE ALL UNITS UNDER A MANDATORY CHECK FIRE FREEZE.** Units will cease firing immediately, remove all personnel from their indirect fire weapons, and ensure the data set on the weapons is not changed.

(2) The unit observing or reporting the burst will immediately visit the site to determine if there are any casualties. If so, initiate MEDEVAC procedures. Each unit RSO will verify the data set on the last weapon(s) fired and record the information found in chapter 3.

(3) The unit range so will immediately notify Range Division of the reason for the check fire freeze. Once imposed, Range Control is the only agency that can lift a check fire freeze.

10-10. Firing points and observation points

Chapter 11 contains a listing of Observation points which can be used to fire mortars. Coordinate directly with range safety or range managers for additional ranges which support mortar fire.

10-11. Special instructions

a. Using unit(s) will police all mortar points and request an inspection by Range Division before moving from an assigned mortar point.

b. All artillery and mortar units have been provided maps of the North and South Impact Areas with description of wet lands where white phosphorus can and cannot be fired. The ITAM office can issue the map if a unit does not have any. The map is color coded with green as the wet land, blue is a 100 meter no fire buffer zone for 60mm and 81mm mortars, the red is a 370 meter no fire buffer zone for 4.2 in, 120mm mortars, 105mm and 155mm artillery. Fort Campbell was directed by Department of the Army to implement this program in 1995.

c. **DO NOT HANDLE DUDS!**

Chapter 11
Artillery

11-1. Purpose

This chapter defines and emphasizes portions of the references in paragraph 11-2.

11-2. References

a. AR/DA PAM 385-63 (Range Safety).

b. FM 6-50 (Tactics, Techniques, and Procedures for the Field Artillery Cannon Battery).

c. FM 3-22.90 (Mortars).

d. FM 3-01.21 (Tactics, Techniques, and Procedures for Field Artillery Battalion).

e. CAM Regulation 700-2 (Conventional Ammunition).

11-3. General
Report all accidents and incidents to Range Division immediately when able, no later then 30 minutes.

11-4. Safety
a. Battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC and RSO to Range Division in accordance with this chapter, AR and DA PAM 385-63. An example memorandum is at figure 3-1.

b. This does not relieve the battery commander of his overall responsibility for the safety and training of his battery.

11-5. Fires book
As of February 2002, the Fires book will no longer be used. All SDZDs will be computed according to instructions outlined in paragraph 11-7 (105mm) and 11-8 (155mm).

11-6. Scheduling procedures
To schedule an FP not scheduled as a result of the TRC, FC Form 253 (four copies) will be submitted not later than 10 working days prior to the intended firing date. All firing points will be listed on the weekly NOTAM. The following information is required on the form:

a. Collective METL task.

b. Type of weapon system and ammunition to be fired.

c. The words "live firing" and the designated impact area(s) at the bottom of the page.

11-7. Safety restrictions and instructions
a. All artillery units conducting indirect live fire exercises will fire at a quadrant greater then 267 mils (15degrees). The purpose of this measure is to ensure that Danger Area Echo for firing units is not in excess of 550 meters for 105mm and 725 meters for 155mm howitzers. It also reduces the occurrence of ricochets by preventing units from firing at low trajectories. This will be adhered to for all live fire exercises at Fort Campbell.

b. Range Division will ask the firing unit the following WGS-84 grid coordinates that define the useable North and South impact areas on Fort Campbell, KY:

South Impact Area: 105mm Units Only		North Impact Area: 105mm Units Only
1. DF 3731 5389		1. DF 3174 6112
2. DF 3793 5420		2. DF 3204 6150
3. DF 3896 5487		3. DF 3628 6135
4. DF 4025 5466		4. DF 3649 6108
5. DF 4010 5410		5. DF 3651 5815
6. DF 3994 5377		6. DF 3502 5687
7. DF 3977 5347		7. DF 3500 5600
8. DF 3974 5277		8. DF 3409 5603
9. DF 3935 5246		9. DF 3242 5759
10. DF 3932 5176		10. DF 3259 5882
11. DF 3803 5177		11. DF 3203 5994

c. The following Firing Point (FPs) series can fire into the North Impact Area only: FP 41, FP 42, FP 43, and FP 44.

d. The following Firing Point series can fire into the South Impact Area only: FP9, 11,12, 13, 17, 19, 20, 21, 22, 23, 24, 25, 27, and 28.

e. The following Firing Point series can fire into the North and South impact areas: FP30, 31, 32, 33, 34, 35, 47, 48, and 49.

f. The above grids do not account for Probable Errors as listed in DA PAM 385-63. The following instructions will be used when computing safety boxes to account for Probable Errors:

(1) The Fire Direction Center (FDC) will plot the useable impact area grids (paragraph 11-7a) for the respective impact area(s) that they will fire into. This area will be marked in blue on firing charts.

(2) The FDC will then construct a safety box within the useable impact area grids.

(3) Once the FDC has constructed their safety box, they will reduce their safety box by the Probable Areas (Reference: DA PAM 385-63, paragraph 11-4). Verify that the safety diagram for the position is properly constructed to account for probable errors in range and deflection. The safety diagram is no closer than eight probable errors in range from the edge of the impact area at max range; no closer that eight probable errors in deflection from the left and right limits of the impact area; and no closer that twelve probable errors in range from the edge of the impact area at minimum range. All probable errors are measured in meters not mils. This area will be marked in red on firing charts.

(4) Report grid coordinates for each corner of the safety box that has been reduced by probable errors to the Firing Point OIC.

g. Area E of artillery weapons surface danger zone is a primary danger and will not be occupied. This area extends 300 meters (105mm) and 350 meters (155mm) to the direct front of the weapon. Units training in the vicinity of artillery positions will not violate this danger area.

h. All units computing safety data for 155mm will submit an SDZD to the Range Division Safety for approval not later than 10 working days prior to the date of firing. SDZDs will be drawn on overlays using a 1:25,000 scale map.

i. Site selection for artillery firing which is not listed on the Trip List will be surveyed to an accuracy of 1/1000 (fifth order) by the artillery units selecting the site. This connecting survey will have the same accuracy. One copy of the data developed from the survey will be furnished for numbering and inclusion in unit's Trig List and one copy will be given to Range Division. Survey markers will be emplaced before live firing is conducted. Units firing from established firing points must ensure that all artillery pieces are located within 200 meters of the firing point coordinates.

j. Each unit is responsible for ensuring that no projectile and shrapnel impact in the No Fire Areas listed below in Table 11-1.

IMPACT AREA	IMPACT AREA
OP 13 From DF37106085 to DF37306086 to DF38145961 to DF37095960 to DF37106085	**Range 44** From DF40505368 to DF41455366 to DF41445225 to DF40305222 to DF40305340 to DF40505340 to DF40505368
Range 46 From DF36455718 to DF36955760 to DF38855550 to DF38325510 to DF36455718	**Range 28** From DF35295479 to DF36195510 to DF37705075 to DF36845034 to DF35295479
Range 29 From DF31645665 to DF32205691 to DF32995570 to DF32255530 to DF31645665	**Demo 39** From DF39855220 to DF41415220 to DF41255091 to DF39895080 to DF39855226
OP 4 DF40765415	**Range 31** From DF37855880 to DF38855860 to 38905845 to DF37855831 to DF37855880

Table 11-1. No fire areas

k. Erratic Rounds.

(1) Anyone detecting rounds impacting outside or near the boundary of the impact area will immediately report this to Range Division. A follow-up report will include the information found in chapter 3.

(2) Whenever a round is fired or reported impacting outside an established impact area, all units will be placed under a mandatory **CHECK FIRE FREEZE**. Units will cease firing immediately, remove all personnel from their indirect fire weapons, and ensure the data set on the weapon is not changed. The unit RSO will verify the data set on the last weapon(s) fired and record the information found in chapter 3.

l. As a minimum, the following items must be present at every artillery firing position:

(1) Fort Campbell map.

(2) A firing chart.
(3) An approved SDZD (if applicable).
(4) Two properly declinated aiming circles.
(5) A properly declinated M2 compass.
(6) Two means of communication (no cellular phone west of Grant and Indian Mound Roads).
(7) A copy of references listed in paragraph 11-2.
(8) Applicable TFTs.
(9) Applicable GSTs.
(10) Applicable GFTs.
(11) A qualified aid man with a medical kit.

m. Upon occupying a new position, a check round must be observed safely in the impact area prior to additional fire missions. This check round may be the initial round of a registration or adjust fire mission.

n. Only authorized fuze wrenches will be used to assemble the fuze to the projectile and excess pressure will be used.

o. All artillery indirect firing operations conducted on Fort Campbell will be conducted using ammunition cleared for overhead fire. The term “ammunition" includes the projectile, fuze, and (for separate loading ammunition) the propelling charge.

p. No firing of ICM.

q. Any soldier in the vicinity of indirect fire will impose an immediate CHECK FIRE when an aircraft is spotted approaching the trajectory of fire, Area E, or passing within 1000 meters of the firing battery/unit.

r. Units will report violations of their airspace to Range Division to include the type of aircraft, tail number, direction of flight, and any other available information. This will be forwarded to Aviation Safety by Range Division to initiate an Operational Hazard Report (OHR) which will be completed by the owning aviation unit.

11-8. Direct fire by artillery

When firing in the Direct Fire Mode, the distance X will correspond to the range of the weapon firing CHG 7 (105mm), or CHG 7WB (155mm) at an elevation of 267 mils. Overhead fire is not authorized for artillery in the direct fire modes. For range, even though firing is conducted with the use of the range scale on the panoramic telescope or elbow telescope, the RSO must verify the elevation so that all rounds fired will be safe. To do this, the RSO must verify safe settings by using the gunner's quadrant or elevation wheel to ensure that rounds are not fired below minimum or above maximum quadrant elevation. An SDZD will be submitted to Range Division Safety not later than 10 working days prior to the date of intended use.

11-9. Ammunition care, handling, and safety

a. Safety precautions contained in FM 6-50, DA PAM 385-64 (Ammunition and Explosive Safety Standards), AR 190-11,(Physical Security of Ammunition), CAM REG 190-11, and CAM Regulation 700-2 will apply at all FPs/ranges., also AR 710-2 for ammunition accountability.

b. M825A1 rounds for 155mm will not be fired at Fort Campell.

c. Ammunition will be placed off the ground using tarpaulins, pallets, etc., and covered for protection. Ammunition will not be removed from sealed containers any earlier than necessary to prepare it for firing. Propelling charges should not be out until the round is ready to be fired. This preparation includes inspection and maintenance.

11-10. Powder burning

a. For restrictions concerning burn index, refer to table 3-2.

b. Fire fighting equipment will be on hand (beaters, shovels, and water).

c. Only the number of personnel absolutely essential to construct the powder row will be used, but never will there be less than two for safety reasons. One will be at the rank of SSG or above.

d. The RSO will not attempt to burn supplemental charges. These charges, which are removed when VT fuses are fired, will be returned to the ammunition section, which will turn them in to the ASP. Complete and proper documentation will accompany the turn-in.

11-11. Firing and observation points.

a. Figure 11-1 is the artillery declination station and description.
b. Table 11-2 is a list of surveyed OPs.
c. Table 11-3 is a list of FP coordinates and heights.

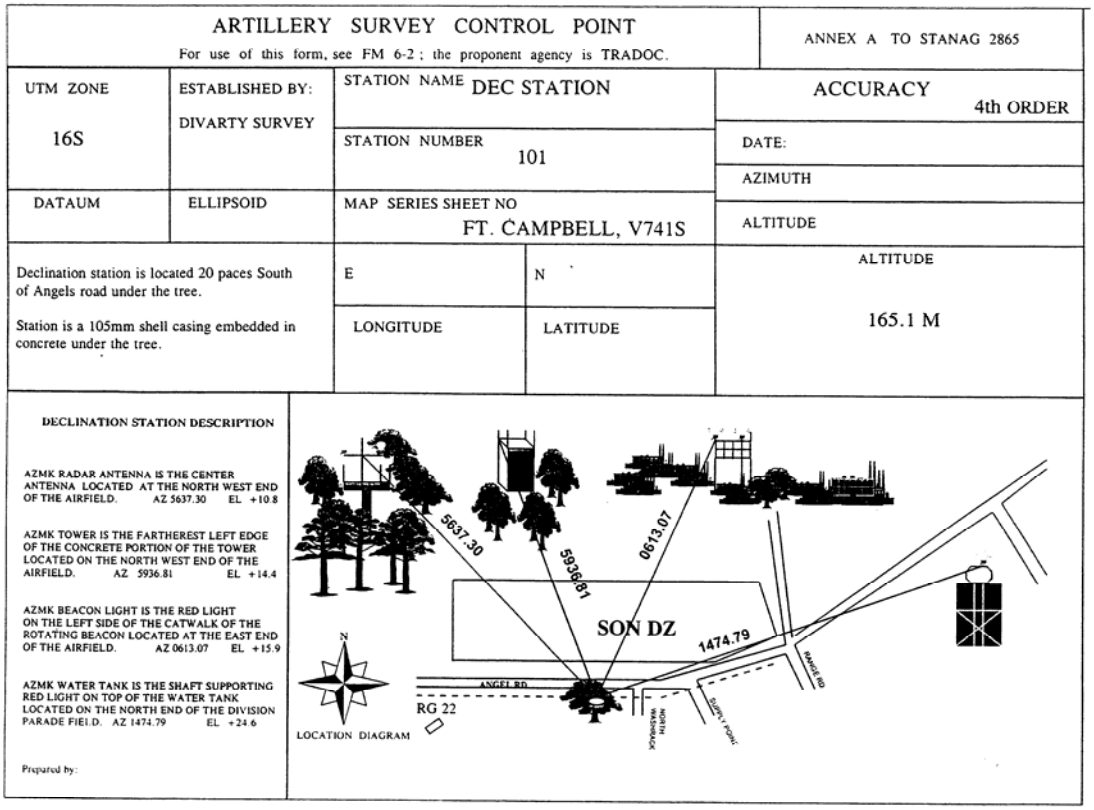


Figure 11-1. Declination station

CAM Reg 385-5

OP	Easting	Northing	AZ TO AZ MK	Description
2	3980	5530		Tower/Bldg
3	4022	5532		Tower
4	4076	5415	3487.4	Tower
7	3378	5230		Berms
8	3136	6227		
10	3120	6059		
12	3108	6117		Tower
13	3745	5997	5893	Bldg

Table 11-2. Surveyed Ops

Firing Point	Easting	Northing	Height in Meters
9A	48193	45979	199.9
9B	48770	45507	195.5
9C	49932	45451	192.3
11B	52217	50905	171.9
11C	50772	51492	158.2
11D	49637	51360	169.1
12A	51070	52042	145.4
13A	49728	52854	163.7
17A	48237	54037	169.5
17B	47165	54612	168.6
19A	45013	51317	177.9
19A1	45007	51266	182.3
19B	45398	51055	177.2
19B1	45425	51093	180.0
19B2	45756	49951	176.3
19G	47145	49680	169.1
19H	47063	50673	173.0
19J	47154	49856	172.1
19K	47202	51575	162.1
20D	45686	47982	193.2
20E	45402	48400	184.5
21A	45950	46649	191.7
21A1	45702	46592	199.0
21B	47228	44161	190.0
22A	41851	47303	204.3
23C	42234	48900	188.1
23C1	42137	49124	177.4
23E	42352	48032	186.0
23F	42439	48465	185.0
23I	44260	48506	187.8
23J	43768	48321	186.3
23L	44179	48118	193.8
24A	44105	50941	180.0
24B	43726	51692	162.2
24B1	43816	51784	163.9
24C	43838	51199	171.5
24D	43988	50338	169.2
25A	45795	54592	170.8
25B	45720	54455	171.2
25C	45537	53816	171.3
25D	45757	53263	160.6
25E	44066	54309	171.0
25F	44147	54472	168.0
25G	44050	53789	174.4
25H	45250	54139	174.1
25J	44564	53829	175.1
25L	44257	52946	169.4
25M	43873	53208	173.9
25N	43465	52908	176.5
25O	44678	53270	172.6
25P	44214	52925	172.2

Table 11-3. FP coordinates and height

Firing Point	Easting	Northing	Height in Meters
CRAIG#1	46425	53620	155.6
CRAIG#2	46526	53483	156.1
27A	41448	54676	169.2
27B	42101	54779	167.3
27C	42380	54851	162.1
27D	42547	54828	169.3
27E	42959	54682	173.6
27F	42770	54521	174.1
27P	42685	53798	178.4
27Q	42553	53432	178.8
27Q2	42544	53296	175.9
27R	42510	53124	177.3
27S	42737	52855	177.0
27T	42661	52932	179.0
27U	42539	53571	177.9
27V	42448	54030	172.0
27W	42783	54863	166.7
27X	41926	54016	175.8
27Y	42870	54559	169.5
27Z	42931	54320	176.3
28A	42305	50691	182.3
28A1	42242	50673	183.6
28B	41868	50592	179.5
28C	42943	50594	178.4
28D	43091	51290	176.6
30A	40734	50489	181.8
30A1	40698	50283	180.7
30B	41002	50761	184.0
30C	40342	50399	183.2
30D	40727	50224	181.1
30E	39469	50777	188.4
30F	39407	49629	181.4
31B	39670	48389	187.2
31B1	39732	48376	188.4
31C	40886	48821	155.4
31D	38607	48212	190.2
31D1	38583	48212	189.4
32A	38482	46678	189.7
32A1	38466	46721	195.3
32B	37591	46379	197.2
32C	37213	46699	199.5
32D	38754	46109	201.5
32F	40117	45739	201.1
32G	40637	46459	209.6
32H	39308	47713	195.8
32I	40912	47150	197.2
32J	39083	47746	187.4
33A	35478	48278	198.6
33B	36378	48551	187.6
33C	36953	48202	192.9
34H	36349	48616	187.3

Table 11-3. FP coordinates and height – (continued)

Table 11-3. FP coordinates and height – (continued)

Firing Point	Easting	Northing	Height in Meters
34J	37540	48929	185.9
35D	35687	50325	198.8
35E	36026	50412	200.7
41A	38915	60831	172.2
41B	39024	60621	173.8
41C	38000	60289	153.3
41D	39136	61008	175.4
41E	38950	60155	180.9
41F	39118	60700	173.3
42A	36315	62856	174.0
42B	36987	62549	173.3
42C	37758	62725	173.7
42D	37263	62421	177.4
42E	38853	61805	174.3
42F	36275	62675	172.0
42G	37542	62373	176.5
42H	36344	63032	170.4
42I	37623	62773	172.4
42J	37595	62736	179.9
42K	38174	61354	171.3
42M	37025	61985	172.8
42N	37622	61136	166.0
43A	35693	63731	170.7
43B	36120	63270	168.0
43J	34889	64402	162.2
44A	29180	61073	210.6
44B	29760	61379	200.8
44C	29260	62529	207.8
44D	29807	61262	204.4
44E	29072	62383	205.8
44F	29705	62661	205.9
44G	29951	62909	201.2
48A	32210	51668	190.7
48B1	32949	52004	180.5
48D	33620	51259	190.2
48J	33107	51285	188.0
48K	32217	51646	188.1
48L	32400	52082	190.2
48M	32515	51428	186.9
48N	32877	51274	192.4

Table 11-3. FP coordinates and height

11-12. Firing white phosphorus in wetlands on Fort Campbell

All artillery and mortar units have been provided maps of the North and South Impact Areas with description of wet lands where white phosphorus can and cannot be fired. The ITAM office can issue the map if a unit does not have any. The map is color coded with green as the wet land, blue is a 100 meter no fire buffer zone for 60mm and 81mm mortars, the red is a 370 meter no fire buffer zone for 4.2 in, 120mm mortars, 105mm and 155mm artillery. Fort Campbell was directed by Department of the Army to implement this program in 1995.

Chapter 12
Armor

12-1. Purpose
This chapter establishes firing safety procedures for tank/Bradley Fighting Vehicle (IFV) gunnery.

12-2. References
a. Ranges will be operated in accordance with the following publications:
(1) FM 5-104 (General Engineering).
(2) FM 3-20.12 (Tank Combat Tables).
b. Safety will be implemented as outlined in:
(1) AR/DA PAM 385-63 (Range Safety).
(2) FM 3-20.12 Tank Gunnery.

12-3. General
a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.
b. Armor units, battalion or larger, will maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of range OIC, control officer, and range SO to Range Division. This list will be updated as required. An example memo is at Figure 3-1.
c. Units will continuously monitor Range Division communication nets (radio and wire). Should communications be lost, a mandatory cease (check) fire will be initiated by the firing unit until communications are reestablished with Range Division.
d. No bridges on Fort Campbell are structurally capable of supporting M1 tanks. Many bridge sites will not support light track vehicles. Armored/mechanized units are to coordinate with range control for route clearance.

12-4. Tank/Bradley gunnery
a. Ranges 28 and 46 are the only ranges on Fort Campbell suitable for tank gunnery (see FM 3-20.12, tables V through VIII).
b. High velocity armor piercing (Armor-Piercing Fin-Stabilized Discarding Sabot Tracer (APFSDS-T) and Armor-Piercing Discarding Sabot Tracer (APDS-T)) rounds with windshields will not be fired in training. High velocity rounds with reduced range capability, such as Target Practice Discarding Sabot Tracer (TPDS-T), may be fired. On Range 46, these rounds will be restricted to quadrant elevations of one degree or less.
c. Firing over the head of troops from any weapon system on a moving tank is prohibited.
d. Mechanical stops that limit elevation or traverse are not a complete precaution. Close safety supervision is mandatory.
e. The use of manned tanks as targets is prohibited.
f. Vehicles will fly the appropriate flag, or during the night phase, display a light of the appropriate color for the firing status of each vehicle on the range.
g. Scorers will proceed with their duties ONLY UPON THE ORDERS OF THE OIC and AFTER the range SO has assured the OIC that it is safe to do so.
h. During actual firing of the 105mm or 120mm main gun, the range Safety Officer (SO) will ensure that the elevation does not exceed +5 degrees (+1 degree for TPDS-T on Range 46) and that the gun is laid on a deflection that is safe.
i. Indirect fire techniques are not permitted on this installation at any time.
j. During night firing, guides equipped with appropriate light devices will be used to assist vehicular movement.
k. Only non-dud producing projectiles will be fired on Ranges 28 and 46.
l. Radio communication between the range SO and the Tank Commander (TC) will be maintained during the entire time a tank is firing on the range.
m. The range SO will maintain radio communication with the OIC to provide for immediate cease fire capability. This will not be on a frequency other than the TC/range SO net.
n. A mandatory cease fire will be initiated during any communications failure, and it will remain in effect until communications are restored.

o. Safety personnel will be the only individuals from which “safe” and “gun clear” will be accepted. No personnel will remain down range behind the berm while firing.

p. Each crew will be briefed by the range SO on safety procedures prior to entering any live firing tank gunnery course.

q. Firing will be confined to that lane in which a tank is positioned on the firing line. Firing across target lanes is not allowed.

r. Upon completion of firing, using units will police all debris from the firing line to the far edge of the danger zone or to the near edge of the impact area, whichever is nearer.

12-5. Range Safety Officer’s requirements for Tank/Bradley firing

a. Before departure for the range:

(1) READ AND UNDERSTAND DA PAM 385-63 (chapter 12), as well as pertinent parts of CAM Regulation 700-2, the appropriate manual of the weapon systems to be fired, and this regulation.

(2) Procure and take to the range a copy of AR/DA PAM 385-63, risk management worksheet for a specific range operation, this regulation, and the appropriate manual(s) for all weapons to be fired.

(3) Verify that your range request (your copy of FC Form 253 approved by Range Division) applies to the unit, date, time, and type of ammunition of your planned firing activity.

(4) Ensure the battalion commander's range certification list is current and on hand at Range Division.

b. Before firing:

(1) Check each vehicle (tank) log book for bore scope and pullover gauge data. Data must indicate that an inspection was conducted within 90 days of the firing date and have sufficient tube life remaining to complete the planned firing. Recoil exercises must have been conducted within 6 months on all cannons which have not been fired.

(2) Brief the control officer, all TCEs, TCs, and crews concerning the range safety procedures. For Range 46 the briefing will include a detailed briefing of the waiver condition contained in paragraph 12-5.

(3) Brief the control officer, all TCEs, TCs, and crews concerning general range safety procedures for range firing. The briefing will include, but may not be limited to, the following:

(a) Range limits. The left and right limits should be pointed out to the crews while standing at each firing point.

(b) Loading and clearing procedures. Explain when, where, and how.

(c) Vehicle movement procedures. Discuss all vehicle movements prior to entering the course, while on the course, and upon returning to the parking area.

(d) Night operations. Ensure that personnel have been briefed that special precautions will be enforced.

(e) Lost communications procedures. CEASE FIRE and stop in place until positive communications are rendered.

(f) Other items. As the Safety Officer deems applicable.

(4) Post the road guards and conduct a visual search of the danger area on each side of the Impact Area.

(5) Inspect the ammunition point to ensure compliance with CAM Regulation 700-2.

(6) Check all communication nets to ensure that positive two-way communication links exist between your range and Range Division, between the range and each tank, and between the control officer and the firing tank commander. Tank intercom systems will also be checked and must work prior to firing.

(7) Open the range with Range Control.

(8) Raise the range flag.

c. During firing:

(1) Control the vehicle and its crew up to the firing line, then turn them over to the control officer for firing on the course.

(2) Control the vehicle weapons clearing activity at the baseline.

(3) Monitor the firing activity.

d. After firing is completed:

(1) Ensure all vehicles are clear of ammunition prior to being released from the range.

(2) Prepare all unexpended ammunition, expended brass, and casings for turn in.

(3) Close the range and give a closing report to Range Division.

(4) Lower the range flag.

(5) Conduct a thorough police of the range and request an inspection by Range Control.

Chapter 13
Aerial Gunnery

13-1. Purpose
This chapter establishes range safety procedures for conducting aerial gunnery at Fort Campbell.

13-2. References
a. AR/DA PAM 385-63 (Range Safety).
b. FM 3-04.140 (Helicopter Gunnery).
c. CAM Regulation 95-1 (Fort Campbell Aviation Policies and Procedures).
d. AR 75-1 (Malfunctions Involving Ammunition and Explosives).

13-3. Scope
In addition to AR/DA PAM 385-63, this safety control plan establishes range procedures and safety criteria for firing live ammunition from helicopter armament systems and subsystems for training. It provides check lists, safety procedures, and range operating procedures for conducting helicopter gunnery.

13-4. General
a. Report all accidents and incidents to Range Control immediately when able, but no later then 30 minutes.
b. Aerial gunnery at this installation will be conducted when approved by the Chief, Range Division.
c. For use of laser range finders/target designators, refer to chapter 19.
d. Range Division will be notified immediately should any ordnance impact outside of the target area or limits of fire.
e. Requests for range areas will be submitted to Range Division as a result of the appropriate TRC. To schedule aerial gunnery ranges not scheduled as a result of the TRC, requests must be submitted not later than 10 working days prior to the requested date(s). If laser operations will be accomplished, the request must be submitted at least 10 working days prior. This will facilitate publishing the NOTAM.
f. Rearming may be accomplished outside the impact areas provided the following restrictions are observed:
(1) Aircraft must be pointed toward the nearest impact area.
(2) Aircraft must be within 2 kilometers of the impact area.
(3) The area between the weapon system(s) and the impact area must not include any trafficable roads unless they are cordoned/blocked and guarded by the using unit.
(4) The rearming area will be approved by the Chief, Range Division not later than 10 working days prior to the rearming exercise.
(5) All ammunition must be stored in a designated holding area.
(6) Loading of ammunition aboard the aircraft will be accomplished at the rearming area. Only ammunition required to load the aircraft will be brought from the holding area to the rearming area. Handling, loading, and unloading of ammunition will only be done by trained personnel.
g. Area overlays and firing range area overlays will be submitted to Range Division Safety not later than 10 working days prior to occupation of a range. Area overlays will depict the following:
(1) Ammunition holding area.
(2) Harmonization/test fire point.
(3) Range traffic patterns.
(4) Rearming areas.
(5) Sequence of firing events.
(6) VIP parking/landing pad.
(7) Medic/crash rescue location and method of marking.
(8) Range OIC location.
h. Surface Danger Zone Diagrams (SDZD) will be submitted to Range Division Safety not later than 10 working days prior to the date of intended use. SDZD will be constructed in accordance with requirements outlined in DA PAM 385-63, chapter 13, and applicable Safety of Use Messages.

13-5. Commanders

The aviation unit commander is responsible for safety during all phases of a firing exercise. This is addressed in CAM Regulation 95-1 and chapter 23 of this regulation. Commanders of aviation units, battalion level and above will establish and maintain a safety training and certification program. As part of this program, battalion commander will submit a list of individuals in their respective units qualified to perform the duties of OIC and SO to Range Division. This list will be updated as required. An example memo is at Figure 3-1.

13-6. OIC

a. Responsibilities.

(1) Overall supervision of the range, the personnel, and enforcement of safety.

(2) Be thoroughly familiar with this regulation, DA PAM 385-63 chapter 13, and the applicable aircraft and armament TMs, and the unit range SOP.

b. Duties. As described in the above listed publications and as briefed by the unit commander.

13-7. Airborne/ground safety officer

a. General. The airborne/ground RSO is responsible for the safe maneuver and firing of all helicopters. He will ensure that all conduct of firing and sequence of firing procedures are complied with at all times during gunnery maneuvers. RSO needs to have the ability to monitor the firing aircraft at all times while on the range.

b. Responsibilities.

(1) Provide overall safety supervision during range operations.

(2) Be thoroughly familiar with this regulation, AR/DA PAM 385-63, the applicable aircraft operator manuals, FMs and armament TMs, also unit range/gunnery SOP.

c. Duties. As described in the above listed publications and as briefed by the unit commander.

13-8. Emergency situation/weapon malfunction

a. In ALL emergency situations, the Pilot-in-Command (PIC), if physically able, will remain with the aircraft until such time as qualified armament and/or EOD personnel arrive and clear the aircraft.

b. When in-flight emergencies arise in armed helicopters, the PIC must make the final decision regarding when and where he will land the aircraft. Urgency of the emergency will determine if the procedures in CAM Reg 95-1 are followed for armed aircraft emergencies.

c. Ammunition malfunction report will be processed IAW AR 75-1. All 30mm incidents will be processed to include what might be assumed to be a M230 gun malfunction.

Chapter 14
Air Defense Weapons

14-1.References

a. AR/DA PAM 385-63 (Range Safety)

b. FM 3-01.11 (Air Defense Artillery Handbook).

c. FMI 3-01.60 (Counter-Rocket, Artillery, and Mortar (C-RAM) Intercept Operations).

d. FM 44-44 (Avenger Platoon, Section, Squad).

14-2. General

a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

b. DA PAM 385-63 (chapter 14) prescribes the general procedures and safety criteria for firing anti-aircraft weapons in the aerial and ground support role. All personnel firing air defense weapons will be thoroughly knowledgeable of the safety requirements published in this and the above regulations and will comply with these regulations at all times.

c. Air defense battalion commanders will maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of range OIC and range SO to Range Division. This list will be updated as required. An example memo is at Figure 3-1.

d. Units will continuously monitor Range Division communication nets (radio and phone). Should communications be lost, a mandatory cease (check) fire will be initiated by the firing unit until communications are reestablished with Range Division.

e. Battery/units will report all violations of their airspace to Range Division to include type of aircraft, tail number, and direction of flight.

14-3. Air defense live fire safety instructions

a. Avenger Gunnery. The Avenger firing .50 cal ammunition can be fired into the North Impact Area, provided they meet the safety precautions outlined in DA PAM 385-63.

b. Safety Procedures for Live Fire. Unit must provide range fans/ surface danger zone diagrams, scenarios and risk management worksheet to Range Division Safety 10 working days prior to training date.

c. For all gunnery when engaging aerial targets (RCMAT) in the North Impact Area, the firing unit must request a NOTAM 10 working days prior to training date.

d. Ensure personnel on the range have been briefed on firing safety, operation of the firing position, misfire/hang fire procedures, and ammunition handling.

Chapter 15
Airborne/Assault Landing Activities and Special Operations

15-1. References

a. FM 57-220 (Static Line Parachuting Techniques & Training).
b. FM 57-230 (Advanced Parachuting Techniques and Training).
c. FM 3-05.211 (Special Forces Military Free-Fall Parachuting).
d. FM 3-05.212 (Special Forces Waterborne Operations).
e. CAM Regulation 95-1 (Fort Campbell Aviation Policies and Procedures).
f. CAM Regulation 385-5 (Range Regulation) (chapter 23).
g. USASOC Regulation 350-2 (Airborne Operations).
h. 101st Airborne Division (Air Assault) ASOP.
i. XVIII Airborne Corps Regulation 350-6.

15-2. General

a. This chapter defines the responsibilities, restrictions, control, and requirements for use of all DZs and surrounding air space on Fort Campbell, Kentucky. It also establishes procedures and safety criteria for conducting helocasting operations.

b. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

15-3. Responsibilities

a. Commanders. The unit commander is responsible for safety during all phases of an airborne/airland/helocasting exercise conducted under his control. Commanders of units conducting airborne/airland/helocasting operations, battalion level and above will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of Drop Zone Safety Officer (DZSO) and malfunction officer to Range Division. This list will be updated as required. An example memo is at figure 3-1.

b. It is the responsibility of the using unit to submit requests for DZs, ALS, LZs and EZs to Range Division during the scheduling window of the applicable TRC. All requests must arrive at Range Division not later than 10 working days prior to drop. These requests will be made in accordance with chapter 2.

c. Ensure that dual means of communications are established and maintained with Range Control and that no cellular phones are used west of Grant Road

15-4. Control

a. All aircraft operating within the Fort Campbell military reservation must monitor Eagle Radio.

b. Eagle Radio is the Fort Campbell airspace coordinator. All military aircraft operating within Fort Campbell's restricted areas will comply with CAM Regulation 95-1, as well as chapter 23 of this regulation. Aircraft will use Eagle Radio's information service and monitor their frequency (UHF 285.625, VHF 128.75). Eagle Radio will:

(1) Coordinate all air traffic affecting the airborne facility or restricted area through Range Division.

(2) Warn aircraft to remain a minimum of 1 nautical mile horizontally from all DZs, LZs, and EZs when drops and/or assault landings are being conducted. Upon notification from Range Control, Eagle Radio will broadcast this warning on the range information service until all drop aircraft have cleared the area.

(3) Alert airborne traffic of any unforeseen hazard.

c. For personnel paradrops, a DZSO, Drop Zone Safety Team (DZST), and Malfunction NCO are required on an active DZ. An Air Force Combat Control Team (CCT) may be substituted for the DZST. The DZSO will be physically present from 1 hour prior to the first drop until all personnel and/or equipment are recovered and the DZ is closed. The DZSO may be a member of DZST or CCT provided he meets the required qualifications for both positions.

d. The drop aircraft will request permission to enter restricted airspace through Eagle Radio. The final approving authority for aircraft penetration into the restricted airspace is Range Division. Range Division will grant approval through Eagle Radio after initiating checkfires or confirming cease fires along the aircraft's line of flight. The check fire will remain in effect until lifted by Range Division. The DZSO must immediately notify Range Division of any changes in the drop schedule.

e. Some of the airborne facilities at Fort Campbell are located close together. Fixed wing aircraft do not have adequate maneuver space to execute an emergency deviation from a prescribed flight path. For this reason, simultaneous drops will not be authorized on adjacent DZs and EZs.

f. . **Confirm frequencies with current DOD Flight Information Publications.**

15-5. Nonparticipating aircraft restrictions

a. Other aircraft will remain a minimum of 1 nautical mile horizontally from DZs/LZs/EZs during scheduled operations. Aircraft desiring to enter this airspace will not enter without clearance from the CCT/DZSO, Primary 139.6 VHF, alternate 142.25 VHF. Aircraft will monitor Eagle Radio for updates to NOTAMs.

b. Army rotary wing aircraft desiring to transition through the designated 1 nautical mile airspace around an active DZ/LZ/EZ or intending to land adjacent to a DZ/LZ/EZ will receive clearance through Eagle Radio from Range Control not later than 20 minutes prior to TOT. Upon receiving clearance from Eagle Radio, aircraft will establish communications with the DZ control party. Upon receipt of permission from the control party, the aircraft may enter the 1 nautical mile protected airspace to transit or land as requested. Landing aircraft must secure engines and tie down rotor blades not later than 10 minutes prior to TOT.

c. Aircraft will conform to published flight routes.

d. Exceptions for special operations will be handled on a case-by-case basis by Range Division.

15-6. General restrictions

a. Active DZs/LZs/EZs are off limits to all personnel except those engaged in the operation being conducted.

b. Normal training will not be conducted within 200 meters of any DZ/LZ/EZ.

c. No digging or construction of any kind is permitted on or within 200 meters of any DZ/LZ/EZ.

d. Only DZ control party/CCT vehicles are authorized on the DZ. This applies even when there is co-usage of a DZ.

e. Smoke during daylight hours or lights during the hours of darkness will not be used within 1 nautical mile of any DZ when drop activities are scheduled. The color red will not be used and is reserved for emergencies only.

15-7. Airborne/Air Assault landing support requirements

a. For personnel drops, the following minimum support personnel must be present at the DZ in order to receive clearance from Range Division to open the DZ:

(1) DZSO/NCO/DZ party (to include road guards as required).

(2) DZST,CCT, MMT.

(3) Malfunction Officer/NCO.

(4) Medic in accordance with 101st Airborne Division (Air Assault) ASOP or SOCOM Regulation 350-2 with evacuation transportation.

b. For heavy equipment, Container Delivery System (CDS) drops, the following minimum personnel must be present in order to receive clearance from Range Division to open the DZ/EZ:

(1) DZSO/NCO/DZ party to include road guards if required.

(2) DZST,CCT, MMT.

(3) Malfunction Officer/NCO.

(4) Medic in accordance with USASOC Regulation 350-2.

c. For Air Force aircraft assault landings, the following minimum support personnel must be present in order to receive clearance from Range Division to open the LZ.

(1) CCT, or 5th Special Forces Group units may also use an Arrival Airfield Control Group (AACG).

(2) Crash fire rescue team. **The supported unit must coordinate with the Fort Campbell Fire Department for this support.**

(3) Road guards.

(4) Medic with evacuation transportation in accordance with 101st Airborne Division ASOP.

15-8. Qualifications/responsibilities of DZ support personnel

a. DZSO.

(1) General. The DZSO is the airborne commander's representative and is responsible for the safe operation of the DZ. He will be briefed by his commander or designated representative prior to assuming duties. No personnel and/or equipment will be dropped if the DZSO is not physically on the DZ.

(2) Qualifications. For all FORSCOM units, the DZS0 must be qualified and current in accordance with the 101st Airborne Division ASOP. Non-FORSCOM units will be qualified in accordance with their MACOM's governing regulations. In no cases will these requirements be less than those required for FORSCOM units.

(3) Responsibilities.

(a) Be familiar with and adhere to provisions of this chapter and all other appropriate range regulations and references.

(b) Be familiar with the provisions of the 101st Airborne Division ASOP.

(c) Have overall operational responsibility for all Army personnel and equipment on the DZ.

(d) Contact Range Control to open the DZ not later than 60 minutes before drop time with the information required in paragraph 4-2. In addition, relay the type aircraft, number of passes, and type of drop.

(e) Have two means of communication with Range Control, (cellular phones west of Grant Road and Indian Mound Road do not constitute a means of communication).

(f) Inspect the DZ to ensure that no obstacles or items of equipment are on the DZ that would constitute an undue hazard to parachutists. Stationary vehicles and heavy drop equipment on the DZ are not considered undue hazards. The DZSO must have positive control of all medical vehicles on the DZ, to include air MEDEVAC helicopters.

(g) Ensure that all helicopters operating in the vicinity of the DZ leave the area or secure rotor blades not later than 10 minutes prior to the drop time. Clear or refuse clearance as appropriate to aircraft requesting permission to operate within 1 nautical mile of the DZ/EZ/LZ (except for helicopters actually dropping parachutists or parked off the DZ with blades secured).

(h) Clear the DZ of all vehicles not essential to operation of the air drop (including farm equipment left on the DZ if possible).

(i) Post road guards, as necessary, to keep unauthorized vehicles from the DZ. Ensure unofficial spectators are not on the DZ during a drop mission.

(j) Ensure the presence of a medical coverage team in accordance with the 101st Airborne Division ASOP. If not present for personnel drops, the drop will be canceled.

(k) Contact Range Control on the Range Control FM net for any final safety checks if required.

(l) Determine/verify the aerial release point for all HAHO and HALO jumps.

(m) Give final approval/disapproval for dropping parachutists or equipment.

(2) Special safety considerations.

(a) If, in the opinion of the DZSO/CCT, unauthorized vehicle/helicopter activity on the DZ just prior to drop could cause a serious hazard to descending parachutists, the drop will be aborted.

(b) Ensure that all personnel on an active DZ wear kevlar helmets and LBV until termination of airborne activities. (This includes unit authorized the wearing of beret or patrolling caps while in field training.)

(c) Control spectators on and in the immediate vicinity of the DZ.

(d) The DZSO will immediately notify Range Division by radio/landline of all incidents/accidents occurring during use of the DZ not later than 30 minutes after the drop, submit an Airborne Operations FLASH Report-

(1) During duty hours, call in the report to S3 Air.

(2) After duty hours, call in the report to the Division Staff Duty Officer (SDO).

(3) If the DZ cannot be closed due to lost equipment/jumpers, an interim report will be passed through Range Control.

(4) This report does not replace nor relieve off-post and nondivisional units of their responsibility to report paradrop operations to their headquarters.

b. U.S. Army Parachute Malfunction Officer/NCO Duties.

(1) General. An airdrop malfunction is the partial or complete failure of a parachute, airdrop item, or component of an airdrop system to function as it was intended or designed.

(2) Qualifications. A Malfunction Officer is a qualified parachute rigger (officer or NCO) holding MOS 92G at the rank of CPL or above and currently on airborne status.

(3) Responsibilities. The Malfunction Officer/NCO will --

(a) Be on the DZ not later than 1 hour prior to any personnel/equipment drop.

(b) Observe the execution of all airdrop missions.

(c) Secure all air items involved in known malfunctions.

(d) Conduct an investigation of all malfunctions and render reports through appropriate channels.

15-9. Special instructions

a. The DZSO will not change the flight pattern or route of the aircraft while the aircraft is within restricted airspace without the approval of Range Control.

b. The supported unit will be responsible for policing the DZ and spectator areas and removing all air delivery items (e.g., platforms, bundles, webbing, trash) prior to closing the DZ.

15-10. Military free fall operations (MFF)

a. MFF operations include both HAHO and HALO exercises.

b. Units participating in MFF operations will operate in accordance with SOCOM Regulation 350-2, FM 3-05.211, and this regulation.

c. Procedures and Restrictions.

(1) Coordination of airspace.

(a) Prior to conducting MFF operations, NOTAM's and MFF flight corridor fans will be approved and filed with Range Division.

(b) Information contained in the MFF flight corridor fans will include, but not be limited to, predicted release point (six digit grid), altitude, magnetic azimuth, and time of release.

(2) Control of MFF operations.

(a) The DZSO will establish communications with both the drop aircraft and Range Control.

(b) The DZSO will report the predicted release point approximately 6 minutes prior to the drop.

(c) The DZSO will report the altitude, magnetic azimuth, and the time when the last jumper exited the aircraft.

d. For planning purposes, the following restricted magnetic azimuths have been established for Fort Campbell DZs ("no drop"):

Drop Zone	Restricted Magnetic Azimuth
Veghel	55 to 160 degrees
Suckchon	290 to 55 degrees (HAHO jumps only)

NOTE: Corregidor and Bastogne DZs have been established as "no drop" DZs for HAHO operations.

15-11. Parachute team demonstration/sport parachute activity

a. Parachute Demonstrations. Personnel drops conducted within the cantonment area will be conducted in accordance with FAA regulations, CAM Regulation 95-1, and applicable Aviation Standardization Bulletins. Opening and closing of DZs on the cantonment area will be reported to Campbell Army Airfield tower.

b. Sport Parachuting. Requests for DZs will be submitted in accordance with chapter 2 of this regulation and conducted in accordance with procedures outlined in AR 215-1 (Morale, Welfare, and Recreation Activities and

Non Appropriated Funds Instrumentalities). Operations conducted within numbered training areas will adhere to the opening and closing procedures contained in this chapter.

15-12. Specific DZ characteristics

These characteristics are subject to change. See **https://private.amc.af.mil/a3/a39/zar/zar.htm** for the latest published surveys.

a. Bastogne DZ (figure 15-10 for details).

(1) Small Arms Impact Area one nautical mile east of DZ.

(2) Traffic Control. The using unit will place traffic control posts on Palmyra Road at the northwest and southwest corners of the DZ and on Mabry Road at the east end of the DZ to stop all traffic until parachutists and equipment have cleared the roads. NOTE: Bastogne DZ is not authorized for fixed-wing aircraft except on a case-by-case basis.

b. Corregidor DZ (figure 15-2 for details).

(1) South Impact Area 1.2 nautical miles west of DZ.

(2) Traffic control. The using unit is responsible for traffic control points on Angels Road at the northeast and northwest corners of the DZ and on Grant Road at the southeast corner of the DZ. Traffic control personnel will stop traffic until all jumpers and equipment have cleared the road.

c. Son DZ. (No longer available, see Policy letter dated, 8 September 2004)

d. Suckchon DZ (West to East)(figure 15-8 for details).

(1) Traffic control. The using unit will place a traffic control post on the road junctions located at DF 47824615, DF 47944413, and DF 45834637. These road guards will stop all traffic until all parachutists and equipment clear the road.

e. Veghel DZ (figure 15-12 for details).

(1) Traffic control. The using unit will place a traffic control post on the road junction at DF 30107002 to stop all traffic until all parachutists and equipment clear the road.

15-13. Tactical DZs, EZs, and LZs

a. In addition to the major DZs, there are lettered surveyed TDZs, two EZs, and one LZ on Fort Campbell.

b. Surveys for the TDZs, EZs and LZs are kept on file in the S3 Air Section and can be found on the internet at: **https://private.amc.af.mil/a3/a39/zar/zar.htm**. These areas are the only areas authorized for airdrop missions involving Air Force equipment or aircraft. Other areas may be used by Army aircraft if surveyed by qualified pathfinders or special operations personnel at a location approved by Range Division.

c. Approved TDZ, EZ, and LZ listings are at table 15-1.

d. **Confirm frequencies with current DOD Flight Information Publications**

15-14. Golden Eagle assault landing strip

a. The Golden Eagle Assault landing strip was constructed in 1987 under specific requirements for landing C-130 aircraft. Unauthorized use degrades the airstrip below Air Force standards and forces major repairs. A 200 meter buffer zone has been established around Golden Eagle to prevent damage to the ALS. Air Force aircraft supporting Army training will have priority of use over all other users of Golden Eagle. Golden Eagle LZ/DZ must be inspected and cleared by a Range Control inspector after training is completed.

b.The following uses of Golden Eagle are **unauthorized:**

(1) Use as a tactical maneuver area.

(2) Any vehicular traffic.

(3) Refueling operations.

(4) Sling-load operations.

(5) Heavy equipment drops.

c. The following uses of Golden Eagle are **authorized:**

(1) C-130 assault landings.

(2) Personnel drops.

(3) Helicopter air assault missions.

(4) Helicopter air crew training (when properly scheduled).

(5) CDS drops.

d. The loading ramp is restricted to those vehicles specifically required for on/off load operations, and then only when using prepared routes.

e. The commander of each unit signing for or utilizing TA 8A will prevent unauthorized use of Golden Eagle ALS and will enforce the 200 meter buffer zone.

f. Fixed wing aircraft supporting Army missions may pre-empt previously scheduled ground users of Golden Eagle on short notice.

h. Questions can be directed to G3 Air.

15-15. Helocasting operations

a. For helocasting operations, the following minimum support personnel and equipment must be present at the helocasting site in order to receive clearance from Range Control:

(1) Casting area safety officer (SFC or above certified by the battalion commander).

(2) Castmaster (qualified combat diver) (SSG or above certified by the battalion commander).

(3) Two safety boat NCOs (SGT or above and qualified dive supervisors).

(4) Two qualified diver/Red Cross certified lifeguards.

(5) Two safety power boats with operators.

(6) Two medics with aid bag and backboard (must be medical dive technician qualified).

(7) Two means of communication with Range Control.

b. The casting area safety officer must have previously participated in helocasting operations. He is directly responsible for conducting the operations. The casting area safety officer must:

(1) Conform to the time schedule as closely as practicable in compliance with safety standards and conditions existing at the time of the operation.

(2) Ensure all participants receive a complete briefing.

(3) Brief the safety boat NCOs.

(4) Cease the helocasting operation if any unsafe condition arises.

(5) Ensure all jumpers wear life jackets or vests. (If a dry suit is worn, a life jacket or vest is unnecessary.)

c. The castmaster will be a qualified combat diver, and must have previously participated in helocasting operations. The castmaster will --

(1) Make a reconnaissance of the proposed drop area.

(2) Conduct the castmaster briefing.

(3) Conduct a safety check of the helicopter to ensure the casting bar, when equipped, is properly placed and rigged for safe operations.

(4) Perform a safety inspection of all swimmers to verify their equipment is properly positioned and functional in order to prevent any malfunction or injury upon exit from the aircraft or on contact with the water. Be particularly attentive to flotation devices, inspecting them in accordance with FM 3-05.210 chapter 18.

(5) Brief the pilot and air crew on all aspects of the operation to include hand and arm signals to be used and no-drop conditions.

(6) Ensure that voice communication exists and is functional among the castmaster, pilot and safety boats.

(7) Assign buddy teams and ensure that all swimmers are seated in stick order. He will verify that all swimmers understand their assigned duties and follow the hand and arm signals and verbal commands.

(8) Ensure that the swimmers exit the aircraft as buddy teams. Swimmers will exit the aircraft only on the command of the castmaster.

(9) Cast the swimmers only if the aircraft is correctly aligned and safe within the limits of speed and attitude.

(10) Ensure that no swimmer exits the aircraft until the boat is in the water when launching the RRC.

(11) Ensure all jumpers wear life jackets or vests. (If a dry suit is worn, a life jacket or vest is unnecessary.)

(12) Abort the operation if any unsafe condition exists.

d. The safety boat NCO will --

(1) Maintain effective control of all surface support in the casting area.

(2) Brief all safety boat personnel in conducting their assigned duties.

(3) Supervise the boat crews, medics and the safety divers.

(4) Establish and maintain boat-to-air communications.

(5) Physically inspect the casting area for safe water depth, obstacles, and potentially hazardous debris. Obstacles will be marked as required by the unit SOP.

(6) Mark the casting area and transmitting appropriate and accurate weather, wind, and surf conditions, as applicable.

(7) Ensure that the safety boats are equipped with medical aid bags, backboards, radios, and buoys, with weights and sufficient line to mark suspected area of lost equipment.

(8) Ensure the casting area is kept clear of unnecessary personnel, equipment, boats, and debris.

(9) Ensure the safety boats move parallel and to the left of the helicopters' line of flight.

(10) Observe each swimmer during water entry.

(11) Abort helocasting operations if, in his opinion, any unsafe condition arises.

e. The safety swimmers will be qualified combat divers or certified Red Cross lifeguards and will --

(1) Follow prescribed safety procedures.

(2) Perform duties as directed by the castmaster.

(3) Follow castmaster commands.

(4) Signal upon surfacing after water entry, to indicate they are uninjured.

f. Safety Considerations. Due to hazards involved, emphasize safety in planning for and executing helicopter casting operations. The following checklist will be implemented for each helocasting operation:

(1) Immediately prior to a helocast operation, physically reconnoiter the casting area to verify water depth and the absence of obstacles and debris.

(2) Ensure water depth is no less than 15 feet.

(3) Ensure motorized safety boats are in the water with motors running to conduct helocasting and recovery operation.

(4) Establish radio voice communication between the safety boats and the drop aircraft.

(5) Ensure one standby diver in complete scuba gear is in each safety boat.

(6) Ensure the castmaster has voice communication with the pilot.

(7) Ensure drop altitude does not exceed 15 feet above the surface of the water (5 feet when launching RRC).

(8) Ensure drop speed does not exceed 15 knots indicated airspeed (KIAS when launching RRC).

(9) Ensure casting operations are done into the wind.

(10) Use only tail-ramp equipped helicopter to launch RRC.

(11) Ensure there is a qualified medic with a medical aid bag and a backboard in one of the safety boats.

(12) Ensure there is a qualified diving supervisor in one of the safety boats in the event the safety divers must enter the water.

(13) Cease helocasting operations in the event of an injured swimmer until the cause and extent of the injury are determined. Immediately contact Range Control by FM radio.

(14) Strictly follow the precautions for casting operations outlined in FM 3-05.210, chapter 18and appendix H.

(15) Conduct Stabo operations in accordance with FM 3-05.210 chapter 13, TM 10-1670-262-12, and FC 57-38.

DZ/EZ/LZ	Training Area	Grid Coordinates	Auth Use	Remarks
Charlie	24	DF 4357 5150	C, D, R	2
India	6	DF 5261 4748	C, P, R	1
Indian Mound (EZ)	28	DF 4250 5178	L, R, W	1
Juliet (EZ)	9A	DF 5182 4629	L, R	2
Kilo	5	DF 5262 4965	C, R	1
Bastogne	14	DF 5000 5370	C, H, P, R	1 No Fixed wing drops without approval By ACofS, G3
Corregidor	25	DF 4353 5432	C, H, P, R	1
Golden Eagle	8A	DF 5180 4549	AASLT Landing	1
Golden Eagle	8A	DF 5180 4549	P, D, C, N, R	2
Suckchon	21	DF 4662 4552	C, H, P, N, R	1
Veghel	44	DF 2943 6175	N, C, P, H, R	1

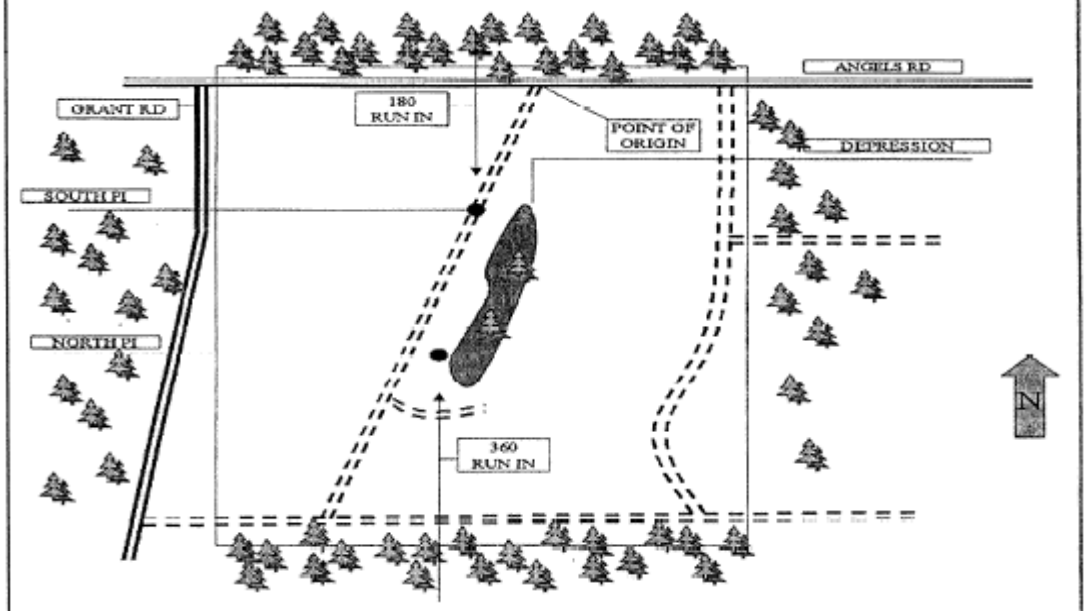
Authorized Use Codes				
C=Container Delivery System	P=Personnel Drop	W=Waiver		
D=Daytime only	N=Night only	Z=Water Drop Zone		
H=Heavy Drop	R=Restricted	L=Low Alt Parachute Extraction System		
Remark Codes				
1=Drop zone	Survey on file	and listed in the AF AZAR		
2=Drop zone	Survey on file	But not listed in the AF AZAR		

Table 15-1. TDZs, EZs, and LZs

DZ NAME

CORREGIDOR 338

10. DZ DIAGRAM



11. REMARKS

1. Drop zone controller will coordinate drop zone usage with Range Control and maintain radio contact with Range Control and aircraft at all times. Range Control radio frequencies: FM 75.25 primary / 48.50 alternate.

2. Aircraft will contact "Eagle Control" for clearance into restricted areas on the following frequencies: VHF - 128.75, UHF - 242.40, pre-flight for rotary wing.

3. 1420' MSL (1000' AGL) tower 14 NM south of drop zone.

4. 60'-80' trees on north and south side of drop zone.

5. South Impact Area located 1.2 NM west of drop zone.

6. User will place road guards on Angels and Grant roads during all personnel operations.

12. PHOTOGRAPH AVAILABLE

YES [X] NO [ ]

LOW LEVEL ROUTES

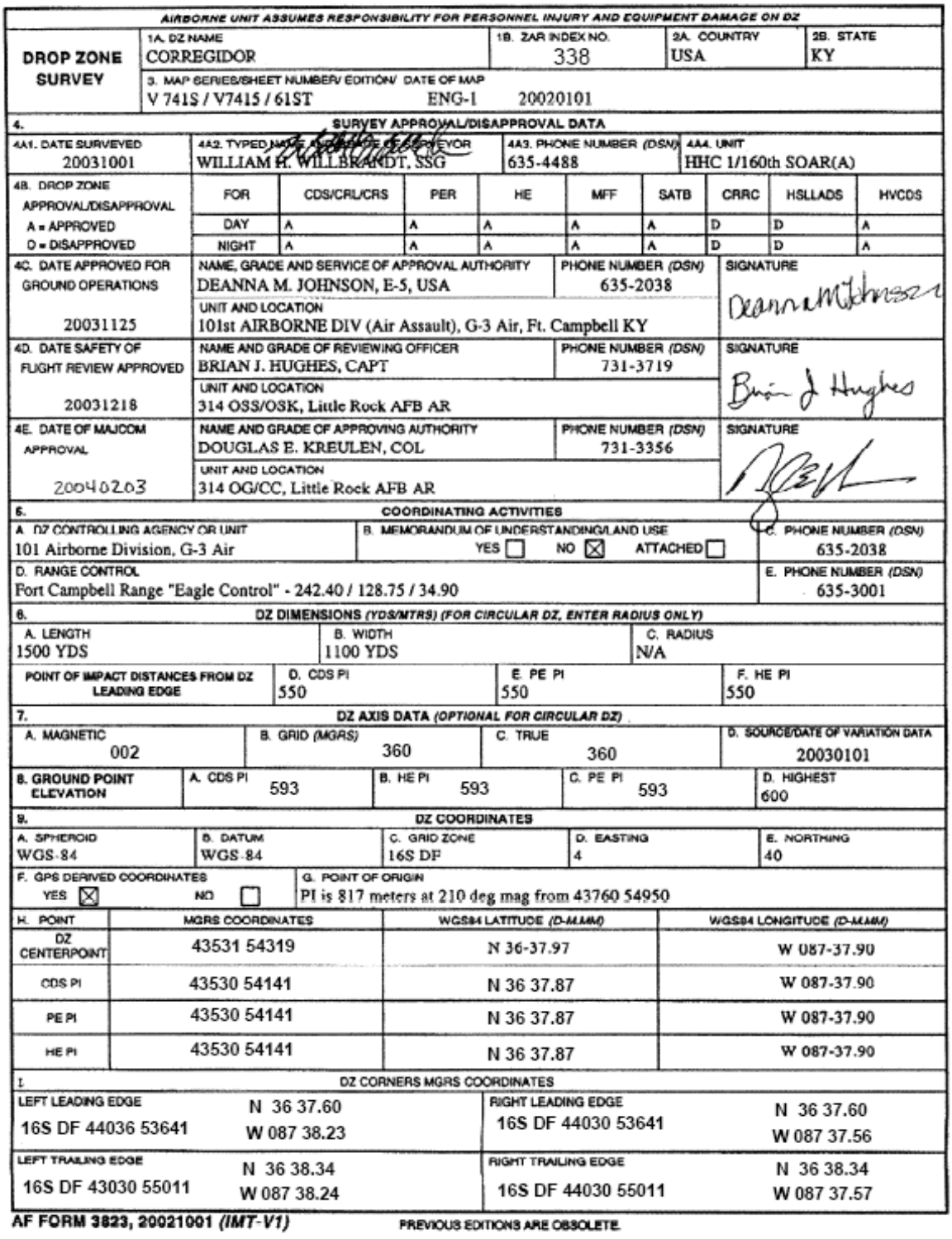
[ ] NONE AVAILABLE

[X] ROUTE NAME/DESIGNATOR SR 061, SR 221

AF FORM 3823, 20021001 (REVERSE) (IMT-V1)

Corregidor DZ 338.max

Figure 15-1. Corregidor DZ
Confirm frequencies with current DOD Flight Information Publications



AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

DROP ZONE SURVEY

1A. DZ NAME	1B. ZAR INDEX NO.	2A. COUNTRY	2B. STATE
CORREGIDOR	338	USA	KY

3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: V 741S / V7415 / 61ST ENG-1 20020101

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A1. DATE SURVEYED	4A2. TYPED NAME, GRADE AND SERVICE OF SURVEYOR	4A3. PHONE NUMBER (DSN)	4A4. UNIT
20031001	WILLIAM H. WILLBRANDT, SSG	635-4488	HHC 1/160th SOAR(A)

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)

	FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRC	HSLLADS	HVCDS
DAY	A	A	A	A	A	D	D	A	
NIGHT	A	A	A	A	A	D	D	A	

4C. DATE APPROVED FOR GROUND OPERATIONS	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20031125	DEANNA M. JOHNSON, E-5, USA UNIT AND LOCATION: 101st AIRBORNE DIV (Air Assault), G-3 Air, Ft. Campbell KY	635-2038	Deanna M Johnson

4D. DATE SAFETY OF FLIGHT REVIEW APPROVED	NAME AND GRADE OF REVIEWING OFFICER	PHONE NUMBER (DSN)	SIGNATURE
20031218	BRIAN J. HUGHES, CAPT UNIT AND LOCATION: 314 OSS/OSK, Little Rock AFB AR	731-3719	Brian J Hughes

4E. DATE OF MAJCOM APPROVAL	NAME AND GRADE OF APPROVING AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20040203	DOUGLAS E. KREULEN, COL UNIT AND LOCATION: 314 OG/CC, Little Rock AFB AR	731-3356	

5. COORDINATING ACTIVITIES

A. DZ CONTROLLING AGENCY OR UNIT	B. MEMORANDUM OF UNDERSTANDING/LAND USE	C. PHONE NUMBER (DSN)
101 Airborne Division, G-3 Air	YES ☐ NO ☒ ATTACHED ☐	635-2038

D. RANGE CONTROL	E. PHONE NUMBER (DSN)
Fort Campbell Range "Eagle Control" - 242.40 / 128.75 / 34.90	635-3001

6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

A. LENGTH	B. WIDTH	C. RADIUS
1500 YDS	1100 YDS	N/A

POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	D. CDS PI	E. PE PI	F. HE PI
	550	550	550

7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)

A. MAGNETIC	B. GRID (MGRS)	C. TRUE	D. SOURCE/DATE OF VARIATION DATA
002	360	360	20030101

8. GROUND POINT ELEVATION	A. CDS PI	B. HE PI	C. PE PI	D. HIGHEST
	593	593	593	600

9. DZ COORDINATES

A. SPHEROID	B. DATUM	C. GRID ZONE	D. EASTING	E. NORTHING
WGS-84	WGS-84	16S DF	4	40

F. GPS DERIVED COORDINATES: YES ☒ NO ☐

G. POINT OF ORIGIN: PI is 817 meters at 210 deg mag from 43760 54950

H. POINT	MGRS COORDINATES	WGS84 LATITUDE (D-MMM)	WGS84 LONGITUDE (D-MMM)
DZ CENTERPOINT	43531 54319	N 36-37.97	W 087-37.90
CDS PI	43530 54141	N 36 37.87	W 087-37.90
PE PI	43530 54141	N 36 37.87	W 087-37.90
HE PI	43530 54141	N 36 37.87	W 087-37.90

I. DZ CORNERS MGRS COORDINATES

LEFT LEADING EDGE: 16S DF 44036 53641	N 36 37.60 W 087 38.23	RIGHT LEADING EDGE: 16S DF 44030 53641	N 36 37.60 W 087 37.56
LEFT TRAILING EDGE: 16S DF 43030 55011	N 36 38.34 W 087 38.24	RIGHT TRAILING EDGE: 16S DF 44030 55011	N 36 38.34 W 087 37.57

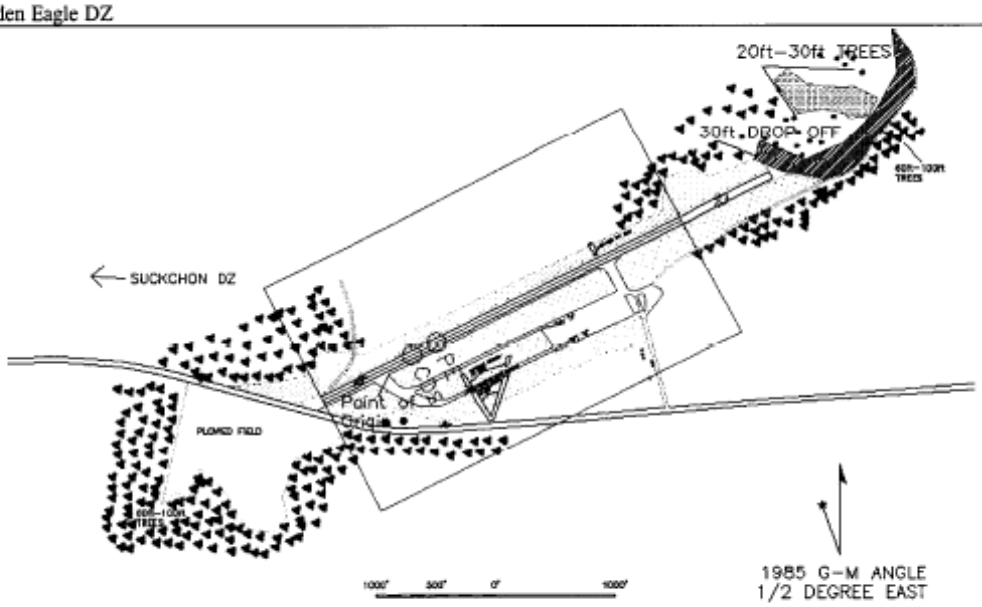
AF FORM 3823, 20021001 (IMT-V1) PREVIOUS EDITIONS ARE OBSOLETE.

Corregidor DZ 338.max

Figure 15-2. Corregidor DZ survey
Confirm frequencies with current DOD Flight Information Publications

DZ NAME

Golden Eagle DZ



11. REMARKS

9b. All coordinates are in WGS-84.

9f. GPS FOM is +/- 25ft.

1. LZ/DZ freqs are Pri 292.00, Alt 139.60
2. Aircraft must contact Eagle Control for clearance into restricted area. Pri 242.4, Alt 139.3.
3. Aircraft must not overfly Sabre Heliport below 200ft AGL. (Located 2.7nm @ 66° from DZ center)
4. For unilateral operations the DZC must contact range control (Pri 49.95, Alt 75.25) at least 30 minutes prior to operations.
5. Range ATIS 367.3 and 143.4.
6. The using unit is required to supply road guards to stop traffic on centerline road during airdrops.
7. The LZ surface is compacted clay. The ramp and taxiways are gravel covered. There are 8ft deep drainage ditches between taxiway "A" and "B".
8. There is a small pond located 1,400ft of the end of the DZ.
9. There is a 30ft drop-off approximately 1,000ft from the end of the DZ.
10. There are powerlines 1.75nm south of DZ running east-west along HWY 79.
11. Suckchon DZ is located 2.25nm West of the DZ.
12. 715ft msl fire tower located 2.5nm west of DZ

11. PHOTOGRAPH AVAILABLE	12. LOW LEVEL ROUTES
YES ☒ NO ☐	☐ NONE AVAILABLE ☐ ROUTE NAME/DESIGNATOR

AF FORM 3823, 19940201 *(REVERSE)* (EF-V2)

Wednesday, October 20, 2004.max

Figure 15-3. Golden Eagle DZ
Confirm frequencies with current DOD Flight Information Publications

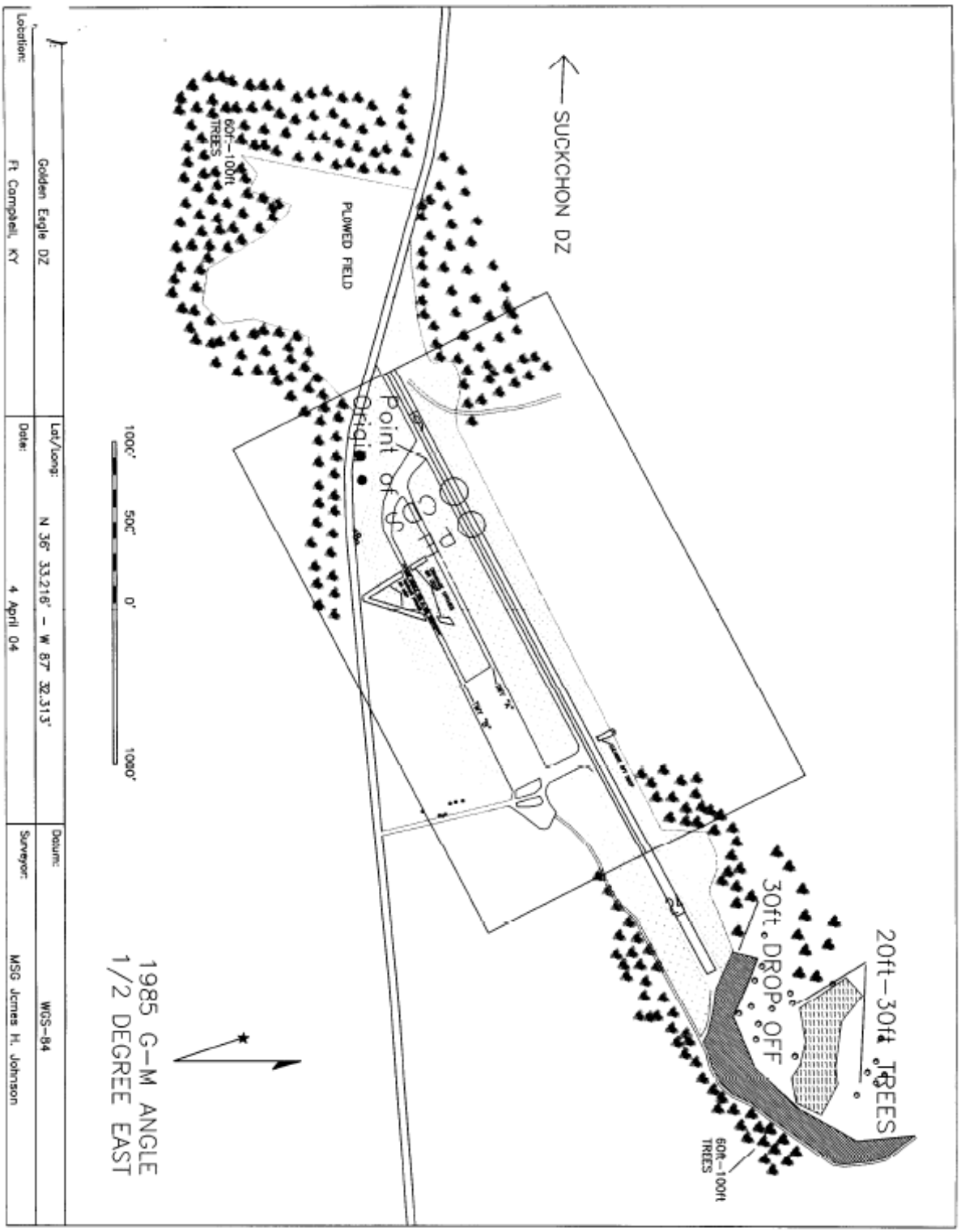
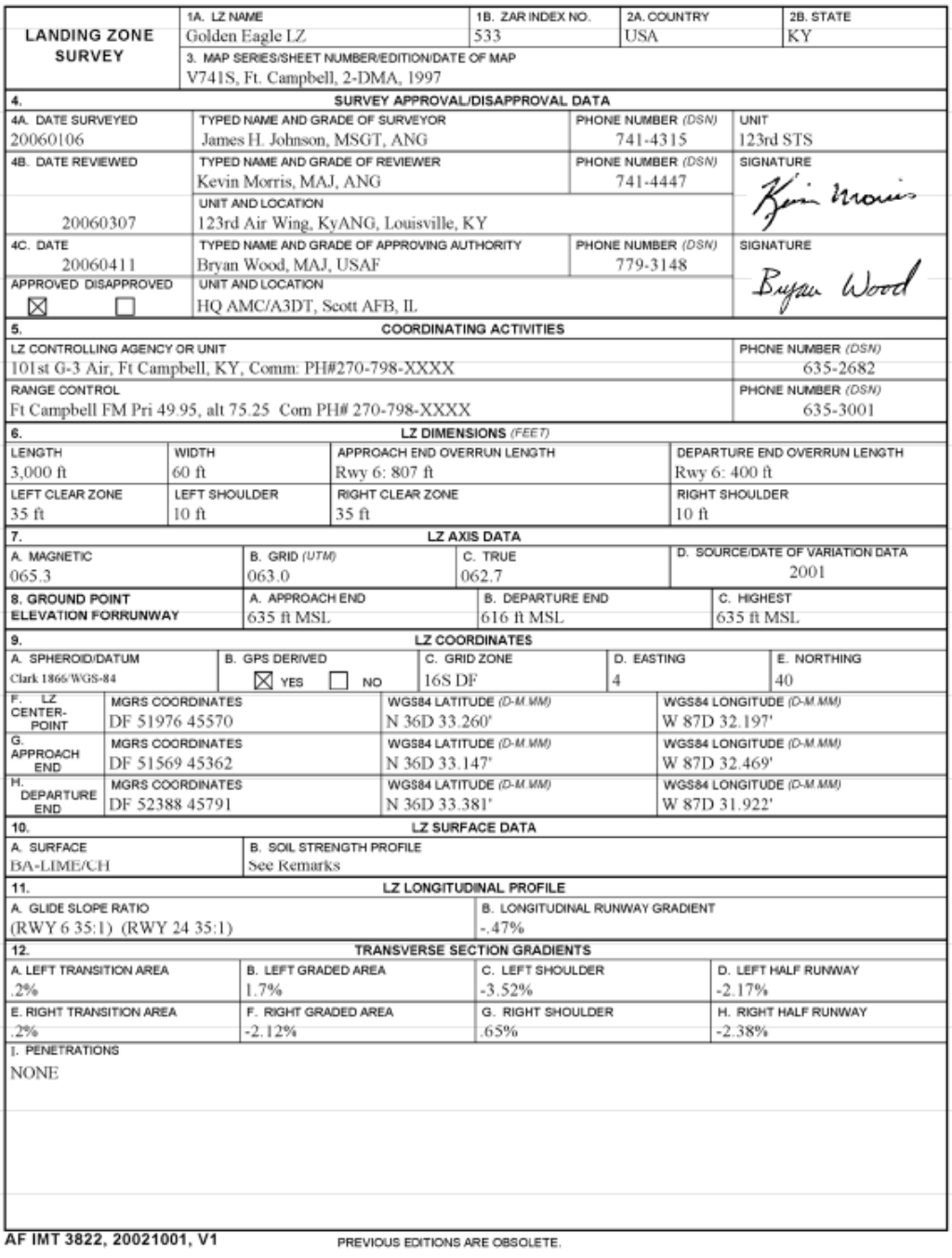


Figure 15-4. Golden Eagle diagram
Confirm frequencies with current DOD Flight Information Publications



LANDING ZONE SURVEY	1A. LZ NAME	1B. ZAR INDEX NO.	2A. COUNTRY	2B. STATE
	Golden Eagle LZ	533	USA	KY
	3. MAP SERIES/SHEET NUMBER/EDITION/DATE OF MAP: V741S, Ft. Campbell, 2-DMA, 1997			

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A. DATE SURVEYED	TYPED NAME AND GRADE OF SURVEYOR	PHONE NUMBER (DSN)	UNIT
20060106	James H. Johnson, MSGT, ANG	741-4315	123rd STS
4B. DATE REVIEWED	**TYPED NAME AND GRADE OF REVIEWER**	**PHONE NUMBER (DSN)**	**SIGNATURE**
	Kevin Morris, MAJ, ANG	741-4447	Kevin Morris
20060307	UNIT AND LOCATION: 123rd Air Wing, KyANG, Louisville, KY		
4C. DATE	**TYPED NAME AND GRADE OF APPROVING AUTHORITY**	**PHONE NUMBER (DSN)**	**SIGNATURE**
20060411	Bryan Wood, MAJ, USAF	779-3148	Bryan Wood
APPROVED ☒ DISAPPROVED ☐	UNIT AND LOCATION: HQ AMC/A3DT, Scott AFB, IL		

5. COORDINATING ACTIVITIES

LZ CONTROLLING AGENCY OR UNIT	PHONE NUMBER (DSN)
101st G-3 Air, Ft Campbell, KY, Comm: PH#270-798-XXXX	635-2682
RANGE CONTROL	**PHONE NUMBER (DSN)**
Ft Campbell FM Pri 49.95, alt 75.25 Com PH# 270-798-XXXX	635-3001

6. LZ DIMENSIONS (FEET)

LENGTH	WIDTH	APPROACH END OVERRUN LENGTH	DEPARTURE END OVERRUN LENGTH
3,000 ft	60 ft	Rwy 6: 807 ft	Rwy 6: 400 ft
LEFT CLEAR ZONE	**LEFT SHOULDER**	**RIGHT CLEAR ZONE**	**RIGHT SHOULDER**
35 ft	10 ft	35 ft	10 ft

7. LZ AXIS DATA

A. MAGNETIC	B. GRID (UTM)	C. TRUE	D. SOURCE/DATE OF VARIATION DATA
065.3	063.0	062.7	2001

8. GROUND POINT ELEVATION FORRUNWAY	A. APPROACH END	B. DEPARTURE END	C. HIGHEST
	635 ft MSL	616 ft MSL	635 ft MSL

9. LZ COORDINATES

A. SPHEROID/DATUM	B. GPS DERIVED	C. GRID ZONE	D. EASTING	E. NORTHING
Clark 1866/WGS-84	☒ YES ☐ NO	16S DF	4	40

	MGRS COORDINATES	WGS84 LATITUDE (D-M.MM)	WGS84 LONGITUDE (D-M.MM)
F. LZ CENTER-POINT	DF 51976 45570	N 36D 33.260'	W 87D 32.197'
G. APPROACH END	DF 51569 45362	N 36D 33.147'	W 87D 32.469'
H. DEPARTURE END	DF 52388 45791	N 36D 33.381'	W 87D 31.922'

10. LZ SURFACE DATA

A. SURFACE	B. SOIL STRENGTH PROFILE
BA-LIME/CH	See Remarks

11. LZ LONGITUDINAL PROFILE

A. GLIDE SLOPE RATIO	B. LONGITUDINAL RUNWAY GRADIENT
(RWY 6 35:1) (RWY 24 35:1)	-.47%

12. TRANSVERSE SECTION GRADIENTS

A. LEFT TRANSITION AREA	B. LEFT GRADED AREA	C. LEFT SHOULDER	D. LEFT HALF RUNWAY
.2%	1.7%	-3.52%	-2.17%
E. RIGHT TRANSITION AREA	**F. RIGHT GRADED AREA**	**G. RIGHT SHOULDER**	**H. RIGHT HALF RUNWAY**
.2%	-2.12%	.65%	-2.38%

I. PENETRATIONS
NONE

AF IMT 3822, 20021001, V1 PREVIOUS EDITIONS ARE OBSOLETE.

Figure 15-4. Golden Eagle diagram
Confirm frequencies with current DOD Flight Information Publications

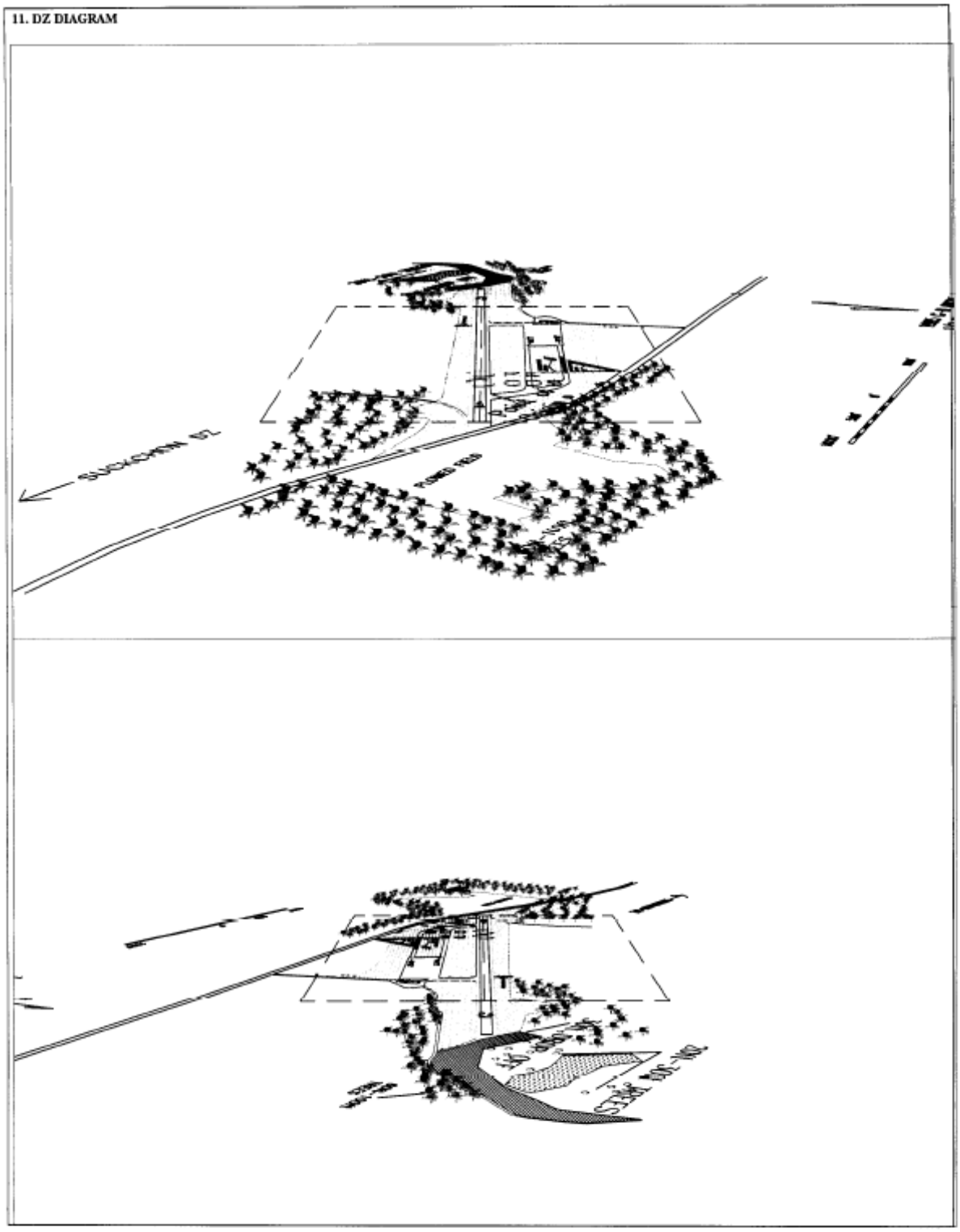
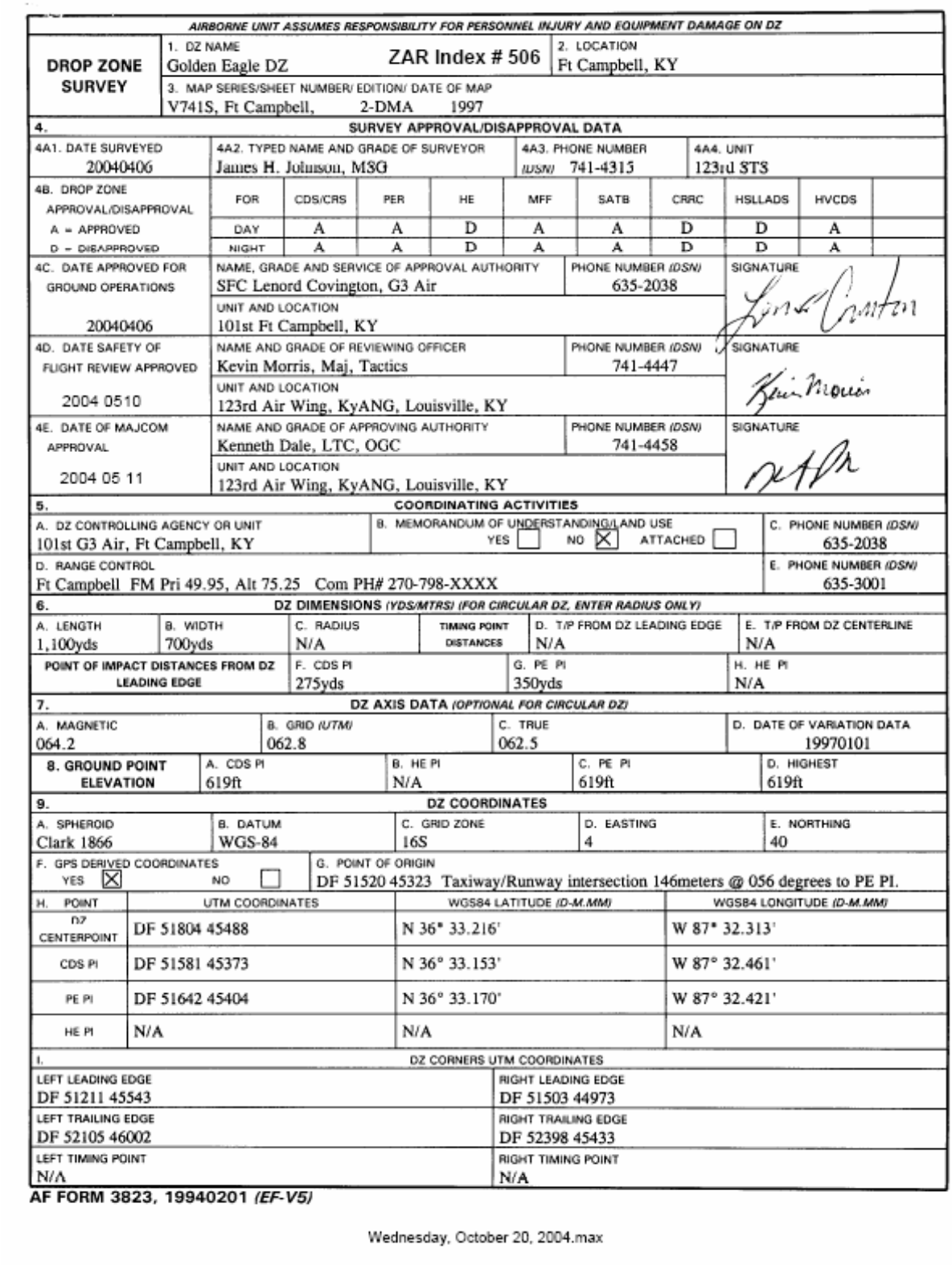


Figure 15-5. Golden Eagle DZ diagram



AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

DROP ZONE SURVEY

1. DZ NAME: Golden Eagle DZ — ZAR Index # 506
2. LOCATION: Ft Campbell, KY
3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: V741S, Ft Campbell, 2-DMA 1997

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A1. DATE SURVEYED	4A2. TYPED NAME AND GRADE OF SURVEYOR	4A3. PHONE NUMBER (DSN)	4A4. UNIT
20040406	James H. Johnson, MSG	741-4313	123rd STS

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)	FOR	CDS/CRS	PER	HE	MFF	SATB	CRRC	HSLLADS	HVCDS
	DAY	A	A	D	A	A	D	D	A
	NIGHT	A	A	D	A	A	D	D	A

	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
4C. DATE APPROVED FOR GROUND OPERATIONS: 20040406	SFC Lenord Covington, G3 Air UNIT AND LOCATION: 101st Ft Campbell, KY	635-2038	
4D. DATE SAFETY OF FLIGHT REVIEW APPROVED: 2004 0510	NAME AND GRADE OF REVIEWING OFFICER: Kevin Morris, Maj, Tactics UNIT AND LOCATION: 123rd Air Wing, KyANG, Louisville, KY	741-4447	
4E. DATE OF MAJCOM APPROVAL: 2004 05 11	NAME AND GRADE OF APPROVING AUTHORITY: Kenneth Dale, LTC, OGC UNIT AND LOCATION: 123rd Air Wing, KyANG, Louisville, KY	741-4458	

5. COORDINATING ACTIVITIES

A. DZ CONTROLLING AGENCY OR UNIT	B. MEMORANDUM OF UNDERSTANDING/LAND USE	C. PHONE NUMBER (DSN)
101st G3 Air, Ft Campbell, KY	YES ☐ NO ☒ ATTACHED ☐	635-2038
D. RANGE CONTROL: Ft Campbell FM Pri 49.95, Alt 75.25 Com PH# 270-798-XXXX		E. PHONE NUMBER (DSN): 635-3001

6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

A. LENGTH	B. WIDTH	C. RADIUS	TIMING POINT DISTANCES	D. T/P FROM DZ LEADING EDGE	E. T/P FROM DZ CENTERLINE
1,100yds	700yds	N/A		N/A	N/A

POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	F. CDS PI	G. PE PI	H. HE PI
	275yds	350yds	N/A

7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)

A. MAGNETIC	B. GRID (UTM)	C. TRUE	D. DATE OF VARIATION DATA
064.2	062.8	062.5	19970101

8. GROUND POINT ELEVATION	A. CDS PI	B. HE PI	C. PE PI	D. HIGHEST
	619ft	N/A	619ft	619ft

9. DZ COORDINATES

A. SPHEROID	B. DATUM	C. GRID ZONE	D. EASTING	E. NORTHING
Clark 1866	WGS-84	16S	4	40

F. GPS DERIVED COORDINATES YES ☒ NO ☐

G. POINT OF ORIGIN: DF 51520 45323 Taxiway/Runway intersection 146meters @ 056 degrees to PE PI.

H. POINT	UTM COORDINATES	WGS84 LATITUDE (D-M.MM)	WGS84 LONGITUDE (D-M.MM)
DZ CENTERPOINT	DF 51804 45488	N 36° 33.216'	W 87° 32.313'
CDS PI	DF 51581 45373	N 36° 33.153'	W 87° 32.461'
PE PI	DF 51642 45404	N 36° 33.170'	W 87° 32.421'
HE PI	N/A	N/A	N/A

I. DZ CORNERS UTM COORDINATES

LEFT LEADING EDGE	RIGHT LEADING EDGE
DF 51211 45543	DF 51503 44973
LEFT TRAILING EDGE	RIGHT TRAILING EDGE
DF 52105 46002	DF 52398 45433
LEFT TIMING POINT	RIGHT TIMING POINT
N/A	N/A

AF FORM 3823, 19940201 (EF-V5)

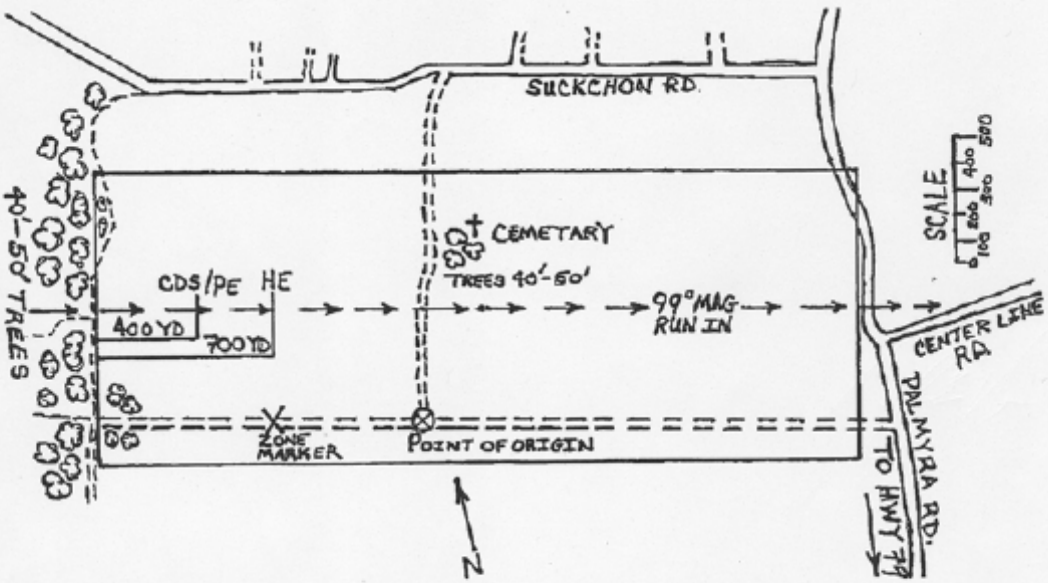
Wednesday, October 20, 2004.max

Figure 15-6. Golden Eagle survey
Confirm frequencies with current DOD Flight Information Publications

DZ NAME

SUCKCHON

10. DZ DIAGRAM



11. REMARKS

1. Drop zone controller will coordinate drop zone usage with Range Control and maintain radio contact with Range Control and aircraft at all times. Range Control radio frequencies: FM 75.25 primary / 48.50 alternate.

2. Aircraft will contact "Eagle Control" for clearance into restricted areas on the following frequencies: VHF - 128.75, UHF - 242.40, pre-flight for rotary wing.

3. Power lines on Hwy 79, 1000 meters south of drop zone.

4. 45' AGL fire tower at trailing edge of drop zone.

5. 124' AGL water tower 4 NM from drop zone at 094 degrees magnetic.

6. Cemetary located on drop zone at DF 46300 45811.

7. Highest obstacle within 10 NM is an 800' AGL (1495' MSL) tower located 2.5 NM fom drop zone at 260 degrees magnetic.

12. PHOTOGRAPH AVAILABLE

YES ☒ NO ☐

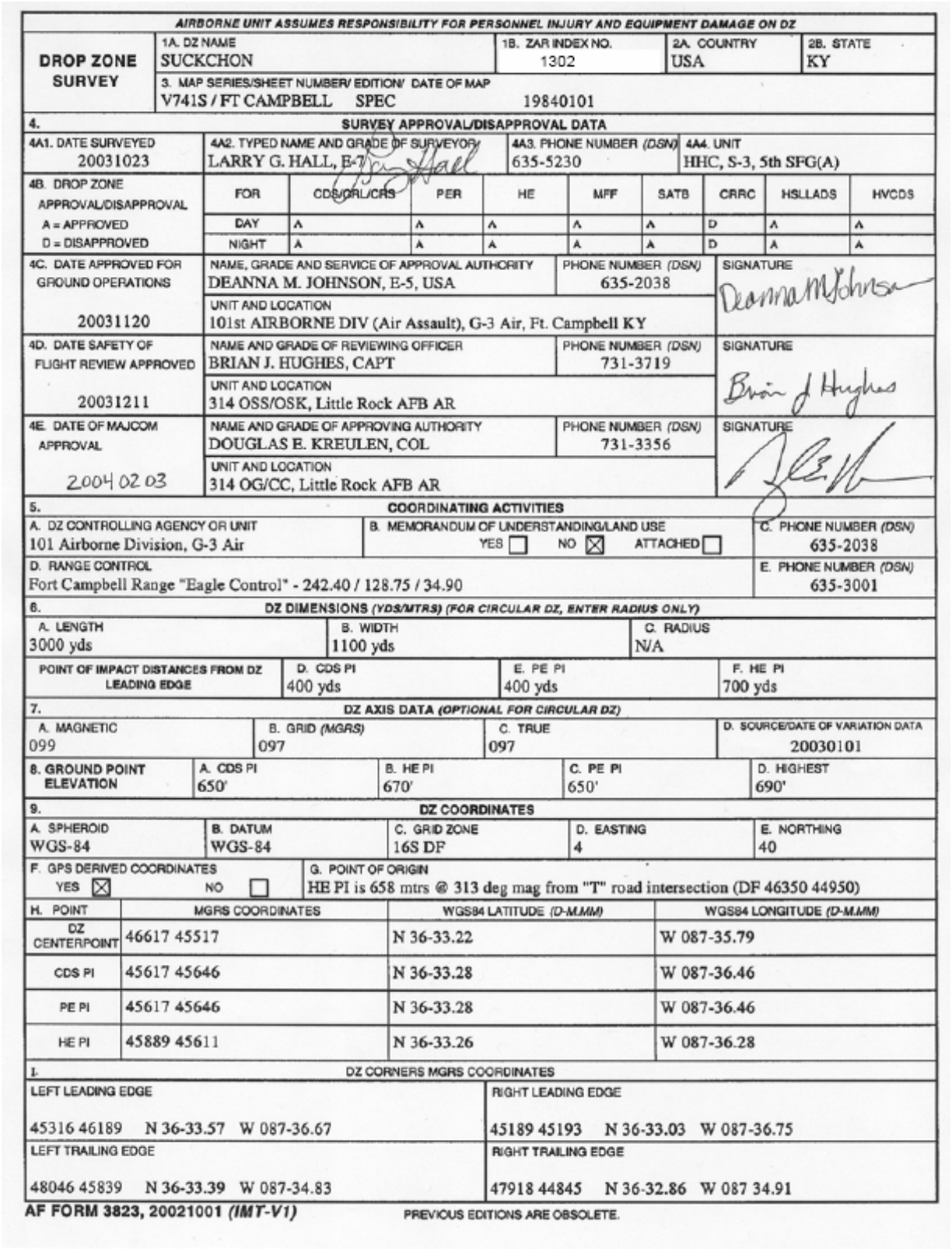
LOW LEVEL ROUTES

☐ NONE AVAILABLE

☒ ROUTE NAME/DESIGNATOR SR 060, SR 221

AF FORM 3823, 20021001 *(REVERSE) (IMT-V1)*

Figure 15-7. Suckchon DZ diagram
Confirm frequencies with current DOD Flight Information Publications



AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

DROP ZONE SURVEY

1A. DZ NAME	1B. ZAR INDEX NO.	2A. COUNTRY	2B. STATE
SUCKCHON	1302	USA	KY

3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: V741S / FT CAMPBELL SPEC 19840101

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A1. DATE SURVEYED	4A2. TYPED NAME AND GRADE OF SURVEYOR	4A3. PHONE NUMBER (DSN)	4A4. UNIT
20031023	LARRY G. HALL, E-7	635-5230	HHC, S-3, 5th SFG(A)

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)

FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRC	HSLLADS	HVCDS
DAY	A	A	A	A	A	D	A	A
NIGHT	A	A	A	A	A	D	A	A

4C. DATE APPROVED FOR GROUND OPERATIONS	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20031120	DEANNA M. JOHNSON, E-5, USA	635-2038	Deanna M Johnson
	UNIT AND LOCATION: 101st AIRBORNE DIV (Air Assault), G-3 Air, Ft. Campbell KY		

4D. DATE SAFETY OF FLIGHT REVIEW APPROVED	NAME AND GRADE OF REVIEWING OFFICER	PHONE NUMBER (DSN)	SIGNATURE
20031211	BRIAN J. HUGHES, CAPT	731-3719	Brian J Hughes
	UNIT AND LOCATION: 314 OSS/OSK, Little Rock AFB AR		

4E. DATE OF MAJCOM APPROVAL	NAME AND GRADE OF APPROVING AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
2004 02 03	DOUGLAS E. KREULEN, COL	731-3356	
	UNIT AND LOCATION: 314 OG/CC, Little Rock AFB AR		

5. COORDINATING ACTIVITIES

A. DZ CONTROLLING AGENCY OR UNIT	B. MEMORANDUM OF UNDERSTANDING/LAND USE	C. PHONE NUMBER (DSN)
101 Airborne Division, G-3 Air	YES ☐ NO ☒ ATTACHED ☐	635-2038
D. RANGE CONTROL: Fort Campbell Range "Eagle Control" - 242.40 / 128.75 / 34.90		E. PHONE NUMBER (DSN): 635-3001

6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

A. LENGTH	B. WIDTH	C. RADIUS
3000 yds	1100 yds	N/A

POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	D. CDS PI	E. PE PI	F. HE PI
	400 yds	400 yds	700 yds

7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)

A. MAGNETIC	B. GRID (MGRS)	C. TRUE	D. SOURCE/DATE OF VARIATION DATA
099	097	097	20030101

8. GROUND POINT ELEVATION	A. CDS PI	B. HE PI	C. PE PI	D. HIGHEST
	650'	670'	650'	690'

9. DZ COORDINATES

A. SPHEROID	B. DATUM	C. GRID ZONE	D. EASTING	E. NORTHING
WGS-84	WGS-84	16S DF	4	40

F. GPS DERIVED COORDINATES: YES ☒ NO ☐

G. POINT OF ORIGIN: HE PI is 658 mtrs @ 313 deg mag from "T" road intersection (DF 46350 44950)

H. POINT	MGRS COORDINATES	WGS84 LATITUDE (D-MMM)	WGS84 LONGITUDE (D-MMM)
DZ CENTERPOINT	46617 45517	N 36-33.22	W 087-35.79
CDS PI	45617 45646	N 36-33.28	W 087-36.46
PE PI	45617 45646	N 36-33.28	W 087-36.46
HE PI	45889 45611	N 36-33.26	W 087-36.28

I. DZ CORNERS MGRS COORDINATES

LEFT LEADING EDGE	RIGHT LEADING EDGE
45316 46189 N 36-33.57 W 087-36.67	45189 45193 N 36-33.03 W 087-36.75
LEFT TRAILING EDGE	**RIGHT TRAILING EDGE**
48046 45839 N 36-33.39 W 087-34.83	47918 44845 N 36-32.86 W 087 34.91

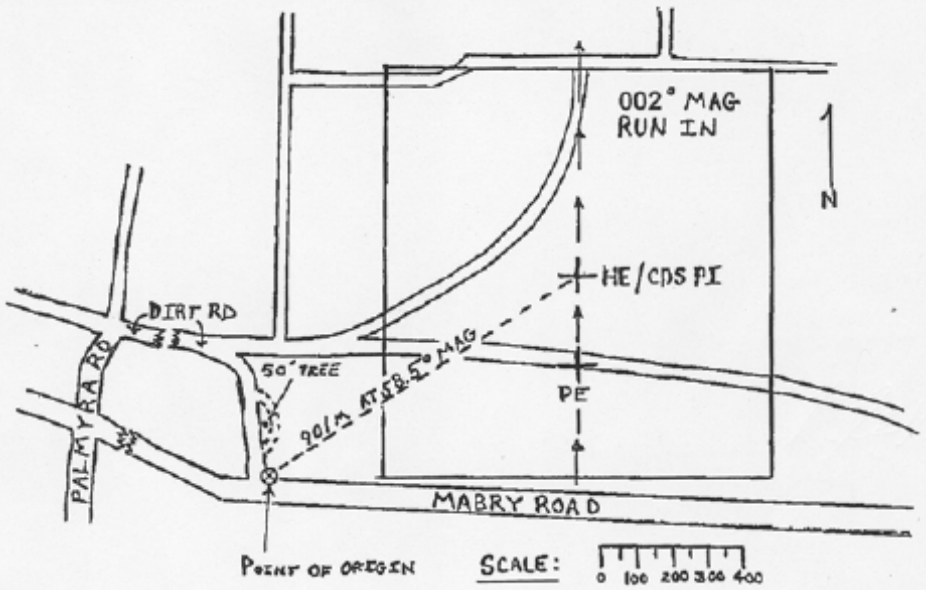
AF FORM 3823, 20021001 (IMT-V1) PREVIOUS EDITIONS ARE OBSOLETE.

Figure 15-8. Suckchon DZ survey
Confirm frequencies with current DOD Flight Information Publications

DZ NAME

BASTOGNE

10. DZ DIAGRAM



11. REMARKS

1. Drop zone controller will coordinate drop zone usage with Range Control and maintain radio contact with Range Control and aircraft at all times. Range Control radio frequencies: FM 75.25 primary / 48.50 alternate.

2. Aircraft will contact "Eagle Control" for clearance into restricted areas on the following frequencies: VHF - 128.75, UHF - 242.40, pre-flight for rotary wing.

3. Drop zone is located within Campbell AAF airspace. CAAF/KHOP is 4 NM northeast of drop zone.

4. Small arms impact area located 1 NM east of drop zone.

5. User will place road guards on Mabry Road during heavy equipment and personnel drops.

12. PHOTOGRAPH AVAILABLE

YES ☒ NO ☐

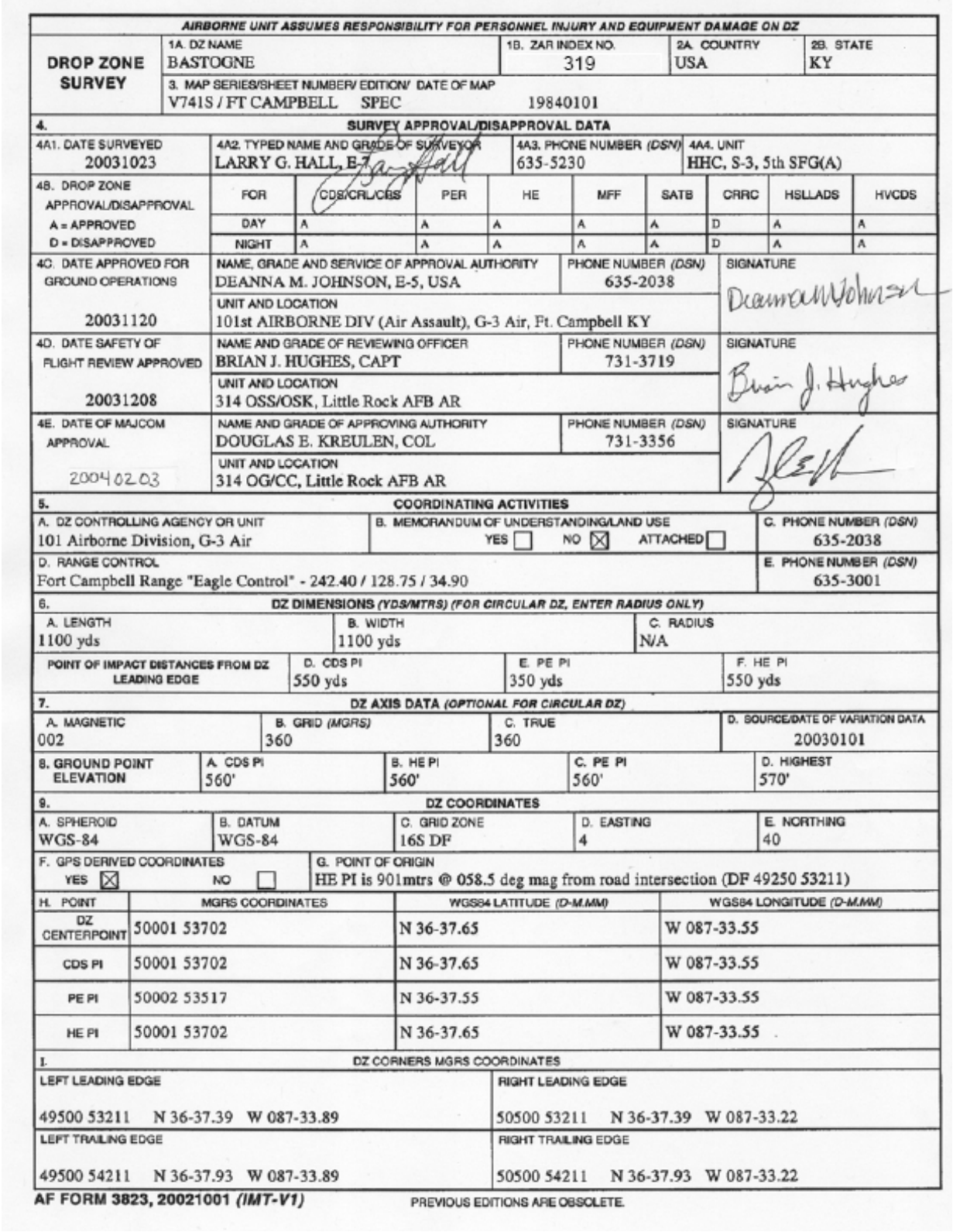
LOW LEVEL ROUTES

☐ NONE AVAILABLE

☒ ROUTE NAME/DESIGNATOR SR 059, SR 221

AF FORM 3823, 20021001 *(REVERSE) (IMT-V1)*

Figure 15-9. Bastogne DZ diagram
Confirm frequencies with current DOD Flight Information Publications



AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

DROP ZONE SURVEY

1A. DZ NAME	1B. ZAR INDEX NO.	2A. COUNTRY	2B. STATE
BASTOGNE	319	USA	KY

3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: V741S / FT CAMPBELL SPEC 19840101

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A1. DATE SURVEYED	4A2. TYPED NAME AND GRADE OF SURVEYOR	4A3. PHONE NUMBER (DSN)	4A4. UNIT
20031023	LARRY G. HALL, E-7	635-5230	HHC, S-3, 5th SFG(A)

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)

	FOR	CDS/CRL/CBS	PER	HE	MFF	SATB	CRRC	HSLLADS	HVCDS
	DAY	A	A	A	A	A	D	A	A
	NIGHT	A	A	A	A	A	D	A	A

4C. DATE APPROVED FOR GROUND OPERATIONS	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20031120	DEANNA M. JOHNSON, E-5, USA	635-2038	
	UNIT AND LOCATION: 101st AIRBORNE DIV (Air Assault), G-3 Air, Ft. Campbell KY		

4D. DATE SAFETY OF FLIGHT REVIEW APPROVED	NAME AND GRADE OF REVIEWING OFFICER	PHONE NUMBER (DSN)	SIGNATURE
20031208	BRIAN J. HUGHES, CAPT	731-3719	
	UNIT AND LOCATION: 314 OSS/OSK, Little Rock AFB AR		

4E. DATE OF MAJCOM APPROVAL	NAME AND GRADE OF APPROVING AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20040203	DOUGLAS E. KREULEN, COL	731-3356	
	UNIT AND LOCATION: 314 OG/CC, Little Rock AFB AR		

5. COORDINATING ACTIVITIES

A. DZ CONTROLLING AGENCY OR UNIT	B. MEMORANDUM OF UNDERSTANDING/LAND USE	C. PHONE NUMBER (DSN)
101 Airborne Division, G-3 Air	YES ☐ NO ☒ ATTACHED ☐	635-2038
D. RANGE CONTROL: Fort Campbell Range "Eagle Control" - 242.40 / 128.75 / 34.90		E. PHONE NUMBER (DSN): 635-3001

6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

A. LENGTH	B. WIDTH	C. RADIUS
1100 yds	1100 yds	N/A

POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	D. CDS PI	E. PE PI	F. HE PI
	550 yds	350 yds	550 yds

7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)

A. MAGNETIC	B. GRID (MGRS)	C. TRUE	D. SOURCE/DATE OF VARIATION DATA
002	360	360	20030101

8. GROUND POINT ELEVATION	A. CDS PI	B. HE PI	C. PE PI	D. HIGHEST
	560'	560'	560'	570'

9. DZ COORDINATES

A. SPHEROID	B. DATUM	C. GRID ZONE	D. EASTING	E. NORTHING
WGS-84	WGS-84	16S DF	4	40

F. GPS DERIVED COORDINATES: YES ☒ NO ☐

G. POINT OF ORIGIN: HE PI is 901mtrs @ 058.5 deg mag from road intersection (DF 49250 53211)

H. POINT	MGRS COORDINATES	WGS84 LATITUDE (D-M.MM)	WGS84 LONGITUDE (D-M.MM)
DZ CENTERPOINT	50001 53702	N 36-37.65	W 087-33.55
CDS PI	50001 53702	N 36-37.65	W 087-33.55
PE PI	50002 53517	N 36-37.55	W 087-33.55
HE PI	50001 53702	N 36-37.65	W 087-33.55

I. DZ CORNERS MGRS COORDINATES

LEFT LEADING EDGE	RIGHT LEADING EDGE
49500 53211 N 36-37.39 W 087-33.89	50500 53211 N 36-37.39 W 087-33.22
LEFT TRAILING EDGE	**RIGHT TRAILING EDGE**
49500 54211 N 36-37.93 W 087-33.89	50500 54211 N 36-37.93 W 087-33.22

AF FORM 3823, 20021001 *(IMT-V1)* PREVIOUS EDITIONS ARE OBSOLETE.

Figure 15-10. Bastogne DZ survey
Confirm frequencies with current DOD Flight Information Publications

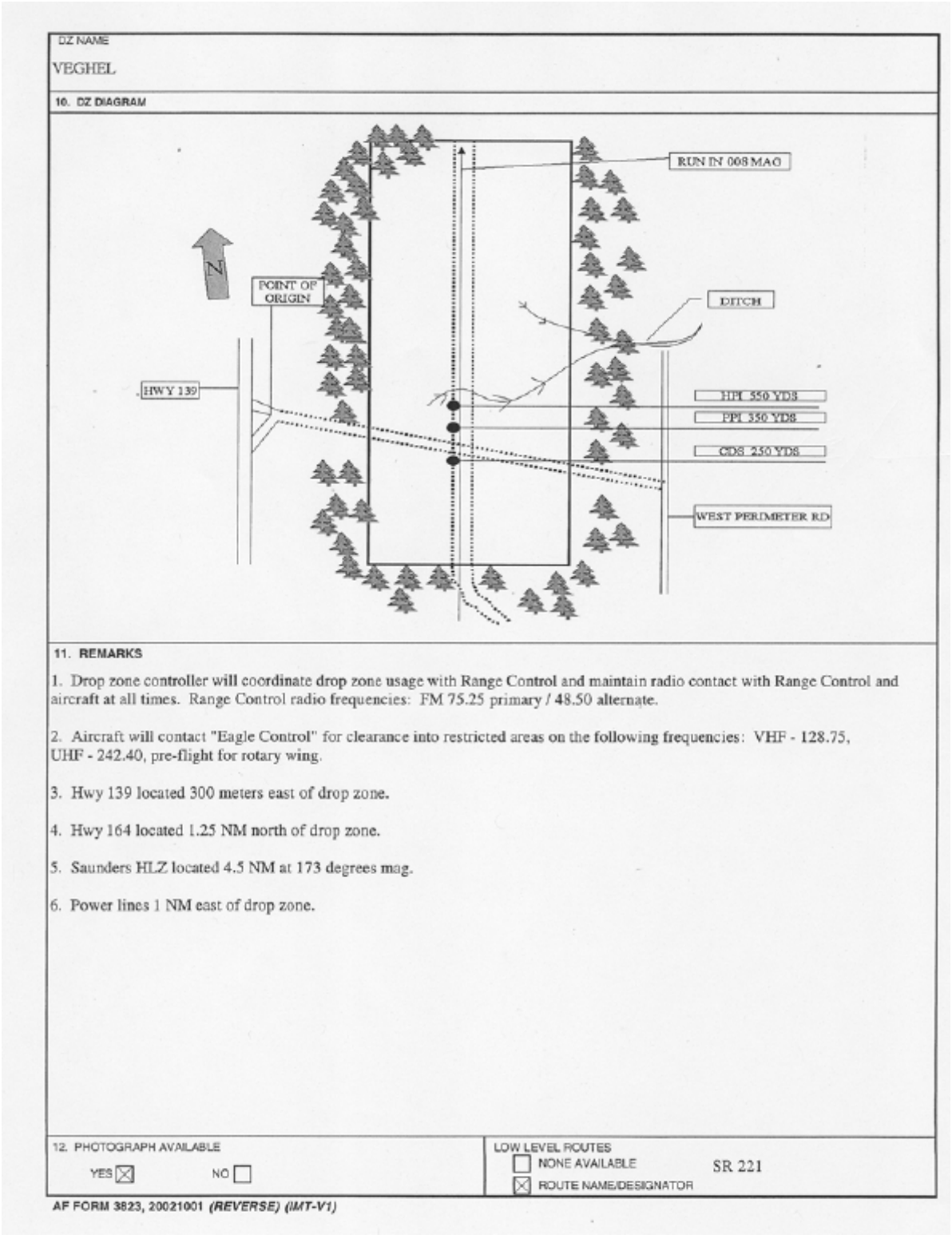
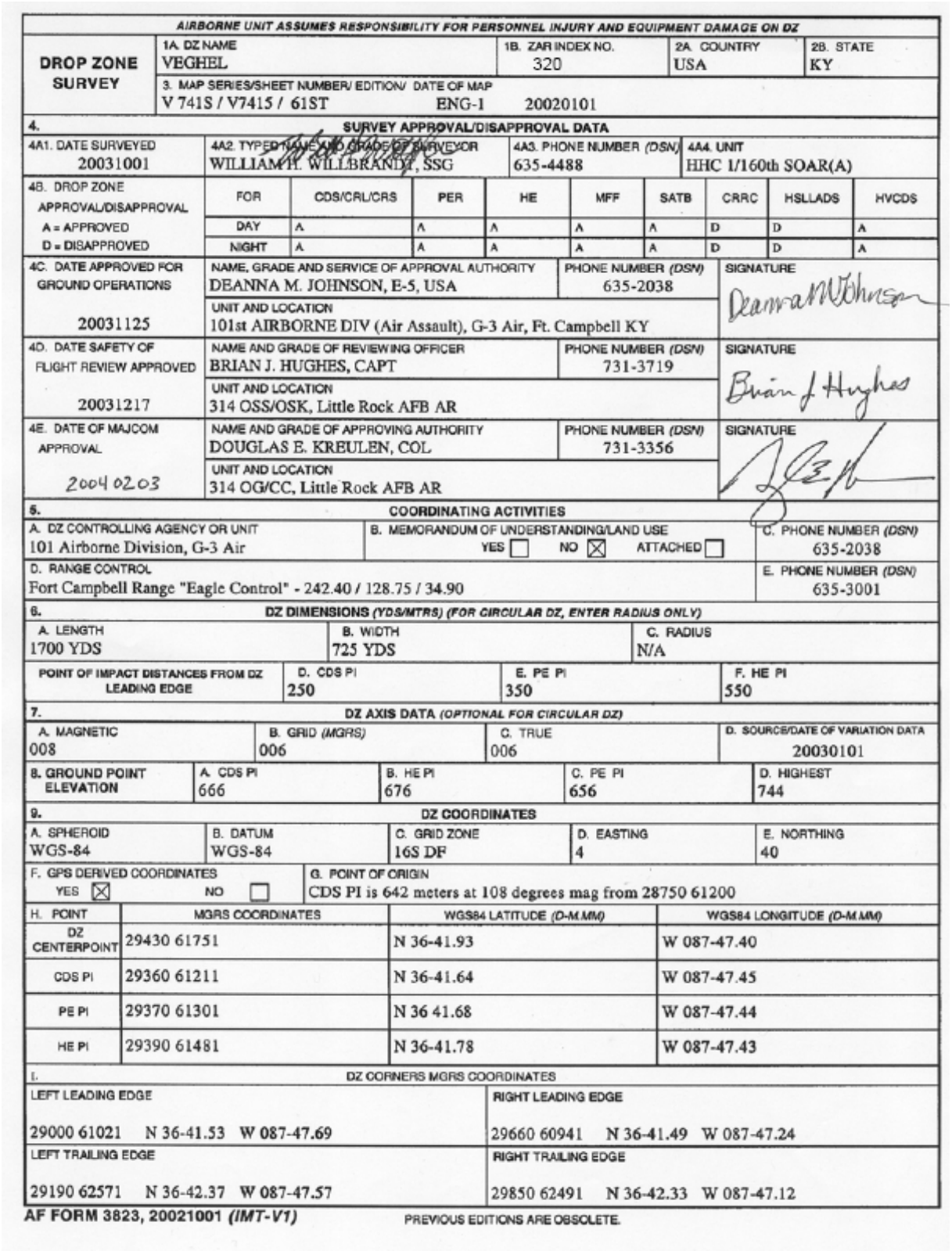


Figure 15-11. Veghel DZ diagram
Confirm frequencies with current DOD Flight Information Publications



AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ

DROP ZONE SURVEY

1A. DZ NAME	1B. ZAR INDEX NO.	2A. COUNTRY	2B. STATE
VEGHEL	320	USA	KY

3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP: V 741S / V7415 / 61ST ENG-1 20020101

4. SURVEY APPROVAL/DISAPPROVAL DATA

4A1. DATE SURVEYED	4A2. TYPED NAME AND GRADE OF SURVEYOR	4A3. PHONE NUMBER (DSN)	4A4. UNIT
20031001	WILLIAM H. WILLBRANDT, SSG	635-4488	HHC 1/160th SOAR(A)

4B. DROP ZONE APPROVAL/DISAPPROVAL (A = APPROVED, D = DISAPPROVED)

FOR	CDS/CRL/CRS	PER	HE	MFF	SATB	CRRC	HSLLADS	HVCDS
DAY	A	A	A	A	A	D	D	A
NIGHT	A	A	A	A	A	D	D	A

4C. DATE APPROVED FOR GROUND OPERATIONS	NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20031125	DEANNA M. JOHNSON, E-5, USA UNIT AND LOCATION: 101st AIRBORNE DIV (Air Assault), G-3 Air, Ft. Campbell KY	635-2038	Deanna M Johnson

4D. DATE SAFETY OF FLIGHT REVIEW APPROVED	NAME AND GRADE OF REVIEWING OFFICER	PHONE NUMBER (DSN)	SIGNATURE
20031217	BRIAN J. HUGHES, CAPT UNIT AND LOCATION: 314 OSS/OSK, Little Rock AFB AR	731-3719	Brian J Hughes

4E. DATE OF MAJCOM APPROVAL	NAME AND GRADE OF APPROVING AUTHORITY	PHONE NUMBER (DSN)	SIGNATURE
20040203	DOUGLAS E. KREULEN, COL UNIT AND LOCATION: 314 OG/CC, Little Rock AFB AR	731-3356	

5. COORDINATING ACTIVITIES

A. DZ CONTROLLING AGENCY OR UNIT	B. MEMORANDUM OF UNDERSTANDING/LAND USE	C. PHONE NUMBER (DSN)
101 Airborne Division, G-3 Air	YES ☐ NO ☒ ATTACHED ☐	635-2038

D. RANGE CONTROL	E. PHONE NUMBER (DSN)
Fort Campbell Range "Eagle Control" - 242.40 / 128.75 / 34.90	635-3001

6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)

A. LENGTH	B. WIDTH	C. RADIUS
1700 YDS	725 YDS	N/A

POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE	D. CDS PI	E. PE PI	F. HE PI
	250	350	550

7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)

A. MAGNETIC	B. GRID (MGRS)	C. TRUE	D. SOURCE/DATE OF VARIATION DATA
008	006	006	20030101

8. GROUND POINT ELEVATION	A. CDS PI	B. HE PI	C. PE PI	D. HIGHEST
	666	676	656	744

9. DZ COORDINATES

A. SPHEROID	B. DATUM	C. GRID ZONE	D. EASTING	E. NORTHING
WGS-84	WGS-84	16S DF	4	40

F. GPS DERIVED COORDINATES: YES ☒ NO ☐

G. POINT OF ORIGIN: CDS PI is 642 meters at 108 degrees mag from 28750 61200

H. POINT	MGRS COORDINATES	WGS84 LATITUDE (D-M.MM)	WGS84 LONGITUDE (D-M.MM)
DZ CENTERPOINT	29430 61751	N 36-41.93	W 087-47.40
CDS PI	29360 61211	N 36-41.64	W 087-47.45
PE PI	29370 61301	N 36 41.68	W 087-47.44
HE PI	29390 61481	N 36-41.78	W 087-47.43

I. DZ CORNERS MGRS COORDINATES

LEFT LEADING EDGE	RIGHT LEADING EDGE
29000 61021 N 36-41.53 W 087-47.69	29660 60941 N 36-41.49 W 087-47.24
LEFT TRAILING EDGE	**RIGHT TRAILING EDGE**
29190 62571 N 36-42.37 W 087-47.57	29850 62491 N 36-42.33 W 087-47.12

AF FORM 3823, 20021001 (IMT-V1) PREVIOUS EDITIONS ARE OBSOLETE.

Figure 15-12. Veghel DZ survey
Confirm frequencies with current DOD Flight Information Publications

Chapter 16
Live Fire Exercises

16-1. References
DA PAM 385-63 (Range Safety) chapter 19 (Live Fire Exercises).

16-2. General
a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

b. Fort Campbell has several tactical ranges available where live fire exercises may be conducted. These ranges facilitate squad, platoon, and company offensive and defensive operations.

c. Units desiring to establish a range outside the existing impact areas may employ a wide variety of non-dud producing ammunition including all small arms weapons, 40mm TPT, 20mm TP, HE demolition, claymore mines, and aerially delivered munitions including 20mm, 30mm (TAC air, helicopters). No dud sweeps are required on these ranges. Digging target positions and fighting positions (and their excavation) must be approved by Range Control.

d. A written scenario, safety plan, range fans and FC Form 4162 will be prepared for each live fire exercise. The commander of units performing tasks not consistent with their established METL will be certified by the next higher command to train and perform such tasks. Subject Matter Experts (SME's) will be used to train, evaluate and oversee training tasks not consistent with the unit METL. The scenario, risk assessment and safety plan will be submitted to Range Division Safety not later than 10 working days prior to the exercise. Safety is the responsibility of the commander and should be employed during all rehearsals and live fire exercises. Range commander/OIC must prepare an accident plan to incorporate and rehearse MEDEVAC routes and procedures. Units must ensure medics have appropriate communications equipment. Commanders/OICs and medical leadership must ensure that medics have the proper equipment.

e. An OIC and RSO will be appointed for each live fire exercise. Both the OIC and RSO will have sufficient personnel, transportation, and communication equipment assigned to them to adequately and properly perform their duties.

f. Prior to conducting a live fire exercise, the OIC and RSO must be thoroughly familiar with the contents of AR/DA PAM 385-63, appropriate FM/TC/TMs, this regulation, the scenario, safety plan, and risk assessment for the exercise to be conducted. The Range OIC must conduct a range walk with the range manager a minimum of 15 working days prior to the training date. The OIC/RSO will brief the Range Division Safety not later than 10 working days prior to the beginning of the exercise. All scenarios, risk assessments, safety plans and Surface Danger Zone Diagrams (SDZDs) must be approved by Range Division Safety not later than 10 working days prior. Range Division will be the approving authority on conducting any exercises in the existing impact areas.

g. Figures 3-2 and 3-3 may be used for planning live fire exercises inside existing high explosive impact areas. These map overlays provide the level of risk associated with a given area.

h. Live fire exercises at battalion level or higher requires the OIC to be a field grade officer.

16-3. Eagle Training Note (ETN) 1. **All units will comply with the provisions and guidance outline within Eagle Training Note 1. No exceptions or deviations from the provisions of this ETN are authorized unless approved by the Commanding General. Eagle Training Note 1 is published by G3 and is normally located on the Fort Campbell Intranet website.**

16-4. Overhead fire
Refer to AR/DA PAM 385-63 for the specific requirements for overhead fire. Mortar firing is NOT cleared for overhead fire.

16-5. Close air support
a. It is essential that the live fire phases of joint training exercises be characterized by maximum realism without compromising minimum safety requirements.

b. Close coordination of the participating personnel in a joint live fire exercise must be accomplished through the development of realistic fire, maneuver, and safety plans.

c. Direct communications will be ensured at all times between the JTAC and the Fire Support Coordination Carrier coordinating any direct support artillery fire in the vicinity of the air strike. The JTAC should contact Eagle

Radio if a check fire is desired prior to tactical aircraft penetrating the restricted airspace. The task force commander is responsible for the safety of tactical aircraft during live fire exercises.

d. Before firing any weapon under conditions in which the maximum ordinate of fire will exceed 45 meters AGL, the responsible commander will provide aircraft spotters and/or a range SO who will call a cease fire when the aircraft traverses the vertical danger zone or approaches the firing point.

16-6. Aviation

a. The task force commander has authority to control all assets conducting live fire exercises, including aviation, and must ensure that he has positive control of the range at all times.

b. Aviation officers should be brought into the planning sequence as soon as the task force commander has developed his concept of the operation. This will allow the time needed to properly plan and coordinate operations. The air mission briefing must eliminate any confusion and should take place after aviation operations have been planned and coordinated.

c. Aviation live fire exercises must be sequence-oriented rather than time-oriented to allow flexibility based on the situation. Formal target hand-off must be made before the aircraft proceeds down range.

d. Range Division Safety must approve all range fans/surface danger zone diagrams and will be briefed not later than 10 working days prior to the beginning of any exercise.

e. Precautions should be exercised when using the telescopic sight unit. The limited field of vision and lack of azimuth references may cause misorientation, resulting in projectiles being fired outside surface danger zones.

16-7. Maneuver live fire ranges 3A, 17, 27, 28, 29, 37, 38, 41, 42, 44, 45, 46, 50, 51, 52, 53, 54, 55, Convoy Live Fire.

a. Units are allocated these resources at the TRC. Units request the range(s) using FC Form 253.

b. After the unit has scheduled the range(s), coordination with the Range Manager or Maintenance contractor and Range Division Safety is required.

c. Coordination with the Range Manager or Maintenance contractor will be to examine the range facilities and develop a scenario to be used on the range. This must be accomplished not later than 15 working days prior to using the range.

d. Coordination with Range Division Safety serves three purposes. First, the unit must detail how range conflicts are to be resolved not later than 30 working days prior to use. For example, Ranges 52 and 53 are scheduled to the same unit. The unit must brief its plan on when each will be used and who will use them. The second purpose of the coordination is to develop the SDZD's "Range Fans" for each range. This must be done not later than 10 working days prior to use. Finally, the unit's risk management worksheet listing all recognized hazards, risk assessments, countermeasures and supervisory controls, must be submitted to Range Control not later than ten working days to mission. The worksheet must be signed by the appropriate level of command based on the level of risk. A copy will be maintained at the range so last minute hazards can be addressed as required.

e. Failure to make these coordination's will result in cancellation of the range(s).

f. **Failure to follow the hand grenade control measures outlined below could result in serious injury or death to individuals training with hand grenades, personnel performing maintenance on bunkers or EOD clearing duds from bunkers. The range coordination packets will not be approved until hand grenades are addressed within the risk assessment. Unit commanders using practice blue body hand grenades and live M67 hand grenades on maneuver live fire ranges with hand grenade bunkers will add the following to their risk assessments for their training event:**

(1) Grenade throwers will be identified and complete task training on the same bunker prior to the live fire exercise, both day and night. Only one grenade per bunker per iteration.

(2) With TL/SL participation, all members of each team will rehearse an immediate action drill for a lost grenade.

(3) The company commander, company executive officer, or first sergeant will personally be present when each grenade is thrown, bearing ultimate responsibility for voicing "grenade live" in the event of a loose grenade.

(4) Grenades will be secured only in the LBV grenade pouch and IAW the instructions for stowing hand grenades on the LBV. Refer to FM 3-23.30, chapter 3.

(5) Fragmentary hand grenades will be thrown one at a time; **no simultaneous** throwing of hand grenades and only **one per bunker per iteration.** If a thrown hand grenade does not explode, an immediate check fire will be initiated for a dud. The OIC or unit commander as stated in CAM Reg 385-5, chapter 8, para. 8-6 will notify Range Control Safety.

(6) All grenade bunkers will be identified during the TEWT. All grenade drills will be executed during the blank fire iteration. All practice grenades will be blue body in color. All practice grenades will be recovered from bunkers after each iteration.

(7) All personnel to include OICs will wear Kevlar, IBA, SAPI, eye protection and gloves.

(8) Ammunition handling and accountability of hand grenades. Range OIC, SO and company commander will keep an accurate count of all blue body practice grenades and all live hand grenades. The list of grenades will be checked against each other after each iteration. If craters are deeper then 6 inches, the crater must be filled in by unit prior to conducting another iteration of training. At no time will a bunker containing water be used.

(9) Range Operators will inspect all bunkers after completion of each blank fire and live fire iteration. Range Operators will also inspect all bunkers after completion of training.

Chapter 17
Chemical Agents, Smoke, Pyrotechnics, and Blanks

17-1. References

a. AR and DA PAM 385-63 chapter 16/17 (Range Safety).
b. AR and DA PAM 385-64 (U.S. Army Explosives Safety Program).
c. TM 9-1370-203-20 (Military Pyrotechnics).
d. TM 9-1370-207-10 (Pyrotechnic Simulators).
e. TM 9-1300-208-10 (Photoflash Cartridges, Surface Flares, and Miscellaneous Pyrotechnic Items).

17-2. General

a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

b. This chapter establishes procedures and safety criteria for the employment of chemical agent stimulants, riot control agent (CS), smoke, pyrotechnics, and blanks. If properly managed, these training munitions can improve training results by providing a more realistic experience for soldiers that will give them an extra edge on the battlefield.

17-3. Riot control agents

a. CS is used during training to enhance biological and chemical defense training situations (to include toxic smoke and NEO operations) and to aid in the evaluation of NBC proficiency and CS chamber exercises.

b. The following restrictions will apply when dispersing CS:

(1) CS will not be dispersed east of Market Garden Road; however, small quantities may be used in the CS chamber located at Range B-7 as authorized by CAM Regulation 350-1.

(2) CS will not be dispersed within 1000 meters of the reservation boundary.

(3) CS will only be employed in TAs controlled by the employing unit.

(4) CS will not be employed within 500 meters of a paved road unless the employing commander has prior approval from Range Division Safety not later than 10 working days prior to employment. Unit commanders will establish road blocks to prevent exercise non-participants from driving into a CS cloud without advance warning and ensure no residual CS is left on the road after the attack.

(5) Pregnant soldiers with a valid profile will be exempt from exposure to CS and other chemicals that simulate NBC training.

(6) A NOTAM must be processed through Range Division to the ADAO not later than 10 working days prior to employment.

c. The following items will not be targeted without prior approval of the commander of the targeted unit:

(1) Moving vehicles operating during periods of limited visibility (to include blackout drive) and vehicles traveling in excess of 30 miles per hour.

(2) Aircraft will not be targeted in such a manner as to contaminate the aircraft with residual CS. Furthermore, aircraft will not be targeted while refueling. Burning munitions will not be used within 50 meters of the aircraft.

(3) Hot refuel points will not be targeted while refueling operations are conducted. Burning munitions will not be employed within 50 meters of the refueling points.

(4) Kyle Lake. CS can only be used in the vicinity of Kyle Lake if the using unit has scheduled both Kyle Lake and TA 31.

d. The employment of CS is accomplished by utilization of the M5 aerial/ground CS disperser, the M33A1 CS backpack disperser, CS grenades, CS capsules, and CS powder. Tactical CS employment requires the user unit to

publish notifications to the following agencies listed in table 17-1. This notice will contain the grid coordinate location (6 digits), TA, unit, and time frame during which dispersal will occur.

Agency	Subject	Notification Suspense
DHĀR Admin Services Division	Screaming Eagle Bulletin	By 1130 Wednesday for posting on Friday.
Through Range Division to the Assistant Aviation Officer	Airspace Management NOTAM	10 working days prior
Division Chemical	Range B-7 utilization and aerial spray mission support only	10 days prior

Table 17-1. Agency notifications for CS employment

e. Personnel employing CS in a ground dispersal fashion will wear a protective mask. Transportation of CS in ground vehicles will be limited to the rear portion of those vehicles and will be in accordance with appropriate explosive transport requirements. Personnel transporting CS will have a protective mask readily available.

f. The M25A1 grenades (baseball-type) will only be used when training individuals in riot control. Personnel will be aware of the restriction imposed by the burn index. Contact Range Division for the current burn index and refer to Table 3-2 of this regulation. Grenades will project an igniter holder assembly about 15 feet away from the grenade when fired. Exercise care to ensure the assembly does not strike personnel.

17-4. Smoke

a. Units conducting smoke operations are responsible for ensuring that no smoke enters within 500 meters of the reservation boundary or hard surface roads. Furthermore, smoke operations will be conducted so that the waters of Kyle Lake are not contaminated. Smoke will not be employed east of Market Garden Road.

b. Smoke may only be employed in TAs controlled by the employing unit. The effects of smoke operations will not extend into DZs or into other TA's unless prior coordination has been conducted with all affected units. A copy of the written agreement between the units must be on file with the Range Division Safety Section 5 working days prior to the smoke operation.

c. Notice of all smoke operations will be published in the two Screaming Eagle Bulletins immediately preceding the smoke operation.

d. Prior to conducting smoke operations, the unit will contact Range Control on one of the Range Control nets to open the area for smoke operations. To open with Range Control, the OIC and RSO must have a battalion commander's certification for smoke operations on file at Range Division. While conducting smoke operations, the unit must maintain two means of communication with Range Control.

e. The OIC and RSO are responsible for monitoring and controlling the effects of the smoke operation. If the smoke enters the buffer zone, the following actions will be taken:

(1) The OIC or RSO will immediately cease all smoke operations.

(2) The OIC or RSO will notify Range Control of the incident, reporting the location, direction, and density of the smoke. The unit will monitor the smoke until it dissipates and Range Control relieves the unit of this responsibility.

(3) Range Control will notify the MP desk of the smoke screen's location, direction, and density. The MPs will contact local law enforcement agencies to coordinate required traffic control.

(4) Range Control will notify the Division SDO keeping him informed of the status of the smoke screen.

(5) When hard surface roads become obscured by smoke, the responsible unit will deploy road guards to warn traffic.

f. Smoke operations are to be treated and controlled like a live fire range. All noncompliance’s with this smoke operations policy will be cited as an unsafe act and a range incident report will be submitted to the G3 for further action.

g. Smoke grenades may be used anywhere on post as command and control signals, provided the smoke does not cross the post boundary or obscure hard surface roads. The use of red smoke and red star cluster is restricted to emergencies only (e.g., range fires, MEDEVAC).

h. Commanders must be aware of the following three hazards of smoke:

(1) Burning munitions, such as HC smoke grenades and smoke pots, will consume most of the oxygen in enclosed spaces and, when used in operations such as military operations on urbanized terrain (MOUT), may cause injuries through oxygen deprivation. Protective masks will not protect soldiers if there is no oxygen to breathe. Do not use smoke grenades or smoke pots in enclosed spaces.

(2) HC smoke produced by the M8 white smoke grenade, smoke pots, and the new metallic powder obscurants sometimes used on armored vehicle smoke grenade launchers are long term health hazards. Unprotected soldiers should not be exposed to HC smoke or metallic powder obscurants.

(3) Fog oil smoke produced by smoke generators is a POL product and exposure to heavy concentrations or prolonged exposure may cause discomfort and potential injury.

i. Personnel will carry the protective mask when participating in exercises which include the use of smoke and will mask:

(1) Before or when passing through or operating in prolonged dense smoke (visibility less than 50 meters) such as smoke blankets and smoke curtains.

(2) When operating in or passing through a smoke haze (visibility greater than 50 meters) and the duration of exposure will exceed 4 hours.

(3) Anytime exposure to smoke produces breathing difficulty, irritation, or discomfort. These effects in one individual will serve as a signal for all similarly exposed personnel to mask.

(4) When using smoke during MOUT training or when operating in enclosed spaces, it is important to remember that the protective mask is not effective in oxygen deficient atmospheres. Care must be taken not to enter confined spaces where oxygen may have been consumed.

j. Units employing smoke near surfaced roads will position road guards to alert vehicle traffic to the possible smoke effects across the road. In addition, the following guidelines will be adhered to:

k. Special precautions must be taken when using HC smoke to ensure that appropriate protection is provided to all personnel who are likely to be exposed.

(1) When planning for the use of HC smoke in training, specific consideration must be given to weather conditions and the potential downwind effects of the smoke. Positive controls, such as observation points, control points, and communications, must be established to prevent exposure of unprotected and nonparticipating personnel.

(2) Soldiers exposed for prolonged periods to smoke should reduce skin exposure by rolling down sleeves, showering, and laundering their clothing following the exercises. This will reduce skin irritation.

l. Smoke obscured roads present a safety hazard and should not be used until the smoke dissipates. If smoke obscured roads must be used, extreme caution must be taken. Nontactical vehicles on all roads and all vehicles on hard surface roads will use headlights and emergency warning lights and not exceed 15 mph when proceeding through smoke.

m. ***Red smoke will only be used to mark the location of an actual emergency***.

17-5. Pyrotechnics

a. Non-standard ammunition (articles, pyrotechnics) are more dangerous than many other types of ammunition because they are more easily initiated. Pyrotechnics must be handled with care at all times. Safety precautions for handling and firing pyrotechnic cartridges and accessories are included in DA PAM 385-64.

b. Pyrotechnics may only be used in TAs west of Market Garden Road.

c. Personnel authorized to use pyrotechnic simulators will be NCOs at the rank of SGT or above. In cases where corporals are assigned the duty of squad leader/section chief, commanders may grant the authority to use pyrotechnics. Commanders will brief these personnel on the specific responsibilities, accountability, and safety requirements. A thorough safety briefing will be conducted by the OIC of that unit's training addressing the proper use of pyrotechnic simulators prior to the use of such devices.

d. Detailed instructions for the safe use of simulators are contained in TM 9-1370-207-10. For systems not contained in the TM refer to system safety data sheet for requirements.

e. The firing of pyrotechnics in tactical TAs may cause range fires. Tactical TAs contains ample fuel for starting and sustaining range fires. Therefore, personnel using pyrotechnics must exercise caution to avoid the accidental start of fires (see Table 3-2).

f. Trip flares and booby traps not detonated during training will be removed prior to departing the area.

g. When a range fire is started in a TA, the OIC will stop all training and concentrate on fighting the fire, using all available personnel.

h. No pyrotechnics will be ignited within 15 meters of personnel or equipment. Simulators will not be thrown over the heads of soldiers.

i. The following precautions will be adhered to when detonating an atomic simulator:

(1) Personnel will not be closer than 450 feet from the point of detonation.

(2) Fires will be extinguished immediately with shovels and hand operated fire extinguishers.

(3) Simulators which have failed to fire will not be approached for at least 30 minutes after disconnecting the power source.

(4) Scheduled detonations will be posted in the Screaming Eagle Bulletin and NOTAMs requested from Range Division by the using unit as required in this regulation.

(5) All safety criteria for detonating explosives will apply. Refer to chapter 3 for additional information.

(6) An aircraft no-fly area will be established consisting of a 2000 meter circle around the detonation area for day firing. The entire TA will be considered a no-fly area for all night detonations.

j. Use of Blank Ammunition.

(1) Blank cartridges will not be fired toward personnel within 6 meters of the weapon.

(2) When misfires in excess of 5 percent occur in firing blank cartridges, the entire lot of ammunition will be suspended and reported to Range Division.

(3) Live and blank small arms ammunition will **not** be fired at the **same** time during any phase of a tactical exercise. **If a change from live to blank ammunition is necessary during the exercise, a complete physical search of all personnel will be conducted prior to changeover.**

17-6. Training agents

a. Simulator Projectile Airburst Liquid (SPAL). Any personnel employing SPAL should be careful not to have the projectiles burst above or around personnel. Any additional printed precautions with the item should be followed to implement safety data for new training munitions.

b. Training Agent PEG200. PEG200 may be employed on terrain, equipment, and personnel by ground dispersal, aerial spray, or SPAL.

c. Training agent metyl salicytate (mint) may be employed on terrain, equipment, and personnel by ground or aerial dispersal.

d. Training agents will not be used when or where they could interfere with operations at Campbell Army Airfield or Sabre Army Heliport.

17-7. Aerial chemical simulator attack safety factors

a. Aerial spray attacks may be conducted from a UH60.

b. All crew members and passengers will have protective masks available.

c. Aircraft Pilots-In-Command (PICs) and crew chiefs should wear protective masks during the mission.

d. The user unit and the Division Chemical Training Team will coordinate for air to ground communications between the aircraft and the evaluators on the ground at the target.

e. The following attack parameters should be used:

(1) Air to ground communications that confirm the target and mission should occur before the target is sprayed.

(2) Attack the target while flying into the wind.

(3) Disperser operations are executed on the command 'mark' given by the pilot when the aircraft is 100 meters from the target.

(4) Recommended air speed and altitude, respectively, are 25-30 knots per hour and 60-70 feet AGL.

(5) PIC can terminate the mission at any time based on an unsafe action or equipment failure.

(6) Members of the Division Chemical Training Team are trained on the operating requirements of the M-5 disperser and the gravity flow disperser. User unit representative flying the mission can operate the dispersers under the supervision of a Division Chemical Training Team member.

(7) Operator of the M-5 disperser will purge the disperser of any unused pressurized air while the aircraft is returning to Range B-7.

17-8. Sanator operations

a. Units will not conduct vehicle decontamination training with SANATORS in or near any streams on the installation.

b. Units may conduct training with SANATORs at the North and South Wash Racks.

c. Units may tap into water holes for SANATORs operations (but not into streams).

Chapter 18
Mines and Demolition Training

18-1. References

a. AR 385-63 and DA PAM 385-63 (Range Safety).
b. FM 5-250 (Explosives and Demolitions).
c. FM 23-23 (Antipersonnel Mine M18A1 and M18 (Claymore)).

18-2. General

a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

b. DA PAM 385-63 (chapter 17) prescribes the general procedures for handling and detonating explosives, mines, firing devices, trip flares, and simulators used by troops in training. All personnel handling or detonating explosives on the Fort Campbell reservation will be thoroughly knowledgeable of the safety requirements published in this regulation and will comply with these requirements at all times. NO HAND GRENADES WILL BE USED IN CONJUNCTION WITH ANY DEMOLITION TRAINING ON FORT CAMPBELL.

c. The firing unit commander is responsible for safety during all phases of a firing exercise under his control. Commanders of units conducting mine or demolitions training, battalion level and above will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC and RSO to Range Division. This list will be updated as required. An example memorandum is at figure 3-1.

18-3. Scheduling and utilizing mine and demolition TAs

a. Demo 39 has been designated for demolitions training.
b. Demo Area 11 is closed.

c. When firing or using demolitions in areas other than ranges or demo areas, the TA to be used will be requested and scheduled for use by the unit detonating the explosives. These requests must be approved not later than 10 working days prior to the date of intended use. When the OIC opens the TA, he will also report the type of explosive being used, the number of shots, and amount of explosives in each shot.

d. Demolition Plan.

(1) A copy of the training unit's DA Form 2203 (Demolition Reconnaissance Record) (sample shown at figure 18-1) will be provided to Range Safety at the time the unit requests use of the range for training purposes.

(2) The training unit's Demolition Reconnaissance Record must be approved one level above the unit requesting explosives, but not less than battalion level.

(3) This plan will be used as a cross check against explosives reported as expended.

(a) Range Division will be provided the original copy of the unit's Demolition Reconnaissance Record at the same time Range Fans/SDZDs, Risk Management Worksheet and a Written Scenario are submitted.

(b) Units conducting training will provide Range Division the following: the time the range was opened and closed, type of training, type and amount of explosives consumed, firing systems types, and amounts consumed. This information will be provided to Range Division at the time the range is closed. Range Division will record the information.

18-4. OIC responsibilities

a. When detonating explosives, the OIC will be present to supervise training but need not be present at the firing site for each charge. He will ensure that all connections are inspected by qualified personnel before firing and that the area is inspected after firing to determine if all charges were detonated. The OIC, with proper assistance, will supervise the neutralization of all misfires.

b. The OlC must ensure the minimum safe distance for personnel is clear of personnel and helicopters in flight. Measures taken may include the use of audible and visual warning signals and road guards.

c. The demolition firing unit OIC will compute and submit an overlay depicting the minimum safe distance zone, for personnel in the open, to Range Safety not later than 10 working days prior to the date of intended use.

d. Prior to conducting a firing exercise involving any special demolition charges or assemblies, atomic simulators, or explosives in excess of 4 pounds, the unit OIC of firing will report blast location to Range Division and give 15 and 5-minute blast warnings.

e. After detonation, the OIC will make an after-blast report of detonation to Range Division.

18-5. MI8A1, anti-personnel weapon (Claymore)

a. Range 35 is normally used for firing this weapon. Other ranges may be used if safety requirements can be met.

b. A copy of FM 23-23 will always be present during firing of this weapon.

c. The safety precautions outlined in FM 23-23 (appendix III, Safety) will be strictly followed.

18-6. Missile/Projectile hazards

Explosives can propel lethal missiles/projectiles to great distances. How far an explosion propelled missile will travel through the air depends on many variables. Table 18-1 displays the distances at which personnel in the open are relatively safe from missile hazards created by bare charges placed in or on the ground, regardless of type of condition of the soil.

Pounds of Explosives	Safe Distance in Meters
1-27	300
50	369
100	465
150	534
200	585

Table 18-1. Safe distance requirements

18-7. Firing detonating cord

When using less than 50 feet of detonating cord primed with a blasting cap, the minimum safe distance for protected personnel is 100 meters. The OIC will ensure no unprotected personnel are within 300 meters of the detonating cord, that his unit has scheduled the TA, filed a NOTAM, and that he has opened the TA in accordance with this regulation. Range Division will be notified of his intentions to use detonating cord, and radio or wire communication will be continually maintained with Range Control.

NOTE: Protected personnel refers to soldiers equipped with helmets, body armor and earplugs, lying in the prone position behind masking terrain, and using their hands and the terrain to protect their eyes and torsos from lethal missiles.

18-8. Restrictions and warnings

a. Detonating mines and explosives of any kind will not be conducted:

(1) During severe weather warnings (see appendix E).

(2) During the hours of darkness, except when less than 40 pounds of explosives are used. **Night demolitions training will be conducted in Demo 39 only.** Breach operations and Claymore mines may be employed on tactical maneuver ranges at night on a case-by-case basis.

b. Fuzes (to include practice), mines, detonators, and explosive simulators which do not detonate are dangerous and will not be handled except by personnel trained for such a purpose.

c. No more than 200 pounds of explosives are to be detonated on Fort Campbell.

d. Explosives will not be fired within 2000 meters of the reservation boundaries.

e. During temperature inversion conditions, demolition training will be curtailed or postponed. Range Division will contact the duty forecaster at 0600 and 1500 daily. Range Control will not open the ranges until the Inversion conditions subside and will postpone demolition training if atmospheric conditions warrant.

18-9. Conduct of barrier/denial training

The use of actual rather than simulated obstacles in the conduct of barrier/denial training operations provides realistic training for both engineer and supported units. Conduct of such training, to include use of explosives outside of the areas prescribed in this regulation, requires additional administrative and safety precautions to be coordinated through Range Division. These operations must comply with applicable laws and regulations dealing

with environmental concerns. In order to maximize realism consistent with prudent safety considerations, the following procedures are established:

a. No obstacles requiring demolitions or tank ditching will be conducted on any paved or graveled roads. Obstacles on unimproved dirt roads and fire breaks may be coordinated with Range Division ITAM for approval. All areas must be returned to its original condition upon completion and inspected by ITAM.

b. Units intending to construct any type of barrier along paved roads must get the approval of the Installation Range Officer at least two weeks prior and must place a notice in the Screaming Eagle Bulletin one week prior to the date construction begins.

c. Barrier plans requiring the closing of paved and or gravel roads will provide provisions for minimal immediate access by emergency vehicles and/or fire fighting equipment. Minimal is defined as a lane that can be opened without specialized equipment. The lane will be marked with engineer tape and chemical lights at night. Full access, to include use of fire breaks, must be restorable within two hours of notification of a major forest/brush fire.

d. Any barrier crossing or closing of a paved or gravel road must be approved by Range Division not later than 10 working days prior and must be manned by a road guard to warn nonparticipants of the hazard. Units will also provide warning lights along all approaches to the hazard.

e. Upon completion of training, all obstacles must be completely removed, and as much as possible, the area restored to its original condition

f. Units must ensure compliance with all laws and regulations designed to protect our environment and endangered species. Appropriate dig permits must be approved in advance. Any digging or modification of the environment will be coordinated with Range Division/Installation Training Area Management (ITAM) and the Environmental Safety Office on post for approval.

CAUTION: DO NOT TRENCH ALONG OR ACROSS BURIED COMMUNICATION CABLE. ALL TRENCH DIGGING MUST BE APPROVED BY RANGE DIVISION ITAM.

DEMOLITION RECONNAISSANCE RECORD

For use of this form, see FM 3-34.214; the proponent agency is TRADOC.

SECTION I - GENERAL

1. FILE NO.			NAME AND RANK	ORGANIZATION
2. DEMOLITION RECON REPORT NO.		5. RECON ORDERED BY		
3. DATE	4. TIME	6. PARTY LEADER		

7. MAP INFORMATION Name Scale Sheet No. Series No.	11. GENERAL DESCRIPTION *(Use block 20 for sketches.)* Type Construction: ☐ Earth ☐ Timber ☐ Concrete ☐ Asphalt ☐ Steel Other Data: ☐ Roadway width ☐ Number of bridge spans ☐ Number of lanes ☐ Bridge class: W-_____ T-_____ Condition: _____ _____ _____ _____
8. TARGET AND LOCATION	12. NATURE OF PROPOSED DEMOLITION *(Use block 21 for sketches.)*
9. TIME OBSERVED 10. COORDINATES	13. UNUSUAL FEATURES OF SITE ☐ High tension ☐ _____ ☐ Radar Installation ☐ _____ ☐ Underwater blasting ☐ _____

SECTION II - ESTIMATES

Determine availability of items 14, 15, and 16 before conducting reconnaissance.

14. MATERIAL REQUIRED	UNIT OF ISSUE	TYPE MISSION: CRATERING	CUTTING	OTHER/SPEC PURPOSE
Modernized Demolition Initiators:				
M11 Shock tube	ea			
M12 Shock tube	ea			
M13 Shock tube	ea			
M14 Delay fuse	ea			
Firing Device	ea			
Electric caps	ea			
Detonating cord	ft			
Firing wire	ft			
Igniters:				
M60	ea			
M81	ea			
Explosive:				
TNT	lb			
C4	lb			
(Other)				
Cratering:				
Crater charge, 40-lb	ea			
Shape charge, 15-lb	ea			
Other Demolitions:	ea			

15. EQUIPMENT AND TRANSPORT REQUIRED *(Continued on page 2.) (Examples: trucks, ram sets and cartridges, demolition sets, post-hole diggers, nails, adhesives, tapes, sandbags, and lumber.)*

NOTE: Troops may not ride in vehicles transporting explosives.

16. PERSONNEL AND TIME REQUIRED FOR	NCOs	ENL	Time
a. Preparing and placing charges			
b. Arming and firing demolition			

17. TIME, LABOR, AND EQUIPMENT REQUIRED FOR BYPASS *(Continued on page 2.)*
(Specify location and method. Specify equipment to clear the site after demolition and available bypasses that allow units to bypass the site.)

18. REMARKS *(Continued on page 2.)*

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Figure 18-1. Sample DA Form 2203

DEMOLITION RECONNAISSANCE RECORD *(Continued)*

Place additional comments in the appropriate blocks.

15. EQUIPMENT AND TRANSPORT REQUIRED *(Continued)*

17. TIME, LABOR, AND EQUIPMENT REQUIRED FOR BYPASS *(Continued)*

18. REMARKS *(Continued)*

19. ADDITIONAL COMMENTS *(Specify block)*

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Figure 18-1. Sample DA Form 2203, page 2

Chapter 19
Laser Operations

19-1. Purpose
This chapter establishes local safety procedures which supplement those contained in DA PAM 385-63 (chapter 18).

19-2. References
a. AR 11-9 (Army Radiation Safety Program).
b. AR 385-63 (Range Safety).
c. TB MED 524 (Occupational and Environmental Health)
d. MIL-HNDBK-828A (Department of Defense Handbook on Laser Safety on Ranges and in Other Outdoor Areas).
e. ANSI Z136.1 (Safe Use of Lasers)

19-3. General
a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.
b. The fundamental concept of laser range safety is to prevent direct and collateral injury or damage resulting from laser use. Personnel using or supervising the use of laser must be thoroughly familiar with all aspects of laser operations and associated danger. Tactical laser will be treated as a direct fire weapon. The ranges on which these laser systems may be used are Ranges 28, 29, 40, 41, 42, 46, and other areas specifically authorized by Range Division.

19-4. Responsibilities
The laser firing unit commander is responsible for safety during all phases of a firing exercise conducted by his unit. Commanders of laser using units are responsible for ensuring strict compliance with procedures in this chapter, DA PAM 385-63 chapter 18 and the applicable TM for the laser system used. Commanders of laser using units (battalion and above) will establish and maintain a safety training and certification program. As part of this program, battalion commanders will submit a list of individuals in their respective units qualified to perform the duties of OIC (E7 and above) and Laser Range Safety Officer (LRSO) (E5 and above) to Range Division. An example memorandum is at figure 3-1.
a. Commanders of laser using units are responsible for publishing a warning order in the Screaming Eagle Bulletin not later than 24 hours in advance of firing. The warning order will include the place of firing, the hours it is to begin and end each day, and the boundaries of the danger area. Range Division will publish the standard laser range fan limits in the Screaming Eagle Bulletin each week for Ranges 28, 29, 40, 41, 42, 46, OP2, OP3, OP4, and OP13.
b. Commanders will report any case of suspected radiation exposure of the eye to the Division Surgeon immediately. An eye examination must be performed within 24 hours of the suspected exposure. The incident should also be reported to the Installation Safety Office.

19-5. OIC
The OIC will be the appropriate commander or his safety certified representative. He is responsible for all aspects of safety and will be thoroughly familiar with the references listed in paragraph 19-2. He will ensure compliance with all applicable portions of this regulation.

19-6. LRSO
The LRSO will --
a. Conduct a thorough safety countermeasure briefing to all personnel authorized to participate in the laser operation.
b. Ensure all laser beams terminate in the appropriate impact area.
c. Provide adequate control of the target area to prevent unauthorized personnel from entering the area and maintain continuous communication with Range Control. If unprotected personnel enter into the laser surface danger zone, the LRSO will immediately terminate laser operations.

d. Ensure that operators fire only at designated targets which are diffuse reflectors. At no time will operators fire at: aircraft, manned vehicles, flat, specular (mirror like) surfaces (such as target vehicle windshields), or water filled craters.

e. Ensure that laser is not operated or experimented with outside the range area. When not in use, ensure the laser exit port is covered with an opaque dust cover and the laser is disabled in accordance with the appropriate TM/FM governing the weapon system (s).

19-7. Laser hazards

a. Hazards are almost exclusively associated with inadvertent exposure of the unprotected eye to intrabeam viewing, either from the direct beam or a reflected beam. Very high radiant exposures will cause gases to form near the site of absorption which may disrupt the retina and may alter the physical structure of the eye.

b. Adverse thermal effects resulting from exposure of the skin to radiation may vary from mild reddening to blistering, depending upon the exposure dose rate.

19-8. Safety requirements

a. The laser port will be covered by an opaque dust cover or ballistic cover when the laser is not is use in order to prevent accidental firing of the device. This requirement includes tactical training exercises, movement to and from ranges, or when the device is in storage. The laser will be further disabled in accordance with the appropriate TM/FM governing the weapon system.

b. This regulation does not apply when laser devices are used in two-sided tactical exercises. No tactical force on force training with laser devices is permitted with tactical lasers, devices which are designed for that purpose, such as Multiple Integrated Laser Engagement System (MILES), may be used.

c. Laser warning signs will be posted on all normal approaches to the range. Nonstandard signs will be drawn from Range Division along with other safety supplies.

d. Inclement weather and night operations require no additional safety precautions. Certain ranges may be closed for operation if water begins ponding.

e. Use training filters whenever possible. Training filters reduce the ocular hazard distance, which greatly improves system safety. However, these filters may also reduce the engagement range of the system. When targets can be engaged effectively using training filters, training filters should be employed.

19-9. Range usage

a. Beam Termination. During laser operations, no portion of the laser beam should extend beyond the controlled target area. Two types of buffer zones will ensure the laser beam terminates in the controlled target area: horizontal buffer zones and vertical buffer zones. Horizontal buffer zones extend to the right and left of the target, while the vertical buffer zone extends down from the horizon. A 10 mil buffer zone (horizontal and vertical) will be used for laser systems not previously evaluated by the Army Environmental Hygiene Agency. All other laser systems will use the data published in DA PAM 385-63 (chapter 18).

b. Units must submit range Surface Danger Zone Diagrams (SDZDs) to Range Division depicting specific firing points (FP's), left and right limits, vertical buffer zones, and type of laser being used. These SDZDs must be provided to Range Division not later than 10 working days prior to the date of intended use.

Chapter 20
Target/Target Mechanisms

Range Specialists will have a list of available targets and target mechanisms for each individual range.

20-1. Moving Armor Target (MAT)

An example of the MAT see figure 20-1.

Figure 20-1 Moving Armor Target (MAT)

20-2. Stationary Armor Target Systems (SAT)
An example of SAT see figure 20-2.

Figure 20-2. Target holding mechanism tank gunnery

20-3. Moving Infantry Target System (MIT)

The Moving Infantry Target system (MIT) simulates an infantryman moving with evasive deftness by traveling from left to right, right to left, changing speed, stopping, instantly changing direction, and dropping from sight on command or when hit. (see figure 20-3).

Figure 20-3. Moving Infantry Target System (MIT)

20-4. Infantry target mechanisms

The target may present a single or double personnel target silhouette. This target may be equipped with thermal devices, hostile fire simulators, night fire simulators. (see figure 20-4).

Figure 20-4. Infantry target mechanisms

Chapter 21

Integrated Training Area Management (ITAM)

21-1. General

ITAM is the Sustainable Range Program that provides stewardship for the training impacts on the environment at Ft Campbell. Environmental protection and conservation effectiveness are the responsibilities of all personnel using Fort Campbell training facilities. Commanders must ensure that no unwanted or deliberate destruction of natural or harvestable resources occurs during training exercises.

21-2. The ITAM Program.

The ITAM program provides the Chief, Range Division the capability to manage and maintain the training lands and support mission readiness. ITAM integrates the unit training requirements with both environmental requirements and management practices. ITAM provides the Chief of Range Division a robust program to sustain the training lands.

a. **The ITAM activities**:

(1) **Management of Training Lands**: Integrate Range and ITAM activities with environmental land management activities.

(2) **Biological Assessments**: Performs biological assessments on the land quality and land carrying capacity, makes recommendations on repairs and reconfiguration of the training sites, and implements remediation, reconfiguration, or maintenance activities.

(3) **Education:** Educating unit leaders on land stewardship issues to minimize adverse impacts.

(4) **GIS and Photomap Products**: Provides a GIS capability that supports both the ITAM and the RTLP. Provides digital photo maps of the training areas to training units.

(5) **Land Reconfiguration and Recovery**: Provide training land remediation, reconfiguration, and maintenance to sustain the training areas for all-weather training activities. Team operates heavy equipment to sustain the training lands and mitigate training damage.

(6) **National Environmental Policy Act (NEPA):** Provides all NEPA support for the SRP activities.

(7) **Coordination:** Host a quarterly Land Management Forum to discuss ITAM and range activities; Range Modernization and Maintenance activities; unit training requirements; and the environmental land management activities.

21-3. Training Area Stewardship.

a. Field latrines "cat holes" will not be dug in the training areas. Units will use Portable Toilets in the field. Contact G4 for portable toilets to support your training exercises.

b. Trash and training debris will be returned to the cantonment area and disposed of in convenience centers/stations.

c. Recommend all trash be recovered prior to sundown to avoid wild animals. Trash bags left on the side of the road for post-exercise recovery will frequently be destroyed by wildlife.

d. Trees are a marketable crop managed by the installation Forestry. Units are not to cut trees. However, units may use scrub tree limbs for camouflage (i.e., sumac foliage, eastern red cedar, and pine) (see DA PAM 420-7).

e. Ft Campbell leases many of the open fields to area farmers. These fields are not off-limits to training. However, the farmers expend considerable time and money to harvest crops on these fields. Minimize damage to fields with row crops. There are grass lanes and open acres around all row crop fields that are recommended for training use. These grass acres correspond to identified Artillery Firing Points, when applicable. Row crop fields are fully available for training once the crops have been harvested. Drop Zones are managed as hay fields and are available for unit training. This AGLEASE program is a Win-Win program for the installation and the farmers. The installation does not have to allocate training funds to maintain the Drop Zones and open fields. The farmers win due to the availability of land for crops. The farmers are not reimbursed for crop damage caused by unit training.

f. Vehicles will not be washed in streams.

g. Low Water crossings have been installed to most of the bridges on post. If you unit vehicles exceed the posted weight limits of the bridges, use the low water crossing. Maps of all the posted bridge classifications are available at the ITAM office.

h. Units that need to conduct berming or mechanically assisted excavations during their training exercises need to obtain a Dig Permit at the ITAM office prior to their training exercise. The ITAM office will provide a photomap of their assigned training area and identity all environmental/cultural areas of concern. Units are required to fill in their excavations at the conclusion of their training. Units do not have to remain on site for a Range inspection. The information on the Dig Permit will be used to inspect area and the unit's recovery efforts. If there is a discrepancy in the unit recovery efforts, Range Division/ITAM will contact the unit for additional recovery or will contract for the recovery and bill the unit for the cost of a contract to recover the area.

i. Threatened and endangered species are protected by law. Photos of plants and areas of concern for animals are available to units at the ITAM office. The only major concern for plants is when units need to berm or excavate. The areas of endangered plants will be clearly marked on the digital photomap that will be provided to the unit with the Dig Permit.

j. Wetlands will be clearly identified on the digital photomaps when units submit their Dig Requests.

k. Units are encouraged to obtain a photomap of their assigned training areas from the ITAM office. These photomaps clearly identify the trails, wetlands, streams, and areas of concern for each training area. The maps are provided at no charge to the units.

l. Any item you suspect as having archaeological or historical significance should not be disturbed. When digging and any foreign object is observed, its location should be reported to ITAM and DPW Environmental Division for further consideration.

m. No training will be conducted inside cemetery fencing nor within the 100 meter buffer around the cemetery.

Chapter 22
Range Surface Clearing and Target Insertion/Maintenance Operations

22-1. References

a. AR/DA PAM 385-63 (Range Safety).

b. AR 75-15 (Policy for Explosive Ordnance Disposal).

c. FM 4-30.5 (Explosive Ordnance Disposal Procedures).

22-2. Purpose

This chapter disseminates procedures for surface clearing ranges and target insertions/maintenance. The Installation Range Officer is the approval authority for all Range Surface Clearing and Target insertion operations.

22-3. General

a. Report all accidents and incidents to Range Division.

b. Range and impact area surface clearing operations are done periodically to clear a training facility of ordnance which has failed to explode. Clearing operations are usually undertaken when it is deemed necessary to use a range or impact area for training involving troops and/or equipment maneuvering across the site. Clearing operations identify and destroy potential and dangerous hazards to this training.

c. Surface clearing operations should only be considered during winter or early spring. The entire surface must be burned to expose ordnance laying on the surface of the ground. A clean burn cannot be obtained during summer or fall.

d. Unit commanders desiring to conduct training on a range and/or impact area which may contain dud high explosive munitions will contact the Installation Range Officer not later than 90 days prior to the initial training day. Early and detailed planning is crucial.

e. All requests for range clearances, no matter how small the area, will be submitted in writing 90 days prior to the start date. Requests must be sent through G3 to: Commander, 717th EOD, Fort Campbell.

f. Direct coordination between Range Division, EOD, and the requester is required. The following POC list can be used:

(1) 717th EOD Operations.

(2) Installation Range Officer.

g. Safety is paramount in any range surface clearance operation. All participants must be thoroughly familiar with prescribed safety procedures.

h. Participants, especially key supervisors, will not be rotated throughout the entire period of range clearance operations. Specific delineation of responsibilities will be prescribed for all participants.

22-4. Scope

The procedures contained herein are applicable for medium to large scale clearances over relatively moderate terrain with moderate levels of ordnance contamination. For relatively small clearance operations with fewer searchers, the size of the project staff and search group may be decreased and duties combined.

22-5. Definitions

a. Dud. An explosive projectile of any size which has failed to function as designed, and as a result is in a hazardous or unpredictable condition.

b. Searchers. Individuals who have the responsibility of searching for, locating, and marking all items of ordnance within their assigned area. They will notify appropriate on-site EOD personnel for identification, classification, or further disposition.

C. Searching Party. A composite force consisting of an OIC, NCOIC, a designated number of individual searchers, and an accompanying EOD element. Minimum uniform will be kevlar helmet, body armor, safety goggles, and LBE/LBV.

d. Collection Point. A centralized location for the collection and inspection of salvageable material prior to transportation to property disposal.

e. Scrap. Any salvageable or recoverable metals or residue obtained from range clearance operations which can be reclaimed and transferred safely to the Defense Reutilization and Marketing Office (DRMO).

22-6. Responsibilities

a. Unit commanders will --

(1) Identify the specific geographical range area(s) to be cleared during the operation and request approval to clear through command channels.

(2) Ensure the availability of supplies, equipment, medical support, transportation, communications, demolition materials, as well as lodging and messing facilities, for all TDY range clearance personnel.

(3) Coordinate the suspension of training and firing in the area(s) to be cleared.

(4) Determine the officer to be assigned overall responsibility for the mission.

(5) Coordinate EOD personnel support requirements with the 717th Ordnance Company. A ninety days advance notice is required for EOD support.

(6) Coordinate with the Division Signal Officer for frequencies to be used during the operation.

b. Chief, Range Division will --

(1) Reschedule training so there will be no firing or maneuvering in the area being cleared.

(2) Provide stakes for the staking parties.

(3) Coordinate the entry and departure of the troop unit conducting the range clearance into and out of the impact area.

(4) Coordinate with DPW (Forestry) for preparation and burning of tall grass and dense brush in the area(s) to be cleared.

(5) Coordinate with the Commander, 717th Ordnance Company to ensure that adequate explosives are available to destroy duds which must be blown in place.

22-7. Milestone schedule

a. Ninety days prior to clearance:

(1) Appoint project officer.

(2) Determine and define the area(s) to be cleared.

(3) Research range records/data to determine quantity and type of ordnance fired into the defined area(s).

(4) Request support from the area EOD Control Center for use of local resources and any additional personnel to augment the local detachment.

(5) Coordinate with the local EOD for technical advice/assistance.

(6) Perform map, ground, and aerial reconnaissance to determine extent of explosive ordnance contamination, vegetation, and terrain.

(7) Determine personnel, funding, equipment, and time requirements to accomplish the clearance operation.

(8) Prepare the final plan for the range clearance operation.

b. Forty-five days prior to clearance:

(1) Prepare maps depicting the areas of responsibility for searching groups, the CP, and the CP location.

(2) Prepare and disseminate all necessary operation orders to participating units for required personnel, equipment, administrative, logistical, and medical support.

(3) Develop class schedules for conducting explosive ordnance recognition and safety classes to be presented to the staff, searching parties, and collection point personnel.

(4) Arrange for the range to be burned to afford visibility for the searching party.

c. Fifteen days prior to range clearance:

(1) EOD personnel conduct explosive recognition and safety classes for all staff, searching parties, and collection point personnel.

(2) Hold planning sessions as needed with the project OIC and staff, searching party OICs and NCOICs, collection point OICs and NCOICs, DRMO, and EOD representatives.

(3) Conduct reconnaissance of the assigned area(s) of search by OICs and NCOICs of searching teams, accompanied by EOD personnel.

d. Five days prior to range clearance:

(1) EOD personnel augmenting the local Company detachment will begin arriving.

(2) All EOD personnel will receive classes on safety and the type(s) of ordnance expected to be found during the clearance operation. Procedures to be followed during demolition operations will be outlined.

(3) Assigned EOD teams will meet with individual searching team, collection point and DRMO personnel. A short dry run on a practice course is recommended.

22-8. Target insertion and maintenance

a. Units requiring targets to be placed into the impact area MUST have EOD support. EOD personnel must escort the unit into the impact area, and clear the area where the targets will be placed. EOD support is also required for maintenance of targets in the impact area i.e. heating of targets for firing or improving of targets.

b. All request for EOD support for targets in the impact area require a written memorandum to the Commander, 717th Ordnance Company (EOD), THRU Chief, Range Division. The Chief of Range Division will annotate approval or disapproval of this request prior to consideration by EOD. Approval by Range Division does not constitute acceptance of the mission by EOD.

c. Requests for support of targets in the impact area requires 45 days prior notice. Units may request for extended support if they will require multiple entries into the impact area.

d. Requests under the 45 day cut off must be submitted by the first 0-6 in the requesting unit's chain of command. "FOR" signatures are unacceptable without assumption of command orders. Late requests under two weeks may be denied without explanation. Units continuously late with their requests will be forwarded to the G3 or the Chief of Staff.

e. Range Division or EOD will detail the location for the targets (8 digit grid), the number of targets, the types of targets, a detailed outline of the mission requirement, the number personnel involved, any special logistical needs, safety requirements, meeting time for the mission, and point of contact.

f. All personnel working in the impact area will wear flak vest/body armor, kevlar, and safety glasses at all times. Failure to adhere to these safety regulations will result in cancellation of the mission.

g. No deviations will be made to the request after it is approved, i.e. changing the location or number of targets, except if a safety concern arises during the mission. The EOD team leader for the mission will determine if any deviation to the mission is warranted due to safety.

Chapter 23
Airspace

23-1. Purpose

This chapter describes how airspace will be managed and used on the Fort Campbell military reservation. This regulation in conjunction with CAM Regulation 95-1, Aviation Flight Regulation, and will provide essential air/ground deconfliction guidance.

23-2. General

This chapter addresses the full range of airspace management and use. Topics discussed include restricted areas, training airspace sectors, airspace coordination areas, danger areas, and NOTAMs.

23-3. Restricted areas

a. The Fort Campbell reservation has two restricted air space areas: R3701A and R3702

(1) Restricted Area 3701A (surface to 5000 feet) encompasses the Small Arms Impact Area.

(2) R3702

(a) Restricted Area 3702A (surface to 6,000 feet) will be activated when artillery, ADA, tanks, aerial gunnery, TAC Air, or mortars are scheduled to fire.

(b) Restricted Area 3702B (6,001 to 22,000 feet) will be activated when artillery is scheduled to fire.

(c) Restricted Area 3702C (22,001 to 27,000 feet). When the maximum ordnance dictates the need for higher altitudes, Restricted Area 3702C will be activated. This area is normally required for 155mm or 8" artillery and when Redeye missiles are scheduled to be fired.

b. Range Division must reserve restricted areas at least 24 hours in advance. Restricted areas will be activated through Campbell Dispatch at least 60 minutes prior to scheduled use on a daily basis.

c. Range Division will notify Eagle Radio of hazardous conditions (firing activities, demolitions, etc.) within R3701 and R3702. Eagle Radio also will be notified when the status is changed (i.e., an FP goes from hot to cold).

23-4. Danger areas

a. The installation danger areas include Small Arms Impact Area, North Impact Area, South Impact Area, and Demo 39. EOD conducts emergency destructs in pre-assigned training areas which is not NOTAMed, and units conduct demolition in training areas which requires a NOTAM 10 working days prior to training event. Over flight of these areas during activation is prohibited.

b. Helicopter PIC's will draw an imaginary circle 1000 meters in diameter oriented around active FP's and OP's firing into the impact area. Helicopters will not fly inside this circle. FP's and OP's not under check fire are considered active. PIC's are responsible for obtaining positive contact with the range OP or FP OIC prior to entry.

23-5. NOTAMs

a. Reviewing FC Form 253 and identifying potential hazardous flight conditions is the responsibility of Range Division. FC 253 with potentially hazardous flight conditions will be forwarded to the ADAO for publication and dissemination of the NOTAMs. Training that requires a NOTAM must be received by Range Division not later than 10 working days prior to the intended date of training. Requests failing to meet the NOTAM deadline will be disapproved and returned without action or a FLASH NOTAM request must be processed. A Flash NOTAM must be coordinated through Range Division, G3 Air and then submitted to the G3 for approval. A Flash NOTAM is the exception and not the rule for NOTAM publication.

b. Eagle Radio, located at the ARAC Facility, provides an advisory service for R3701A and R3702. Eagle Radio frequencies are UHF 285.6250, VHF 128.75 and FM 65.20. To confirm frequencies call Eagle Preflight at 798-2967.

c. Eagle Radio duties and responsibilities are outlined in CAM Regulation 95-1.

23-6. Flight following

Flight following procedures are outlined in CAM Regulation 95-1.

23-7. Airspace management/training sectors

a. Purpose. To outline procedures and assign responsibilities for scheduling airspace 900 feet MSL to the surface over the Fort Campbell reservation.

b. General. Range Division manages the airspace described over the reservation. This allows units to schedule sectors of airspace over the reservation for exclusive, brigade, or joint use while participating in exercises. Procedures for scheduling these sectors of airspace are similar to methods in which other training resources are scheduled at Fort Campbell and are set forth below. The forum for airspace scheduling decisions will be the TRC.

c. Procedures.

(1) Refer to CAM Regulation 95-1, chapter 12 for Airspace training sectors

(2) Scheduling process.

(a) Overall supervisory responsibility for scheduling of airspace will be the responsibility of Range Division. Each MUC and separate battalion should identify a planner to handle airspace management for their unit (normally the S3 Air and/or BAE) to coordinate airspace with the scheduler. The designated personnel must attend an A2C2 briefing and have their name submitted to Range Division on a DA Form 1687 signed by the MUC or separate battalion commander.

(b) Range Division convenes a TRC Preview for the next training cycle. Air sector requirements should be submitted at this meeting. Conflicts which cannot be resolved in this forum will be presented at the TRC for resolution.

(c) Finalized airspace scheduling information will be distributed to Eagle Radio, all MUCs, separate battalions, G3 Air, Range Division. A minimum of 10 working days is required to safely disseminate airspace scheduling information; therefore, requests for airspace sectors arriving at Range Division with less than 10 days notice will be disapproved and returned without action. The format for dissemination of scheduling information will be similar to the NOTAM process already established.

(d) Cancellations or early ENDEX must be coordinated with Range Division. Units failing to close with Range Control will remain responsible for airspace management in their sectors until the scheduled dates have expired.

(e) Priority for scheduling airspace will be established by the G3 in accordance with the priorities established for training in CAM Regulation 350-1.

d. Responsibilities.

(1) Range Division.

(a) Overall supervision of airspace management and scheduling process.

(b) Convene cyclic TRC to lock in sector scheduling for the next allocation period and to plan airspace requirements for the following months. Present results at the TRC and present any conflicts requiring resolution.

(c) Monitor airspace scheduling and disseminate changes as required.

(d) Coordinate airspace management issues with users, Eagle Radio, and G3 Air.

(e) Submit requirements so as to meet TRC suspense, G3/S3 conference suspense, and NOTAM suspense.

(f) Deconflict air and ground scheduling at cyclic TRC and G3/S3 Conference.

Chapter 24
U.S. Air Force Use of Fort Campbell Ranges

24-1. References

a. AFI 11-214 (Air Operations Rules and Procedures).

b. CAM Regulation 95-1 (Fort Campbell Aviation Policies and Procedures).

d. CAM Regulation 385-5 (Range Regulation)(chapter 23).

24-2. General

a. Tactical exercises frequently require the use of live ordnance in armament fire power displays and/or in aerial delivery operations. Proper control in the use of live ordnance munitions is imperative.

b. This chapter establishes responsibilities and prescribes procedures and requirements necessary to ensure the maximum degree of operational safety for the employment of USAF aircraft delivering ordnance in the Fort Campbell tactical weapons range areas.

c. Using commanders will ensure a thorough knowledge of this regulation by all aircrews involved with aircraft operations at Fort Campbell.

24-3. Scheduling

Requests for range periods will be submitted by the fighter units to the Division Air Liaison Officer (ALE (AV 956-1302/1366 DSN 363)) in accordance with the procedures outlined in paragraph 2-3 of this regulation.

24-4. Procedures

a. Loading and arming of aircraft at Fort Campbell will be in accordance applicable fighter unit directives.

b. Supersonic flight within R3702 is not authorized.

c. USAF tactical aircraft will operate in the Fort Campbell range areas in accordance with AFI 11-214.

d. Tactical weapons range procedures are as follows:

(1) Traffic control outside of R3702 and Fort Campbell military operational areas (MOAs) 1 and 2 will be in accordance with flight information publication documents and federal aviation regulations.

(2) The Fort Campbell airspace complex consists of the Fort Campbell MOAs 1 and 2 and the restricted areas R3702 and R3701. MOAs 1 and 2 are controlled by Campbell Approach/Eagle Radio. Flights are to file IFR (with VFR delay in the MOAs) to the appropriate arrival/departure point. Fighters will check in and out of the MOAs

with Campbell Approach and squawk the transponder code assigned by Campbell Approach while operating in MOAs. Entry into the MOAs is not clearance into the restricted area R3702.

(3) Fighter aircraft will request clearance to enter restricted airspace from Eagle Radio. Eagle Radio will obtain the clearance from Range Control and relay to the aircraft.

(4) A 19 ASOS qualified range officer will be the range OIC and will accomplish range OIC duties as outlined in this regulation, to include ensuring that all range fans are approved by the Range Division Safety at least 10 working days prior to the actual employment of weapons. Tactical control of the fighters may be determined by the exercise scenario.

(5) Targets and munitions. Targets and the weapons to be used will be approved on a case-by-case basis by Range Division Safety after reviewing the range fan for each weapon system. Minimum safe separation distances will not be less than those listed in AFI 11-214. Each range fan will have, as a minimum, run-in headings, location of target (minimum 6 digit grid, 10 digit grid and lat/long recommended), type of munition, location of all personnel, and pull off restrictions. The senior JTAC has overall responsibility for the safe employment of USAF assets.

e. Emergency Procedures.

(1) If an emergency develops, an attempt will be made to expend remaining ordnance prior to departing the range, safety permitting.

(2) If possible, the JTAC will notify both Eagle Radio (285.625) and the deployed detachment SOF of the nature of the emergency and intended actions.

(3) The weapons jettison area is the center 1 kilometer grid square of the tactical range DF 3500 5863.0, N36 40.2 W87 43.5, or from Airbe NDB 258 degrees 16.4 nautical miles.(CAM REG 95-1, para 25-6)

(4) In the event a weapon is inadvertently released, accidentally fired, or misfired, all weapons delivery will terminate, and Range Division will be notified giving coordinates, type of weapons involved, and type and quantity of ordnance. All known/suspected duds will be reported to Range Division with as accurate a grid location (eight-digit minimum) as possible. Aircraft involved will be flown to home base or CAAF via hot gun routes and impounded in accordance with home base procedures.

(5) Aircraft losing communications will comply with the appropriate 55-series manual(s) and FARs concerning radio-out procedures. No ordnance will be expended without radio contact with the JTAC.

24-5. Safety precautions for use of live ordnance

a. When live ordnance is used, safety precautions must be taken to provide protection for spectators, equipment, and delivery aircraft. The following rules apply:

(1) Coordinate as early as practical with the appropriate division/brigade ALO, 19 ASOS. On request, 19 ASOS will provide range safety fans and information on minimum safe distances from target to observers for all training and live munitions usable in the Fort Campbell impact areas.

(2) Emergency jettison areas will be designated whenever live ordnance is carried in exercises/demonstrations. Live ordnance will be jettisoned in a safe, condition unless otherwise briefed. Type of ordnance, time of drop, and location of impact area will be furnished explosive ordnance disposal personnel as soon as practical.

b. Air Force commanders are responsible for establishing up-to-date “hot gun” routes for aircraft carrying live ordnance. Routes will be selected to avoid centers of population. Procedures will be established that ensure minimum chance of inadvertent release of live, armed ordnance over human habitation or assemblies of personnel.

Chapter 25
Ammunition

25-1. References

a. AR 75-1 (Malfunctions Involving Ammunition and Explosives).
b. AR 190-11 (Physical Security of Arms, Ammunition, and Explosives).
c. AR 385-40 (Accident Reporting and Records).
d. AR and DA PAM 385-64 (Ammunition and Explosives Safety Standards).
e. AR and DA PAM 385-63 (Range Safety).
f. CAM Regulation 700-2 (Conventional Ammunition).
g. CAM Regulation 190-1 (Physical Security of Arms, Ammunition, Explosives, and Sensitive Items).

25-2. General

a. Report all accidents and incidents to Range Division immediately when able, but no later then 30 minutes.

b. This chapter explains and emphasizes local safety rules and regulatory requirements for handling, field storing, and firing ammunition.

25-3. Ammunition handling

a. SOP. The range OIC will ensure that SOPs for safe handling and storage of ammunition in the field are prepared and present during range training exercises. Assistance in preparing SOPs may be obtained by contacting the QASAS at the ASP.

b. Range Safety.

(1) Weapon system(s) FMs and TMs must be available at the firing site. They contain the necessary detailed handling instructions for specific weapons and ammunition items.

(2) The range OIC must be familiar with the range safety criteria and information regarding handling, transporting, and storing ammunition at the training site.

(3) Ammunition packages should not be opened until it is required to support training. Ammunition turned in to the ASP with components missing is unserviceable. A report of survey will be directed for excessive amounts of unserviceable ammunition being turned in.

25-4. Ammunition firing restrictions

a. 40mm Ammunition.

(1) Due to a high dud rate of 40mm grenades, HE grenades fired from hand-held weapons will only be fired on Ranges 26A and 26B.

(2) EOD and Range Division will annually insert targets into Ranges 25A, 26A, and 26B.

(3) OICs will ensure no 40mm HE ammunition is fired at targets closer than 130 meters.

b. Restrictions on firing imposed by the burn index may be found in table 3-2.

c. Small Arms Ammunition**. If live rounds are found packed in a box marked 'blank,' it is a CRITICAL defect. If blank rounds are discovered in a box marked 'ball' or 'tracer' ammunition, it is a MAJOR defect. In either case, call a cease fire, locate and retain the seals removed from the can (s) and/or box (s) from which the rounds were removed, immediately contact Range Division by phone or radio, and request that Quality Assurance Specialist Ammunition Surveillance (QASAS) be notified immediately. QASAS will visit the site and perform an investigation of the incident.**

d. Ammunition Found on Post.

(1) When ammunition above .50 caliber is found outside an impact zone, it will not be touched. The spot will be marked by a 4-foot long stake with a red banner attached. The location, quantity, type of ammunition (if known), and point of contact will be reported to Range Division by phone or radio.

(2) When ammunition of .50 caliber or below is found on a range or in a non-designated area anywhere on post, it may be turned in to the ASP during normal business hours on a “no questions asked" turn-in basis.

25-5. Malfunction reporting

a. Ammunition malfunction and accident reports are submitted as required by references listed in paragraphs 25-1a and 25-1c.

b. When a reportable malfunction has occurred, the OIC or RSO will immediately report the following information by phone or radio to Range Control:

(1) Type of event (dud, hangfire, erratic round, etc.) and whether or not the event resulted in personal injury or damage to property.

(2) Name and rank of the individual making this report.

(3) Complete unit identification.

(4) Location of malfunction (range and/or coordinates).

(5) Weapon identification.

(a) Type.

(b) Manufacturer (if known).

(c) Serial number.

(6) Ammunition.

(a) Nomenclature and model number.

(b) National stock number (NSN) (if known).

(c) Lot number.
(7) Total rounds fired from the same weapon prior to the malfunction.
(8) Total number of misfires/duds.
(9) Any other pertinent information.
c. The checklist for malfunction investigation (figure 25-1) provides information about the type of data needed to be reported to higher headquarters by the QASAS and should be followed.
d. Missile firing data reports are prepared for all missile firings including those which have malfunctioned.

25-6. Defective/altered ammunition

a. Any alteration of loaded ammunition, such as increasing the amount of propellant, is prohibited.
b. Small arms ammunition will be inspected immediately prior to issue to the firing line to ensure appropriate, serviceable ammunition is issued (i.e., ball is not issued for blank). Evidence of defects, such as burrs, scratches, or lacquer missing at the mouth end of blank cartridges, should not be found.
c. Defective ammunition will be set aside and reported to the QASAS immediately.

25-7. Temporary vehicle holding area

a. A 72-hour vehicle holding area located within the ammunition storage area is available for use by the using units. Arrangements for use can be made at the ASP during duty hours.
b. Due to the unavailability of certain security requirements, Category I (ready to fire configured rockets and missiles) and Category II (rifle and hand fragmentation grenades and demolition items weighing less than 50 pounds) cannot be stored in this area at any time.
c. Detailed information regarding use of this area is contained in DA PAM 385-64 chapters 13 and 14..

25-8. Field storage security

a. Storage Guidance. Guidance for storing small quantities of ammunition at the firing site is provided in Cam Reg 700-2, chapters 10 and 11.
b. Security Requirements. All ammunition items, including Categories I and II items, may be stored overnight in the field provided the following general requirements are met:
(1) The site is completely contained within a concertina wire barrier at least two strands high.
(2) Sufficient lighting is present to preclude entry by unauthorized persons at night. (This may be accomplished using portable flood lights or vehicle headlights when an electrical power source is not available).
(3) A one-entry access point is established and an access roster maintained identifying those who are authorized entry. Additional security requirements to be met are contained in AR 190-11.
(4) This policy applies to all units assigned to Fort Campbell. For questions, contact the Installation Range Officer or the QASAS.

25-9. Range Briefings

Weekly safety briefings are conducted Wednesday at 13:00 and every Friday [except for holidays & Divisional Days of No Scheduled Activities (DONSAs)]. When a DONSA falls on Friday, the safety briefing will be conducted on the last workday of the week at 1030 in the Range Division classroom. This safety briefing is conducted by the Range Division Safety and the QASAS and provides valuable safety information for unit OICs, NCOICs, and RSOs. To confirm the time and location for the brief call 956-4484. This Range Briefing will be integrated in all unit commanders Range Safety Certification Programs. All OIC's and SO's must attend this briefing to be Range certified.

25-10. Explosive site plan at the ammunition supply point

Commanders will ensure that soldiers within their command are aware of and will not enter or train within the ASP explosives safety arc marked on the specially prepared map (see figure 25-3).

1. UNIT IDENTIFICATION.

2. WEAPON.
   a. Item nomenclature.
   b. Manufacture (plant or arsenal).
   c. Serial number.
   d. Rate of fire (per minute).
   e. Duration of fire (minutes).
   f. Elevation.
   g. Fuze setting.
   h. Zone (or number of increments).
   i. Length of recoil.
   j. Range to target (meters).
   k. Condition of weapons (before firing).
   l. Date of last overhaul.
   m. Description of weapon after malfunction (photos, sketches, and measurements of important features).
   n. Number of rounds fired from weapon on day of malfunction.
   o. Total number of rounds fired prior to malfunction.
   p. Description of malfunction.
      (1) Was operation normal just prior to malfunction?
      (2) Describe actual action of weapon at the time of malfunction.
      (3) Describe events immediately preceding malfunction.
      (4) Describe actions of personnel following the malfunction.

3. AMMUNITION.
   a. Premature.
      (1) High order.
      (2) Low order.
      (3) Distance from muzzle.
      (4) Obstructions.
      (5) Tube of weapon.
      (6) Fuze setting.
   b. Nonstandard conditions.
      (1) Extra propellant used.
      (2) Evidence of unburned propellant.
      (3) Residue in tube.
      (4) Deviation from instructions in technical manual.
   c. Personal injury.
   d. Unassociated material damage.
   e. Location of casualties with respect to weapon.
   f. FSN, nomenclature, and model number of ammunition.
   g. Name of manufacturer.
   h. Lot number.
   i. Type and model of fuse lot number, and manufacturer.
   j. Headstamp of cartridge(s) manufacturer, and year of manufacture.
   k. Condition of ammunition prior to firing.
      (1) In original sealed containers.
      (2) Length of exposure to climactic conditions.
      (3) Record of previous rounds fired.
      (4) Condition of packaging.
   l. Total number of rounds of lot fired remaining on hand.
   m. Range of fragments.

4. PREVAILING CONDITIONS.
   a. Weather.
      (1) Temperature extremes.
      (2) Wind, velocity and direction.
   b. Nonstandard conditions.
      (1) Extra propellant used.
      (2) Relative humidity.
      (3) Visual conditions.
   c. Terrain at scene.
   d. Impact area.
   e. Area adjacent to weapon.
   f. Date and time of malfunction.
   g. Did projectile of round reach the anticipated point of impact?
   h. Evidence or possibility of gravel, pebbles, etc., in bore from previous firing.
   i. Description of:
      (1) Artificial barriers.
      (2) Course layout.

5. PERSONNEL INVOLVED
   a. Name, rank, and unit of safety officer.
   b. Name, rank, and unit of range officer.
   c. Name, rank, and unit of other applicable personnel involved.

Figure 25-1. Malfunction investigation checklist

1. Safe handling of ammunition stocks, containers will not be dropped, tumbled, dragged, thrown, rolled, or walked.
2. Suitable containers for small, loose ammunition items (i.e., detonators, initiators, squibs, electrically actuated devices, blasting caps - NOT CARRIED IN POCKETS.
3. Cigarette lighters not carried into ammunition field storage area.
4. 'NO SMOKING' signs present
5. No accumulation of packing material, dunnage, oily rags, and likely combustibles within the ammunition field storage area.
6. Ammunition field storage area SOP is present.
7. Guards on duty at ammunition field storage area.
8. Ammunition is stacked by lot number in stacks arranged for free circulation of air.
9. Ammunition is covered to protect it from the elements.
10. Adequate dunnage on ground to support ammunition.
11. Two working fire extinguishers present.
12. Completed DD Form 626 for vehicles used to transport ammunition during field training. (FM 4-30.13, para. 4-79).
13. Range guards present
14. Scarlet flag displayed when firing.
15. Red flags on vehicles, tanks, and armored personnel carriers when firing
16. Unpacking of ammunition is limited to the minimum number of rounds needed for efficient firing exercise
17. Range communication system available and operative. (CAM Reg 385-5, para 5-1)

Figure 25-2. Range safety inspection checklist

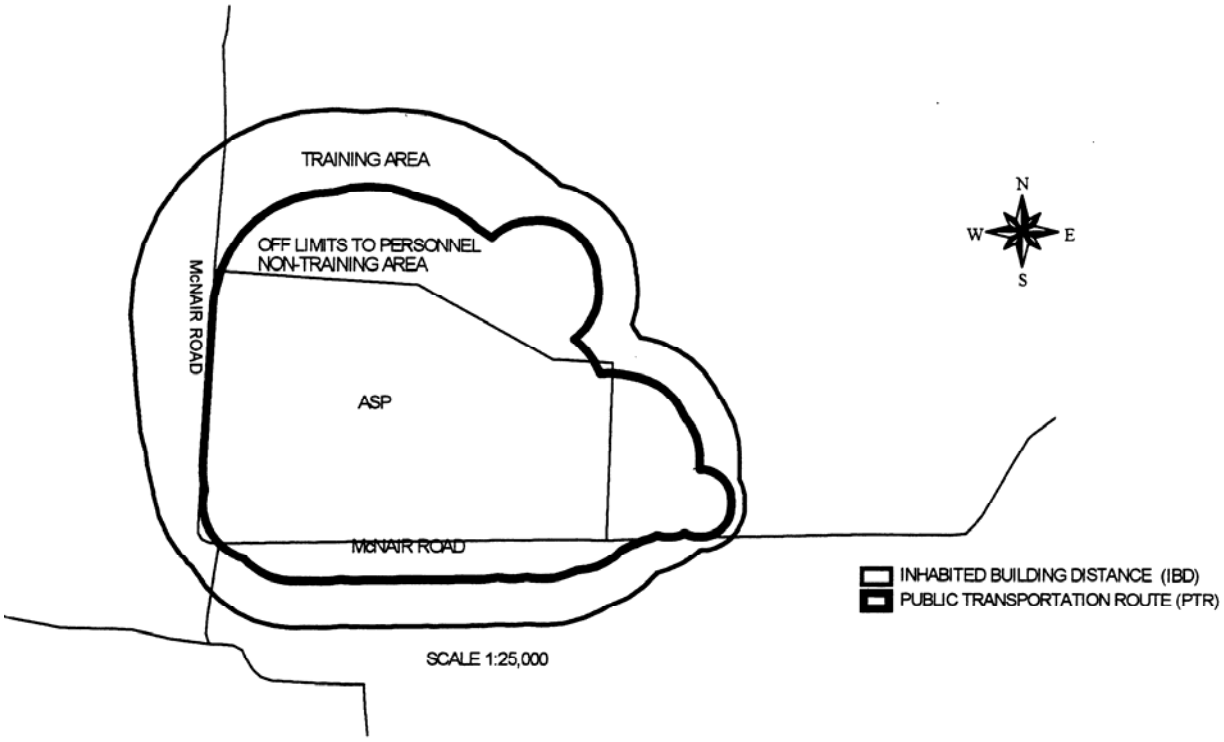

Figure 25-3. Fort Campbell explosives site plan ammunition supply point

Chapter 26
Tactical Unmanned Aerial Vehicles Systems (TUAVS)

26-1. General
Installation commanders having Army UAVS assigned, attached, or tenant to their commands will prepare and publish local flying rules. Rules will include the use of tactical training and maintenance flight areas, arrival and departure routes, and airspace restrictions as appropriate to control UAVS operations in their local flying areas. This regulation in conjunction with CAM Regulation 95-1and the 101st Airborne Division Tactical Unmanned Aerial Vehicle Tactical Operating Procedures will provide the rules required.

26-2. References
a. AR 95-23 (Unmanned Aerial Vehicle System Flight Regulation).
b. TC 34-212 (Unmanned Aerial Vehicle Aircrew Training Manual).
c. 101st Airborne Division Tactical Unmanned Aerial Vehicle Tactical Operating Procedures.
d. CAM Regulation 95-1 (Fort Campbell Flight Regulation).

26-3. Procedures
a. Range Control Procedures and Responsibilities:
(1) Maintain Range Control Net to ensure radio communications from activation to termination
(2) Schedule and de-conflict TUAV airspace requests
(3) Notify Eagle Radio if radio communications is lost with ground operators
(4) Notify TUAV operators if Eagle Radio losses radio contact
b. Eagle Radio Procedures and Responsibilities:
(1) Maintain radio communications with the TUAV ground operators from 30 minutes prior to launch until termination
(2) Notify all aircraft by transmitting pertinent information on the Range Information Service (Eagle Air Traffic Information System (ATIS)) and making blanket broadcasts on all frequencies.
(3) Eagle Radio shall provide procedural and altitude separation between the TUAV and all other aircraft from launch until termination of the flight
(4) Provide current weather, altimeter and transponder code for the TUAV flight
c. TUAV Ground Operators procedures and Responsibilities:
(1). Submit NOTAM request to G3 Aviation a minimum of 10 working days prior to operations. Provide their individual Flight Schedule and Risk Assessment with the NOTAM request.
(2) Conduct an Air Mission Coordination Meeting with all participating units to establish the lateral, time, or vertical separation procedures in effect within the geographical boundary in a NOTAM to mitigate risk of operating the TUAV in close proximity to participating aircraft.
(3) Maintain radio communications with Range Control from activation of the airspace until termination of all training.
(4) Establish radio communications with Eagle Radio 30 minutes prior to launch. Verify weather, set altimeter, set transponder to assigned squawk code and input GPS flight route.
(5) Notify Eagle Radio 10 minutes prior to launch for clearance to launch.
(6) Notify Eagle Radio 10 minutes prior to the TUAV entering the TALS holding pattern for landing
(7) Notify Eagle Radio when the TUAV has landed
(8) Terminate TUAV operations if radio contact is lost with either Eagle Radio or Range control for more than 10 minutes.
(9) Notify Range Control if TUAV goes down in the impact area. NO unit will attempt to recover TUAV from the impact area.

FOR THE COMMANDER:

THOMAS D. VAIL
Colonel, GS
Chief of Staff

DISTRIBUTION:
Intranet

Appendix A
References

Section I
Army Regulations

AR 40-5-Preventive Medicine

AR 11-9-Army Radiation Safety Program

AR 75-1-Malfunctions Involving Ammunition and Explosives

AR 95-1-Flight Regulations

AR 95-2-Air Traffic Control, Airspace, Airfields, Flight Activities, and Navigation Aids

AR 95-23 Unmanned Aerial Vehicle System Flight Regulation

AR 190-5-Motor Vehicle Traffic Supervision

AR 190-11-Physical Security of Arms, Ammunition, and Explosives

AR 385-10-The Army Safety Program

AR 350-19-Army Sustainable Range Program

AR 385-40-Accident Reporting and Records

AR 385-55-Prevention of Motor Vehicle Accidents

AR 385-63-Range Safety

AR 385-64-U.S. Army Explosives Safety Program

DA Pamphlet 385-40-Army Accident Investigation and Reporting

DA Pamphlet 385-63-Range Safety

DA Pamphlet 385-64-Ammunition and Explosives Safety Standards

DA Pamphlet 420-7-Natural Resources, Land, Forest, and Wildlife

USASOC Regulation 350-2

Section II
TAC Regulation

AFI 11-214-Air Operations Rules and Procedures

Section III
Field Manual

FM 3-04.140-Aviation Gunnery

FM 3-05.210-Special Forces Air Operations

FM 3-05.211-Special Forces Free-Fall Parachuting Operations

FM 3-05.212-Special Forces Waterborne Operations

FM 3-06.1-Aviation Urban Operations

FM 3-06.11-Combined Operations in Urban Terrain

FM 3-09.21-Tactics, Techniques, and Procedures for the Field Artillery Battalion

FM 3-11.5-Multiservice TTP for Chemical, Biological, Radiological, and Nuclear Decontamination

FM 3-11-Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Defense Operations

FM 3-11.21-Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical aspects of Consequences Management

FM 3-20.12-Tank Gunnery

FM 3-22.1-Bradley Gunnery

FM 3-22.9-Rifle Marksmanship, M4/M16

FM 3-22.27-MK19 40mm Grenade Machine Gun MOD 3 Change 1

FM 3-22.31-40mm Grenade Launcher M203

FM 3-22.32-M41, Improved Target Acquisition System

FM 3-22.34-TOW Weapon System

FM 3-22.40-Tactical Employment of Non-lethal Weapons

FM 3-22.65-Browning Machine Gun, Caliber .50 HB, M2 Change 1

FM 3-22.68-Crew Served Machine Guns

FM 3-22.90-Mortars

FM 3-22.91-Mortar Gunnery

FM 3-23.24- M47 Dragon Medium Antitank/Assault Weapon System

FM 3-23.25-Light Antiarmor Weapons

FM 3-23.30-Grenades and Pyrotechnic Signals Change 1

FM 3-23.35-Combat Training with Pistols and Revolvers Change 1 and 2

FM 3-34-Engineering Operations

FM 3-50-Smoke Operations Change 1

FM 4-30.5-Explosive Ordnance Disposal Service and Unit Operations

FM 5-34-Engineer Field Data

FM 3-34.214-Explosives and Demolitions

FM 6-2-Tactics, Techniques, and Procedures for Field Artillery Survey Change 1

FM 6-20.10- Tactics, Techniques, and Procedures for Fire Support Targeting Process

FM 6-30-Tactics, Techniques, and Procedures for Observed Fire

FM 6-40-Tactics, Techniques, and Procedures for Field Artillery Manual Cannon Gunnery Change 1

FM 6-50-Tactics, Techniques, and Procedures for the Field Artillery Cannon Battery

FM 6-60-Tactics, Techniques, and Procedures for Multiple Launch Rocket System (MLRS) Operations

FM 3-21.8-Infantry Rifle Platoon and Squad

FM 4-30.13-Ammunition Handbook

FM 3-20.8-Light Cavalry Gunnery

FM 20-11-Military Diving

FM 20-32-Mine/Countermine Operations

FM 21-10-Field Hygiene and Sanitation

FM 21-18-Foot Marches

FM 21-75-Combat Skills of the Soldier

FM 23-10-Sniper Training

FM 23-11-90mm Recoilless Rifle, M67 Change 1-3

FM 25-4-How to Conduct a Training Exercise

FM 23-23-Antipersonnel Mine M18A1 and M18 (Claymore) Change 1

FM 44-16-Platoon Combat Operations-Chaparral, Vulcan, and Stinger

FM 44-18-Air Defense Artillery Employment, Stinger (How to Fight) Change 1

FM 44-44-Avenger-Platoon, Section, Squad Operations

FM 3-21.220-Static Line Parachuting Techniques & Training

FM 5-19- Composite Risk Management

Section IV
DA Training Circulars

TC 9-21.01-Improvised Explosive Devices Iraq and Afghanistan

TC 21-24-Rappelling

TC 23-13-Crew-served Night Vision Sight

TC 25-1-Training Land

TC 25-8-Training Ranges

TC 34-212 Unmanned Aerial Vehicle Aircrew Training Manual

TC 90-1, Training for Urban Environments

Appendix B
Aeromedevac Request Procedures

B-1. Reference
The Air Assault School Handbook.

B-2. General
This appendix provides information concerning AEROMEDEVAC requests through Range Division. The AEROMEDEVAC support for Fort Campbell is contracted with local vendors. Units are advised that response times vary for this support and must plan for alternate medevac within the medical plans for all training exercises.

B-3. Procedures
a. Contact Range Division. In the event of illness or injury to personnel requiring MEDEVAC, units will contact Range Division as follows:

(1) Telephone. Dial Range Division, 798-3001/4122

(2) Radio. Units/individuals requesting a MEDEVAC will contact Range Division on frequency 75.25 (primary) or frequency 48.50(alternate).

b. Units/individuals will provide Range Division with the following information:

(1) Location of pick-up site
(2) Radio frequency, call sign, and suffix.
(3) Number of patients by precedence.
(4) Special equipment required.
(5) Number of patients by type.
(6) Security of PZ. (if necessary)
(7) Method of marking PZ.
(8) Patient's nationality and status. (if necessary)
(9) NBC contamination (if necessary).

c. Once the AEROMEDEVAC helicopter is in the air, Range Division will notify the requesting unit/individual and provide the AEROMEDEVAC call sign (e.g., “Air Evac or Life Flight. . .”).

d. Requesting unit/individuals will keep Range Division informed concerning the status of the casualty(ies) and notify Range Division when the helicopter has lifted off with the casualty(ies).

Appendix C
Range Waivers

C-1. Purpose
This appendix provides information about the range waivers/deviations currently authorized at Fort Campbell.

C-2. General
Fort Campbell currently has range waivers/deviations approved by the Commanding General.

a. Range 4 (Sniper Tower) This waiver authorizes the use of the M24 sniper rifle using match grade ammunition without closing adjacent ranges. The ballistic range (distance X) exceeds the limits of the small arms impact area. The waiver for Ranges 4 requires the following conditions to be met:

(1) OICs will ensure that a one-to-one firer/coach ratio is maintained.
(2) Weapons are fired at an angle of 5 degrees or less from the tower and 10 degrees or less from the ground.
(3) No automatic firing or aerial target engagements will be conducted.
(4) Range OIC/RSO must receive briefing for M21/M24 from Range Division Safety.

b. Ranges 10, 11, 13/14, and 16. This waiver authorizes the use of the M24 sniper rifle using match grade ammunition without closing adjacent ranges. The ballistic range (distance X) exceeds the limits of the small arms impact area. The waiver for Ranges 13, 14, and 16 requires the following conditions to be met:

(1) OICs will ensure that a one-to-one firer/coach ratio is maintained.
(2) Weapons will be fired at an angle of 10 degrees or less.
(3) No automatic firing or aerial target engagements will be conducted.
(4) Range OIC/RSO must receive briefing for M21/M24 from Range Division Safety.

c. TOW Inert Missile. This waiver authorized TOW inert missile firing. The SDZD reduces from 47 degrees to 30 degrees on each side of the missile target line provided the following conditions are met:

(1) The missile launcher (aerial or ground) is located within 25 meters of a surveyed FP.
(2) The RSO has verified the missile launcher is oriented on the missile target line.
(3) Approved SDZD is on file at Range Division 10 working days before firing.

d. Range 3A, 17A, 27A, 38, 44A, 44C, and 51C (Shooting House). This waiver authorizes the firing of 5.56mm, 9mm, 38 and 22cal. Pistols ammunition 360 degrees inside the building and rooms of the live fire shooting house provide that:

(1) No weapons are fired at targets above shoulder high.
(2) Range Division personnel place targets inside the shooting house to control the direction of fire.
(3) Only one team can conduct building/room clearing at a time.
(4) Unit OIC and RSO must receive an onsite briefing provided by Live Fire Range Manager
(5) Units refer to current Shoot House SOP for specific guidance and restrictions.

Appendix D
WBGT Categories (refer to GTA 5-8-12, Individual Safety Card)

WORK/REST/WATER CONSUMPTION							
Heat Cat	WBGT[1]	Easy Work		Moderate Work		Hard Work	
		Work/ Rest (Min)	Water Intake (Qt/Hr)	Work/ Rest (Min)	Water/ Intake (Qt/Hr)	Work/ Rest (Min)	Water Intake (Qt/Hr)
1	78 to 81.9° F	NL	1/2	NL	3/4	40/20	3/4
2 (Green)	82 to 84.9° F	NL	1/2	50/10	3/4	30/30	1
3 (Yellow)	85 to 87.9° F	NL	3/4	40/20	3/4	30/30	1
4 (Red)	88 to 89.9° F	NL	3/4	30/30	3/4	20/40	1
5 (Black)	>90° F	50/10	1	20/40	1	10/50	1
CAUTION **Hourly fluid intake should not exceed 1½ quarts. Daily fluid intake should not exceed 12 quarts.**							
[1]If wearing body armor, add 5° F to the WBGT; the MOPP overgarment, add 10° F. *NOTES:* *1. Rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hours of work in the specific heat category. Individual water needs will vary ± ¼ quart per hour.* *2. NL = No limit to work time per hour.* *3. Rest means minimal physical activity (sitting or standing) and should be accomplished in the shade if possible.*							

EXAMPLES		
Easy Work	Moderate Work	Hard Work
1. Weapon maintenance 2. Walking on a hard surface, 2.5 mph, ≥30-lb load 3. Manual of arms 4. Drill and ceremony	1. Walking in loose sand, 2.5 mph, no load 2. Walking on a hard surface, 3.5 mph, <40-lb load 3. Calisthenics 4. Marksmanship training 5. Patrolling	1. Walking in loose sand, 2.5 mph, any load 2. Walking on a hard surface, 3.5 mph, ≥ 40-lb load 3. Individual movement techniques (low/high crawl) 4. Defense position construction 5. Field assaults 6. Rifle bayonet training 7. Road march, >4 mph

Table D-1. Recommended modifications of physical activity by heat category

PREVENTION OF COLD INJURIES DUE TO WINDCHILL			
When the windchill is -	And your training Is —	You should be —	And extended breaks are —
CAT I +32 to +1° F	Stationary	Fully dressed	At the commander's discretion
	Physically active	Partially dressed	Not recommended
CAT II 0 to -5 °F	Stationary	Fully dressed	Recommended
	Physically active	Partially dressed	Not recommended
CAT II 0 to -10° F	Stationary	Fully dressed	Recommended
	Physically active	Fully dressed	Not recommended
CAT IV Below -10° F	Discontinue outside training.		

BASIC COLD INJURY PREVENTION
1. Wear sufficient clothing and equipment to keep our body warm. Dress in layers. 2. Avoid prolonged exposure of unprotected skin to extreme cold and/or windy conditions (see page 4). 3. Keep clothing and equipment as dry as possible. Change socks at least daily or more often if they are damp. 4. Keep clothing loose so that circulation is not decreased. 5. Remove clothing layers, as appropriate, to limit sweating during activity. 6. Eat hot meals, and drink hot liquids. Maintain food and fluid intake. 7. Be aware that the risk of cold injury increases in wet weather or when wearing wet clothing, particularly if the windchill is 40° F or below.

DEFINITIONS	
Windchill	The cooling power of wind on exposed flesh expressed as an equivalent temperature under calm conditions.
Fully Dressed	Wearing long underwear, field pants, overshoes, gloves or trigger finger mittens (when available), and a pile cap.
Partially Dressed	Wearing gloves and a pile cap—no long underwear, field pants, or overshoes.
Extended Breaks	A maximum of 20 minutes continuous training with interspersed 10-minute breaks to visit warming facilities and drink hot liquids.
Stationary Activity	Maintaining a fixed position, such as bleacher instruction, basic rifle marksmanship, and ceremonies.

Table D-2. Cold Injury Prevention

Appendix E
Weather Warning Categories

E-1. Reference
Air Force Manual 15-125, CAM Regulation 115-1, Local Policy.

E-2. Weather watches
Weather watches are issued to increase awareness of the possibility of extreme and/or severe weather when the potential exists for development and are valid for the entire Fort Campbell Reservation. Weather warnings are issued when a specific weather condition, of such intensity as to pose a hazard to property or life, is occurring or is expected to occur, and are valid for the entire Fort Campbell Reservation and off-post areas within a 5 nautical mile radius of Campbell Army Air Field. Watches and warnings will be issued on AR Form 3807.

E-3. Procedures
Warning categories and desired lead times are listed in table E-1.

E-4. Watch categories
Watch categories and desired lead times are listed in table E-2.

Warning Categories	Desired Lead Times
Tornado - Tornado is imminent. Direction, distance movement (if known)	10 min
Hail ¼" or greater	1 hour
Hail ½" but less than ¾"	1 hour
Wind 35 knots or greater direction and speed of gusts	1 hour
Heavy snow greater than 2 inches in 2 hours	1 hour
Freezing precipitation	1 hour

Table E-1. Warning categories and desired lead times

Watch Categories	Desired Lead Times
Tornado Watch - The potential exists for tornado development	N/A
Severe Thunderstorm Watch - The potential exists for severe thunderstorm development	N/A
Freezing Precipitation Watch - The potential exists for freezing precipitation	N/A

Table E-2. Watch categories and desired lead times

Appendix F
Terms

F-1. Check fire
A temporary interruption in a firing event. During a check fire, all firing must cease. A check fire may be issued by the OIC, RSO, or other personnel in the event of a serious safety hazard or incident on a range, or by Range Control when appropriate. A check fire imposed by Range Division will only be lifted by Range Control. A check fire imposed by a unit on a range will be reported immediately to Range Control.

F-2. Check fire freeze
A command used to indicate a serious range incident has occurred and it is imperative that all weapons immediately cease firing, and all firing data be kept on the guns (elevation, deflection, charge, shell, fuze, etc). Small arms weapons will be placed on safe. Firers remain in place until the check fire freeze has been lifted. A check fire freeze will only be lifted by Range Division. Specific actions to be taken by firing units are listed in the chapter addressing the weapons being used.

F-3. Cease fire
A cease fire is a temporary interruption in a training event to facilitate the changing of firing orders, firing tables, lunch breaks, etc. it is also used to indicate the end of a training day or training event. Cease fire is normally imposed by the training unit. However, a cease fire may be imposed by the Installation Range Officer if warranted.

F-4. Close Air Support (CAS)
Air action by fixed- and rotary wing aircraft against hostile targets that are in close proximity to friendly forces and which require detailed integration of each air mission with the fire and movement of those forces.

F-5. Cook-off
The delayed functioning of a chambered round of ammunition initiated by the heat of the weapon which causes the explosive train or primer to ignite.

F-6. Direct fire
Fire delivered on a target when the weapon is laid by sighting directly on the target using the weapon's sighting equipment.

F-7. Downwind hazard area
That area beyond the impact point which may be affected by riot control chemical agent's simulated chemical agent or deliberate smoke operations due to the extent of downwind drift (which is affected by the direction and speed of the wind).

F-8. Dud
A discharged projectile containing an explosive charge which failed to arm as intended or which failed to function after being armed.

F-9. Erratic fire
After normal firing has occurred, the round deviated from its planned course of trajectory.

F-10. Firing line
The line from which weapons are fired. No one is permitted forward of this line during firing except as specifically indicated in this regulation.

F-11. Firing point
A point from which artillery or mortar weapons will deliver live fire into an established impact area.

F-12. Firing position
The point or location at which a weapon, other than demolition, is placed for firing. In the case of demolition, the firing position is that point or location where the firing crew will be located during demolition operations.

F-13. Hangfire
A hangfire is a delay in the functioning of the propelling charge of the explosive train. A hangfire cannot immediately be distinguished from a misfire. For this reason, always wait the prescribed time (as established by the appropriate FM) before attempting to clear the weapon.

F-14. Indirect fire
Indirect fires are those fires that cannot be observed by the firing unit. This necessitates the use of outside agencies, such as forward observers, aerial observers, or radar, to observe, direct, and control the effects of the fire.

F-15. Installation range officer
A commissioned officer or Department of the Army civilian charged with management and enforcement of installation range safety, coordination and scheduling of ranges, maintenance, modification, and construction of ranges and training facilities in accordance with procedures prescribed in this regulation.

F-16. Joint air attack team (JAAT)
Joint close air support elements utilizing the combined assets of fixed wing and rotary wing aircraft under the control of a single battle commander.

F-17. Joint Airborne/Air Transportability Training (JA/ATT)
Joint exercise utilizing Air Force aircraft, personnel, and equipment to fulfill training requirements in airborne/air transport operations for more than one service.

F-18. Joint Terminal Attack Controller (JTAC)
A Qualified (certified) service member who, from a forward position, directs the action of combat aircraft engaged in CAS and other air operations. A qualified and current JTAC will be recognized across Department of Defense as capable and authorized to perform terminal attack control.

F-19. Joint usage
A coordinated, written agreement between two or more units to share a training facility. Coordination is documented on an FC Form 253 (Range Requirements) and submitted to the Scheduling Section, Range Division, for final approval.

F-20. Malfunctions of ammunition
Includes premature functioning, duds, erratic fire, hangfires, and misfires. Class A malfunctions are those that can cause fatalities, serious injury, and/or serious damage to a weapon launcher under normal training or combat conditions.

F-21. Misfire
A misfire is defined as an item of ammunition whose primer has failed to function or has failed to ignite the succeeding explosive train of the propelling charge.

F-22. Notice to Airmen (NOTAM)
A published notice containing information on scheduled air operations, use of CS, demolitions, live fire exercises, or other activities that affect airspace, thereby changing or creating hazardous flight conditions.

F-23. Officer-in-Charge (OIC)
The OIC is normally the commander of the soldiers conducting training, firing, or using installation range/training area facilities. The officer, warrant officer, or NCO (E6 or above) is responsible for everything the soldiers do or fail to do while under his control. He must attend a range division safety briefing and be properly trained and certified by his battalion commander. name must be on the battalion's certification list on file in the Safety Section, Range Division IAW chapter 3, para 3-2 of this regulation.

F-24. Overhead fire
Fire that is delivered over the heads of unprotected personnel occupying Area D of a SDZD to include:
a. Military personnel conducting training.
b. Army helicopters flying below the trajectory of the projectile.
c. Nonmilitary personnel traveling along public roads.
d. Hunters, farmers, and others.

F-25. Quality Assurance Specialist Ammunition Surveillance (QASAS)
The QASAS is the assigned ESO at Fort Campbell. Provides technical assistance and support on ammunition quality and explosive safety matters to locally assigned personnel and to soldiers training on ranges. Investigates and reports ammunition malfunctions. Assists the Range Safety Officer as required.

F-26. Range personnel
Those persons specifically designated to assist the Range OIC in the discharge of his duties.

F-27. Range Safety Officer (RSO)
A qualified commissioned officer, warrant officer, or NCO (E6 or above) who is the safety representative of the OIC of the training unit. He will not be assigned other duties while acting in this capacity. The RSO must attend a range division safety briefing and be safety certified by his battalion commander IAW chapter 3, para 3-2 of this regulation.

F-28. Runaway gun
A runaway gun is a gun that continues to fire after the trigger is released.

F-29. Ruptured cartridge
A cartridge whose shell casing bursts or ruptures inside the chamber of a weapon.

F-30. Safe radius
Safe radius is that distance from a weapon considered safe for personnel. It is also the minimum distance that soldiers will be kept away from a misfire, dud, or any potential explosive hazard. The safe radius is the distance to move away from a potential cook-off that cannot be cleared from the weapon.

F-31. Stoppage
A stoppage is any interruption in a weapon's cycle or functioning caused by faulty action of the gun or its ammunition.

F-32. Surface Danger Zone
That segment of the range area which is endangered by a particular type of weapon firing.

F-33. Training facilities
The term used to refer to FPs, OPs, DZs, ranges, TAs, LSs, and other special facilities within the reservation which are scheduled, maintained, and controlled by Range Division.

Appendix G
Central Vehicle Wash Facility Utilization (CVWF)

G-1. Purpose
This appendix prescribes procedures and responsibilities for the use of the CVWF, Ranges 8 and 18.

G-2. Applicability
This appendix applies to all units, activities, and agencies utilizing the CVWF.

G-3. General
a. The CVWFs are high volume, high pressure vehicle wash facilities. Range 8 is located near the intersection of Mabry Road and Stillwell Road. Range 18 is located near the intersection of Market Garden Road and 47th Street. These facilities are for military vehicle washing only. Washing of POVs is prohibited. Maintenance cleaning is also prohibited.

b. Range 8 can only accommodate wheeled vehicles. Range 18 can accommodate both wheeled and tracked vehicles.

c. Units should come directly from the TAs to the facilities so vehicles can be washed prior to returning to garrison locations.

d. The tracked vehicle portion of the CVWF consists of four stations:

(1) The first station is a vehicle preparation area where vehicles can download equipment and dispose of trash prior to washing.

(2) The vehicles can then go to the second station and use the bird baths. Driving through these bird baths loosens and knocks off excessive mud and dirt.

(3) The third station has high pressure fire hoses and spray wands to complete the majority of the exterior washing.

(4) The fourth station consists of low pressure hoses to be used for interior cleaning. Prior to departing the CVWF, vehicles will upload any downloaded items.

e. The wheeled vehicle portion of the CVWF consists of three stations:

(1) At the first station, vehicles can download equipment and eliminate trash prior to washing.

(2) The vehicles can then proceed to one of the high pressure manual wash islands to complete the majority of the washing.

(3) Vehicles will upload any downloaded items before leaving the facility.

f. All MILES equipment will be removed from vehicles prior to the unit's arrival at the CVWF.

g. A battalion-size unit (approximately 20-30 vehicles) will normally take 75-120 minutes to wash all vehicles at the CVWF. Similarly, a brigade-size unit (approximately 100-125 vehicles) could be expected to take 4-5 hours.

G-4. Procedures
a. Range 8 (south wash rack) will have normal operating hours, Monday through Friday, 0900-1700.

b. Range 18 (north wash rack) will have normal operating hours Monday through Friday, 0900-1700. (The wash rack may also be scheduled 0600-0900 and 1700-2400).

c. Both Ranges 8 and 18 will be closed on Federal holidays and DONSAs.

d. During normal operating hours, vehicles will be washed on a first-come-first-served basis. Units will not schedule the wash racks during normal operating hours.

e. Units washing 2-9 vehicles are required to have an NCOIC (corporal or above) to control the vehicles. Units washing 10 or more vehicles must have an NCOIC (SSG or above) and a 6-man cleanup detail. Drivers of single vehicles and all using unit NCOICs will report to the wash facility operator to receive a safety and operating procedure briefing.

f. Range 18 can be scheduled for use after normal operating hours and on holidays and DONSAs by submitting the request on a separate FC Form 253 not later than 10 working days in advance in accordance with chapter 2.

g. Only water and brushes are authorized for use on the wash rack. **Soap, detergent, glass cleaner, degreasers, etc., will not be used. Violators will be required to leave the wash rack.**

h. Any variations must be coordinated with the contract range maintenance.

G-5. Responsibilities
a. Using units will --:

(1) Have unit OIC report to the CVWF personnel prior to any washing to receive operational/safety briefing.

(2) Clean the facility prior to leaving the CVWF. The unit OIC will be present throughout wash and clean-up activities.

(3) Provide a driver and ground guide for each vehicle and establish their own traffic control. The following ground guiding procedures will be used in the CVWF areas:

(a) Before a tracked vehicle is started, a member of the crew will walk completely around the vehicle to ensure no one is in danger from the vehicle's movement.

(b) Tracked vehicles will require ground guides front and rear. Guides must be able to see each other and must be visible to the driver.

(c) Wheeled vehicles will normally require one ground guide; however, two guides will be used when backing a wheeled vehicle with restricted vision.

(4) Conduct a thorough police call and ensure that no unit equipment, pyrotechnics, brass, ammunition, or explosives are deposited in trash bins. All trash will be deposited in the dumpsters provided.

(5) Have a retrieval vehicle on site to recover any stalled vehicles. This will avoid lengthy delays due to stalled vehicles in the bird baths.

b. Range Division will --

(1) Conduct all scheduling and supervise CVWF personnel.

(2) Contact CSM of units not adhering to policies.

(3) Notify installation units and DPW of CVWF closures.

(4) Report malfunctions to DPW.

c. CVWF personnel will --

(1) Conduct operations and safety briefings.

(2) Report all malfunctions and any safety violations or failure to properly clean the facility to Range Division.

(3) Ensure clean up is completed prior to releasing the unit OIC.

(4) Ensure all hoses and equipment are secured upon completion of unit operations.

(5) Coordinate small unit and single vehicle use of the facility.

d. DPW will --

(1) Provide maintenance and repair for the facility.

(2) Notify Range Division 24 hours in advance of closures.

G-6. Safety

a. No horseplay with any of the hoses; also no running while in the facility.

b. No vehicle will proceed on the complex without a ground guide; facility speed limit is 5 mph.

c. Any time a vehicle is in motion, operators will ensure that headlights are turned on.

d. If a vehicle breaks down, turn on the four-way flasher and sound the horn.

e. Do not touch power boxes located on the cement islands.

f. Since all hoses are subject to damage and may be high pressure type-

(1) Do not run over any hoses with your vehicle.

(2) Do not kink hose lines; straighten out any kinks or knots.

(3) Do not leave any hose line unattended. (When washing is completed, shut the nozzle down and close the valve located on the cement islands.)

(4) Always open nozzles and valves slowly.

g. If a hose line breaks, get clear of the line and shut down the water flow at the valve located on the cement islands (never jump on any hose line).

h. NEVER DRINK THE WATER AT THE FACILITY. Water is recycled.

G-7. Cold Weather operations

a. Due to cold weather, recent damage to the CVWF has necessitated that operating procedures be modified to prevent further damage.

b. **When the outside temperature is forecasted to drop below 32 degrees Fahrenheit, the wash facilities will be closed and winterized. These actions will be initiated as the temperature drops below 35 degrees Fahrenheit. When the temperature rises above 35 degrees for 6 hours, the wash facilities will be reopened.**

c. Cold weather opening and closing decisions for the wash facilities will be made by the contract range maintenance personnel or the Chief, Range Division.

d. During cold weather use of the CVWF, the use of wet weather clothing is recommended. Due to the wind chill factor, which can lower the temperature considerably, soldiers should keep hands and feet protected with gloves and overshoes while using the wash facility.

Appendix H
Local NOTAMs

NOTAMs are published by the G3 Air to inform aviators of possible flight hazards and temporary airspace restrictions in the Fort Campbell area. Training activities requiring a NOTAM are airborne operations, smoke operations, CS gas operations, air sector training, close air support, C-130 assault landings on Golden Eagle, demolition training in training areas, RCMAT training in the impact areas, UAV training in training areas (must comply with UAV Memorandum of Agreement), Hellfire missile, Copperhead shoots, and MLRS training. Units performing hazardous activities (i.e., airborne operations, smoke, CS gas operations) must submit an FC Form 253 to Range Control Scheduling not later than 10 working days prior to conducting the activity NOTAM requests submitted less than 10 working days prior require a 'FLASH NOTAM.' Requests must be routed through G3 Air, Range Division, Chief of Staff for approval. FLASH NOTAMs are to be the exception, not the rule, when scheduling air operationsG3 Air will publish a weekly NOTAM sheet and Eagle Radio will broadcast NOTAMs in accordance with CAM Regulation 95-1. Questions about any activities that may be hazardous to the flight or that require airspace restrictions should be directed to G3 Air.

Appendix I
Range and Training Area Recovery Operations

All Range and Training Area mechanically assisted digging/berming operations must be coordinated through Range Division/ITAM offices by means of a digging request notification. This notification must be included with range packets/land allocation packets detailing grid coordinates, date of training mission, nature and size of ground disturbance, occupying unit size, duration of activity. Requests must include date of recovery/rehab and an inclement weather alternative date. Recovery/rehab will include filling and leveling of all foxholes, trenches, fighting positions, berms and other force protection. Areas disturbed will then be seeded, fertilized and mulched with materials provided by ITAM. This record will be kept for inspection by ITAM and DPW, Environmental Division.

Appendix J
Market Garden Street Lights

Street lights along Market Garden Road have been installed and are controlled by three switches located at Range Control. The firing desk operator has access to these switches 24 hours a day seven days a week. Battalion S-3s can request that the center and South sections of lights be turned on or off as necessary to enhance training or safety. Default condition of the lights will be on. Contact Range Control at 798-3001/4122, provide name rank and reason for lighting condition change, and date requested.