

**Camp Gruber Training Center
Regulation 385-1**

Camp Gruber Range and Training Facilities Safety Regulation



**Camp Gruber Training Center
Oklahoma Army National Guard
Braggs, Oklahoma 74423-0029
1 September 2021**

This regulation supersedes OMD Regulation 385-1, Camp Gruber Range and Training Facilities Safety Regulation,
Dated 1 September 2020

UNCLASSIFIED

Summary of Change

CG Regulation 385-1

This revision

- Updates CH 2-9b, information regarding range training expiration.
- Updates CH 2-36c, information regarding requirement to turn in overlay with Deliberate Risk Assessment Worksheet
- Updates Gas Chamber (Special Instructions)
- Updates Obstacle Course (Special Instructions)

Headquarters
Oklahoma Military Department
Oklahoma City, OK
1 September 2021

CG Regulation 385-1

Safety
Camp Gruber Range and Training Facilities Safety Regulation

By Order of the Commander:

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Commander

History. This publication supersedes
CGR 385-1, dated 1 September 2020.

Summary. This regulation provides commanders and training units with required force protection guidance when utilizing ranges and training facilities on Camp Gruber. It provides procedures to protect military and civilian personnel who are utilizing Camp Gruber for training.

Applicability. This regulation applies to all military and civilian personnel utilizing any facility on Camp Gruber.

Impact on Army Manning System. This regulation does not contain any information that affects the OKARNG full time manning system.

Army Management Control Process. This regulation is subject to the requirements of AR 11-2.

Supplementation. Supplementation of this regulation is prohibited without approval from the post Range Management Authority.

Suggested Improvements. Users are encouraged to send comments and suggested improvements on DA 2028 (Recommended Changes to Pubs and Blank Forms) directly to Camp Gruber Training Center.

Distribution. A

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* This regulation supersedes CGR 385-1, Camp Gruber Range and Training Facilities Safety Regulation, dated 1 September 2020

Chapter 1

General

1-1. Purpose

This regulation governs the safe use of training facilities and areas located at Camp Gruber, Oklahoma. It is intended to supplement current training publications and regulations.

1-2. Responsibilities

- a. The Director Plans, Operations, and Training Division is responsible for the management and scheduling of training facilities and maneuver land at Camp Gruber. This individual, or the garrison commander, are the only persons who may approve exceptions to policy established by this regulation.
- b. The Plans and Operations Officer is responsible for scheduling the use of training facilities.
- c. The Range Management Authority is responsible for the enforcement of policies and procedures established by this regulation.

1-3. Scheduling of Training Facilities

- a. Scheduling of ranges and training areas will be IAW Camp Gruber Range Facility Management Support System (RFMSS) SOP.
- b. Information concerning the availability of training facilities can be obtained telephonically or by viewing the Two Week Calendar located in RFMSS. However, training facilities are scheduled and reserved only thru RFMSS. RFMSS is the primary means for requesting and scheduling resources at Camp Gruber for all units. Organizations may request access thru the RFMSS website. <https://rfmss.belvoir.army.mil/>
- c. Cancellation of training facilities previously approved may be initially accomplished telephonically, but requires written documentation.
- d. Units will not "block schedule" ranges or training areas for a period of greater than three (3) continuous days unless approved by the Plans and Operations Officer or his designated representative. A training plan or training schedule is required prior to final approval of any continuous training events of greater than three (3) days.

1-4. Military Services and Civilian Agencies

- a. All military services as well as local, State, and Federal agencies may use ranges at the discretion of The Adjutant General (TAG) of the state of Oklahoma, the United States Property and Fiscal Officer (USP&FO) of the state of Oklahoma, and the garrison commander.
- b. Requests for range use shall include all technical data regarding munitions and weapons systems. A determination will be made regarding the adequacy of the range for the proposed operation.
- c. Services and agencies that use Camp Gruber ranges and training areas must comply with all applicable regulations, to include: AR 350-19, AR 385-63, DA Pam 385-63, NGR 385-63, NGR 5-1 and any other as appropriate.

1-5. Arriving onto Post for training

- a. All agencies, military units that will stay or train on post must check-in at Range Control building 740 when first arriving onto Camp Gruber.
- b. No directorate on post will issue buildings, facilities or ranges without the Camp Gruber RC Form Post Entry/Clearance 16-001.

1-6. Daily Range Coordination Meeting

- a. A range coordination meeting is conducted daily at 0800 in Building 740 (Range Control) in order to conduct final coordination for facilities that will be utilized on the training site over the next 24-48 hour period.
- b. Units are required to provide a representative to this briefing to accomplish the following:
 - (1) Add or cancel ranges/facilities.
 - (2) Coordinate with other units to transfer scheduled facilities or to arrange for joint utilization.
 - (3) To receive information on installation directed cease-fires, safety precautions or administrative information of interest to all training units.
 - (4) To turn in daily unit Situation Report (SITREP Camp Gruber RC Form 16-002) IAW Appendix B.
- c. Units failing to attend the coordination meeting will result in the delay or cancellation of the training event.

1-7. Additions or Cancellations of Reserved Training Facilities

- a. Additional training facilities may be acquired in the following manner:

- (1) Provide a RFMSS request IAW CG RFMSS SOP.
 - (2) Request the facility at the daily range briefing utilizing same day request pending facility is available for use.
 - (3) Request a facility from another unit currently scheduled for the facility.
 - (4) Coordinate for joint utilization with another unit. The unit scheduled for the range will be responsible for clearance of the range.
- b. Units may cancel facilities at a minimum 48 hours prior to day of scheduled use by notifying the Range Control Scheduler.

1-8. Control of Airspace

- a. Camp Gruber's airspace is controlled at the installation level by activating and deactivating a Controlled Firing Area (CFA). Range Control is the only agency allowed to activate or deactivate a CFA via a NOTAM. The level of restricted airspace that is activated is dependent on the weapons systems being fired on various range facilities within the installation.
- b. All scheduled aircraft supporting ground elements must coordinate with Range Control (FM 40.80 or alternate 31.30) prior to entering the restricted area. Minimum information required is:
- (1) Aircraft call sign or tail number.
 - (2) Estimated time of arrival.
 - (3) Estimated time on station.
 - (4) Number of personnel on the aircraft.
 - (5) Type of aircraft.
- c. Firing will not be conducted when the ceiling (cloud height) is less than 305 meters (1000 ft AGL) above maximum ordinate of fire. No projectiles shall enter a cloud formation. Visibility shall be sufficient to maintain surveillance of the entire CFA and for a distance of five (5) miles beyond the CFA in all directions. The range OIC is responsible for ensuring that all firing is ceased prior to an aircraft entering the CFA airspace.
- d. Range OIC is responsible for calling cease fire if cloud cover falls below safe overhead limit.

1-9. Camp Gruber Maps

- a. The current Camp Gruber training map is the Camp Gruber Military Installation Map, scale 1:50,000, Series V783S, Edition 001, NSN 7643015690483.
- b. Units may order copies of the map through the Defense Logistics Agency (DLA), or download a digital copy from the Camp Gruber webpage on the OKGKO website.
“<https://states.gkoportal.ng.mil/states/OK/cgtr/ro/Documents/Forms/AllItems.aspx>”

1-10. Environmental Awareness and Protection

- a. Environmental considerations and requirements are listed in OMD 200-1.
- b. Defensive fighting positions such as foxholes, mortar firing pits, etc. may be constructed only with prior notification and approval in authorized digging areas. All defensive positions but must be restored to original condition prior to the unit clearing the training area.
- c. Hazardous materials will not be left or disposed of anywhere on Camp Gruber. Contact the organization that issued the material for disposal instructions. All oil spills will be reported immediately to Range Control.
- d. All radioactive equipment training requires a Radiation permit (OKARNG Army Radiation Permit), located on the Range Control Homepage, that will be filled out prior to training and approved by Range Control and State Radiation Safety Officer (SRSO).

1-11. Alcohol policy

Alcoholic beverages are prohibited on all training facilities at Camp Gruber. It is also prohibited to transport alcoholic beverages along any installation road/trail leading to a training area or facility outside of the cantonment area. The use of alcoholic beverages is under the authority of the training unit commander, however, the garrison commander may prohibit alcohol use for any unit, or individual, at any time.

1-12. Privately Owned Vehicles (POVs)

POVs are not authorized in the training areas or on ranges. Units may request an exception to this policy (POV Pass) from Range Control, which will be considered on a case-by-case basis as deemed necessary to support the unit's training requirements. Range POV passes will be requested thru BNs, BDEs, or MACOMs at the CSM or BC level of approval to range control. Failure to abide by POV pass authorized locations and limits will result in the offender being prohibited from acquiring a POV pass in the future.

1-13. Fire Prevention

a. Commanders will ensure all unit personnel are aware of fire hazards inherent in field training operations, to include the handling and firing of ammunition, fueling operations, open fires, etc. Except as noted below, units are responsible within their capabilities for extinguishing fires started either by their personnel or as a result of their training activity. Based on current fire hazard categories, unit personnel (Range OIC/Safety Officer) may hand receipt additional fire protection equipment for use on the range/facility.

b. Units will notify Range Control as soon as the fire is discovered. The report of the fire must include:

- (1) Nature and size.
- (2) Presence of ammunition or other explosive material, if any.
- (3) Location by 6-digit grid coordinates, or if in a remote area, location of a ground guide.

c. Range Control must be immediately notified of the location and extent of any fire on Camp Gruber whether on a range or on the Main Post. No training unit personnel are authorized to move downrange without specific authorization from Range Control.

d. For fires involving ammunition and explosives:

(1) Every reasonable attempt will be made to prevent fires from reaching ammunition and explosives storage areas.

(2) If it appears that a fire could extend into an area where ammunition and explosives are stored, steps must immediately be taken by the senior service member present to evacuate such ammunition and explosives out of the fire area.

(3) Should a fire reach ammunition and explosives storage area, the senior service member present shall order the evacuation of all personnel to a safe distance from the storage area and post road guards as necessary to preclude entry of civilian and military traffic into the danger area. The senior service member present shall then notify Range Control of the measures taken.

e. When dry weather creates a fire hazard on the installation, the garrison commander may direct Range Control to declare a suspension on the use of certain types of ammunition/explosives/pyrotechnics. Due to varying conditions, some items may be suspended while other types may be approved for use. The Range Management Authority or his designated representative will consider this on a case-by-case basis, relevant to a Burn Ban issued for Muskogee County.

f. Burning of trash is prohibited.

g. Warming fires used to preclude cold weather injuries are permitted on a case-by-case basis only with prior approval of Range Control. Range Control personnel must be advised of the exact location of each fire. Unit commanders are responsible for safe use of warming fires.

1-14. Training Facility Clearance Procedures

a. Units are responsible for clearing all facilities they have been issued.

b. Clearance will be conducted during daylight hours utilizing CG RC Form 16-008 Range Clearance Checklist (See Appendix E). Additional procedures (by range) are listed in Appendix A and the specific Range/Facility Packet. When clearance is complete, the inspector will notify Range Control.

c. Inspectors will inspect facilities only until it becomes obvious that not enough preparation for clearance has occurred. In this case the inspector will brief the OIC of the deficiencies and depart.

1-15. Key Phone Numbers and Locations

a. Range Control	918-549-6041	Building 740
b. Operations and Training	918-549-6076	Building 154
c. Facility Maintenance	918-549-6078	Building 154
d. Security	918-549-6021	Trailer T-25
e. Warehouse	918-549-6064	Building 327
f. Billeting	918-549-6065	Building 117
g. TADSS	918-549-6014	Building 107
h. Fire Department	918-549-6010	Building 119

Chapter 2

Safety

2-1. General

Safe training is the responsibility of the training unit commander. This chapter provides general safety guidelines for conducting training at Camp Gruber.

2-2. Risk Assessments

Risk assessments are required for all live fire ranges, training events, and ammunition or explosives storage and transportation. Nonstandard range and training activities with high or extremely high residual risk must be evaluated as outlined in DA PAM 385-30 or ATP 5-19 and DD Form 2977. Deliberate Risk Assessment Worksheet (DRAW) must be approved by the appropriate Command Authority as outlined in NGR 385-10, paragraph 7-8 and reviewed by the Range Control *OIC/NCOIC* and be on file at Range Control.

{ *Excerpt from NGR 385-10, ARNG Safety Program, 12 Sept 2008*

7-8. DRAW Program Development

a. Levels of risk. Operations should be categorized according to level of risk. The Army program consists of four levels - low, medium, high, and extremely high. These levels are used to call attention to the significance of each risk and to enable decision-making at the proper level.

b. Risk decisions. The higher the level of risk, the higher the level at which acceptance of that risk should be made. Formalized procedures should be developed that specify at what level of command a particular risk decision must be made. Commanders are required to make informed risk decision at the appropriate level. The final risk decision is made on the highest level of residual risk in column 9 of DD Form 2977. Deliberate Risk Assessment Worksheet. Use the Risk Assessment Matrix found in DA PAM 385-30 or ATP 5-19 to determine the risk assessment. The overall mission risk level will be the highest residual risk. Commanders may approve the mission using the following residual risk levels:

- (1) Low risk – Company Commanders.
- (2) Moderate risk – Battalion Commanders.
- (3) High risk – the first O-6 in the chain-of-command.
- (4) Extremely high risk – the first general officer in the chain-of-command.

c. DRAW cycle. The 5-step process is continuous. Step 5, supervising, will allow leaders to evaluate the effectiveness of the controls that have been put in place. The 5-step process is then worked through again, and any adjustments to the controls are made.}

2-3. Communications

a. All units using Camp Gruber training facilities are required to maintain two types of communication with Range Control. The type of communication required is dependent on the facility being used and whether live firing is being conducted. Specific requirements are listed in Appendix A for each training facility or range.

b. Some ranges contain single radio (FM) capability. Units are still required to provide the second type of communication (FM or cell phone) with Range Control from internal assets.

2-4. Formations and Roadway Movements

a. Formations and roadway movements within requested training areas do not require any additional coordination.

b. Formations and roadway movements within the cantonment area (TA200) require prior coordination with Security 24 hours prior to the event. Units will also follow requirements listed in Chapter 11 - Motor Vehicle Accident Prevention, Army Regulation 385-10 dated 24 February 2017.

2-5. Vehicle operations and movement

a. Safety equipment.

(1) Eye protection (ANSI Safety Code Z87.1 approved safety goggles or spectacles with side shields) will be worn by VCs, drivers, and assistant drivers of combat or tactical vehicles when exposed to hazards outside the vehicle except when protected by a windshield.

(2) Head protection (combat vehicle crew, approved ballistic helmet, or flight helmet as appropriate) will be worn by all personnel operating or riding as a passenger in Army tactical vehicles in the field. Commanders at company, troop, and battery level may determine the headgear worn in garrison.

(3) All trailers will be equipped with safety chains or similar devices and properly connected to the prime mover to prevent breakaway trailer accidents.

(4) Trailer brake lights, taillights, and turn signals will be in operating condition.

(5) Army Motor Vehicles (AMV), except non-tactical vehicles, will be equipped with properly sized chock blocks for use when parked on sloped terrain, while maintenance is being performed, or when a vehicle is parked and a trailer is attached.

b. Ground guides. Ground guides are required when wheeled and tracked vehicles are backed or when moved within cantonment area or motor pool.

c. Specialty vehicles.

(1) Manufacturer installed safety equipment will be maintained in working order.

(2) Occupant protective devices will be worn by operators and passengers of specialty vehicles when installed by the manufacturer.

(3) Adequate head protection is required for operators and passengers operating or riding in tactical specialty vehicles and for operators and passengers of non-tactical vehicles

(4) Operators of tactical specialty vehicles will wear approved head protection (helmet) that at a minimum conforms to DOT Safety Standard No. 218 or equivalent, protective goggles or face shield, full-fingered gloves, long-sleeved shirt or jacket, long trousers, and over-the-ankle boots. Commanders may authorize the use of helmets that offer ballistic protection in lieu of DOT Safety Standard No. 218 when the tactical situation dictates such use.

d. General movement of personnel.

(1) The following safety precaution must be in place before transporting troops in vehicles:

(a) Vehicle Commander or operator, is responsible for safe operation of vehicle and safety of all passengers.

(b) Fixed seating is installed and passengers are seated wholly within the body of the truck.

(c) The body is equipped with stakes or sideboards, rear safety strap or tailgate protection, and a tailgate step or ladder.

(d) Canvas tops are in place with the sides rolled down when the cargo space is used for passengers (at the discretion of the commander).

(2) Before starting the engine, operators transporting passengers in trucks must ensure that the tailgate, safety device, or safety strap is in place and determine that all passengers are in a safe position.

(3) Operators will follow passenger carrying capacities for tactical and administrative vehicles per TB 9-639 or the appropriate vehicle TM.

(4) Passengers may be transported without fixed seating for short distances on the installation if each passenger remains seated and wholly within the body of the vehicle.

(5) Personnel will not be transported in the bed of an Army truck, off post, unless the truck is specifically designed to carry troops.

(6) When transporting passengers in cargo trucks in which cargo is loaded, ensure that they are seated in fixed seats and the cargo is adequately secured.

(7) Transportation to and from troop training or maneuver areas may be done with cargo trucks provided such transportation is part of training and the vehicle is equipped with fixed seating.

(8) When transporting large numbers of Soldiers for training purposes, only approved semitrailers (such as vans and personnel carriers for 80 passengers) are authorized. No other types of semitrailers are considered safe to transport personnel.

e. Movement of personnel in cargo trucks. When transporting personnel in cargo truck convoys, the last vehicle in the convoy will not be used to carry passengers.

f. Army combat vehicle (ACV) safety guidelines

(1) Personnel in ACVs will wear protective headgear. The crew will wear fully operational combat vehicle crewman helmets or approved ballistic helmets with the chinstrap fastened.

(2) Personnel exposed to eye hazards will wear appropriate eye protection.

(3) Personnel in hatches will not expose more than their head and shoulders (nametag defilade). When nametag defilade is not observed, commanders must establish clear guidance and implement controls to mitigate or eliminate the added risk. All other personnel will ride with their bodies completely inside the vehicle.

(4) Riding on the exterior of ACVs is prohibited except where outlined as an accepted practice in an Army TM or FM.

(5) Seated personnel will wear occupant restraints, unless specifically exempted in the unit SOP or by the commander after completing RM for the mission.

(6) When vehicles and dismounted personnel are training together during darkness, the dismounted personnel will notify vehicle operators and track commanders or VCs of their location.

g. Assembly areas.

(1) Commanders will ensure that sleeping area perimeters are designated and marked. They should select sleeping areas protected by natural obstacles when possible.

(2) Where access to bivouac or an assembly area is restricted to road entry, a guard will be posted to warn vehicle crews that there are troops on the ground.

(3) Prior to leaving a motor pool or assembly area in tactical environments, the vehicle commander will walk completely around the vehicle to check for personnel clearance and/or other hazards in the vicinity of the vehicle.

(4) Operators will move ACVs in motor pools, parking areas, cantonments, assembly, and sleeping areas only when a dismounted ground guide assists. When visibility is reduced, guides will use flashlights to direct vehicles. The track commander or VC, driver, and dismounted ground guide will maintain visual contact at all times.

h. The speed limits posted in this regulation apply to all personnel (military and civilian) operating on Camp Gruber. Utilize safe driving practices at all times.

i. **DO NOT** operate POVs beyond the cantonment area (area located between 3rd and 18th streets, and between Sicily Road and Central Europe Road) without a POV pass issued by Range Control.

j. **DO NOT** exceed posted speed limits (cantonment area, North/South and Hilltop roads). All other maximum speed limits are as indicated in the Table 2-1.

k. Antennas must be tied down when moving within the cantonment area. Cover Antenna tips with a protective ball to prevent injury to personnel.

l. Utilize seat belts and safety restraints for both civilian and military vehicles.

m. Utilize protective headgear for both civilian and military motorcycles and all-terrain vehicles.

n. Highway warning devices will be used when vehicles are stopped or disabled on public highways/roads surrounding Camp Gruber, cantonment roads, and range roads. In no instance will personnel attempt to repair a downed vehicle (located in a road/trail) without a marking device to warn oncoming vehicles (i.e. soldier w/ flashlight or signaling device).

o. Vehicle movement at assembly area sites. Units must apply risk management procedures to control vehicular movement within their field sites. Control measures will be established based on the tactical mission requirements and the unit commander's risk assessment.

p. Motor marches (convoys arriving/departing) will be coordinated with Security (918-549-6021) NLT 24 hours in advance (Refer to OMD Pam 55-101). Units are responsible for turning in a timeline for motor movement. All convoys will enter thru Central Europe Gate, except Fuel tanker, Ammunition and Oversized Loads which will enter thru Sicily Gate. Units are responsible for coordinating with Security for opening Sicily Gate.

(1) Vehicles involved in a motor march must maintain a minimum safe distance.

(2) The front and rear vehicles of a motor march should have communications capability with each other.

q. Limited visibility (blackout) marches.

(1) Units are required to coordinate night convoys with Range Control 24 hours in advance. Units must turn in a route map and completed risk assessment prior to executing any night (blackout/NVG) marches.

(2) Unit commanders must ensure that appropriate intersections are manned by road guards equipped with flashlight or recognition devices enabling them to halt and warn other vehicles approaching the line of march.

(3) Travel on or across hard surface roads (cantonment area or public highways) will be with service drive only.

(4) The cantonment area is NOT an authorized "blackout drive" area. Vehicles will use service drive within this area.

(5) Only command-certified personnel will operate vehicles with night vision goggles/devices.

(6) Vehicles will not travel under blackout conditions until passing the established light lines. Posted light line markers: Youth Camp Road (UV04234928), Urban Assault Course (UV04344950), Sicily Road (UV04885085), and 24th Street/Pistol Loop Road (UV04275098).

r. Tracked vehicles:

(1) All armored/fighting tracked vehicles must travel with a minimum of two personnel, i.e. driver and vehicle commander. Personnel are required to have communications between driver and track commander. Radio is required between the lead and trail vehicles of each movement element.

(2) Dismount guides must be employed when moving in close quarters, crossing hard surfaced roads and in bivouac areas at all times.

s. Units that wish to move vehicles that are uploaded with ammunition (to and from ranges) must inspect the weapon system (main gun, coaxial machine gun, and small arms) to ensure all live ammunition has been removed and is safe for transport.

t. On Post Convoy movements.

(1) All convoy movements will be coordinated with Range Control NLT 24 hours prior to movement.

(2) Units will submit a convoy movement table and map overlay for approval by Range Control for any convoy movement within the training center boundaries. Additional risk assessments may be required (as determined by the Range Control NCOIC) prior to conducting the motor movement.

(3) See Table 2-1 For convoy movement Vehicle Speed Limits

Table 2-1

Wheeled Vehicles	Max Speed	Tracked Vehicles	Max Speed
<u>Normal Conditions</u> - Established Roads (paved/non-paved, not posted) - Cross Country/Off Road	35 MPH 25 MPH	<u>Normal Conditions</u> - Established Roads (paved/non-paved, not posted) - Cross Country/Off Road	25 MPH 20 MPH
<u>Limited Visibility</u> - Established Roads/Trails With NVGs Without NVGs - Cross Country/Off Road With NVGs Without NVGs	25 MPH 20 MPH 20 MPH 15 MPH	<u>Limited Visibility</u> - Established Roads/Trails With NVGs Without NVGs - Cross Country/Off Road With NVGs Without NVGs	15 MPH 10 MPH 10 MPH 5 MPH
<u>Convoy Operations (5+vehicles)</u> - Normal Conditions Established Roads Cross Country/Off Road - Limited Visibility Established Roads With NVGs Without NVGs Cross Country/Off Road With NVGs Without NVGs	20 MPH 15 MPH 15 MPH 10 MPH 10 MPH 5 MPH		
Table 2-1 Vehicle Speed Limits* <i>*Commander, Camp Gruber Training Center, may change existing speed limits due to weather conditions. Changes will be coordinated with using units by Range Control.</i>			

2-6. Restricted and Off-Limit Areas

- a. **DO NOT** enter onto ranges and training areas without first checking into Range Control. The areas may pose a danger to personnel that can result in serious injury or death. Range Control will advise personnel of the restrictions that may be put into place while downrange.
- b. **DO NOT** enter onto ranges and training areas other than what is assigned to the unit without approval by Range Control.
- c. **DO NOT** use firing ranges for tactical training or non-firing exercises without written approval from Range Control.
- d. **DO NOT** circumvent or by-pass road guards or road barriers.
- e. **DO NOT** conduct tactical training or fire any ammunition or pyrotechnics in the cantonment area (area located between 3rd and 18th street, and between Sicily Road and Central Europe Road) without written approval from Range Control.
- f. **DO NOT** enter into fenced or barricaded areas.
- g. **DO NOT** enter areas that are designated for collapsed/vertical structure rescue training. These areas are inherently unsafe for untrained personnel and can result in serious injury.
- h. **DO NOT** enter areas that are marked as hazardous areas. Areas on Camp Gruber have been identified as areas that pose a possible health hazard and are marked with appropriate signage.

2-7. Camp Gruber Barriers

- a. Barriers are used on Camp Gruber to restrict access to specific areas during range/training operations. Current barriers used on the training center consist of pipe gates, cable gates, and barricades. Bypassing or driving around and or the removal or unlocking of barricades is strictly PROHIBITED and will result in decertification of OIC.
- b. Responsibilities. Each unit will ensure required barriers (as listed in the CGR 385-1 and the specific range/facility packet) are in place prior to requesting a “hot” status from Range Control. Range Control personnel will verify barrier emplacements prior to approving any unit for a “hot” range/facility status.
- c. Inoperative barriers. Any inoperative barrier will be immediately reported to Range Control for repair/replacement.
- d. Additional barrier requirements. Using units/organizations will coordinate with Range Control for issue of barricades (if required). Using units/organizations are responsible for placement and recovery of barricades and associated materials.

2-8. Officer in Charge (OIC)/Range Safety Officer (RSO) Requirements

Prior to conducting training on Camp Gruber, a commander certified OIC/RSO shall check in at Range Control, receive their required safety briefings, and present their certification memorandum to the Range Control staff for record. Specific OIC/RSO requirements are listed in Appendix G.

2-9. Certification of OIC/RSO

In order to be certified as an OIC or RSO, the following two requirements must be met:

- a. Commander's Certification. The first O-5 level commander shall provide a memo to Range Control in the format shown in Appendix F of those personnel who are certified to perform the duties as OIC and/or RSO IAW this regulation and DA Pam 385-63. It is recommended that the commander require each OIC and RSO to successfully complete a written examination which evaluates the individual's knowledge of DA Pam 385-63, applicable FMs for the subject weapon system and CGR 385-1. All officers/NCOs certified by their command must be branch/MOS qualified for the type of training being conducted.
- b. Safety Briefing. All OICs and RSOs are required to receive a range safety briefing prior to range issue or occupation of the training areas/facilities. Range Safety training certificate shall be valid for one year from date of training.

2-10. Decertification of OIC/RSO

- a. OICs or RSOs who violate, or allow for the violation of DA Pam 385-63, applicable FM safety standards or this regulation may be decertified by the Range Safety Officer.
- b. Upon decertification, training will cease at the training facility until a certified officer is appointed.
- c. Examples of safety violations, which may result in immediate decertification, are as follows:
 - (1) OIC/RSO not present on range or not in a position to control training being conducted.
 - (2) No qualified medic or litter-bearing vehicle on site.
 - (3) Unsafe handling or storage of ammunition or pyrotechnics.
 - (4) Failure to establish and maintain communication with Range Control.
 - (5) Road guards not posted or performing duties as required.
 - (6) Damage, destruction, or alteration of a training facility.
 - (7) Permitting personnel downrange without authorization by Range Control.
 - (8) Failure to follow specified actions as described in the specific Range Facility Packet.

2-11. Recertification Process after being de-certified

If a Battalion (BN) Commander (CDR) requests to Re-Certify an OIC/RSO that has been De-Certified at Camp Gruber, the BN CDR must send a Re-Certification Memorandum thru the Major Subordinate Command (MSC) CDR, State Safety Office (SSO), the Director Joint Staff (DJS) for The Adjutant General's approval. The I-TRAIN Certificate of completion must be attached to the Re-Certification Memo. The Re-Certification process consists of:

- a. Contact the SSO to get login information to I-TRAIN website.
 - (1) Soldier reviews the Range Control safety video in I-TRAIN.
 - (2) Soldier reviews the Range Control supplemental instructions to the Range Control Safety video.
 - (3) Soldier Passes the Range Control safety test.
 - (4) Soldier receives a certificate of completion from the "ITRAIN Station"
- b. The BN CDR sends the Re-Certification memo (with certificate attached) through the above chain of command.
- c. TAG approves memo to Re-Certify the individual(s).

Upon receiving TAG approval, the SSO will forward the Re-Certification Memorandum with attached Certification of Completion from I-TRAIN to the RMA. The RMA will then direct that the Re-Certification packet be attached to Current Commander's Certification Memo and the Soldier will be considered Re-Certified to act as OIC/RSO for ranges at CGTC.

2-12. Required Documents and Equipment at Training Ranges

The following documents must be present at all training facilities and must be readily accessible to the OIC:

- a. Range/Facility Packet (issued by Range Control).
- b. Field Manual and or Technical Manual for the type of training being conducted or weapon system being fired.
- c. A strip map that shows the route to the nearest aid station, Camp Gruber Troop Medic Clinic (when operational), and Muskogee Regional Hospital (see Appendix H).
- d. A copy of this regulation (CGR 385-1).

2-13. Range Safety Requirements

- a. Officer in Charge (OIC) and Range Safety Officer (RSO) requirements are listed in Appendix G.

b. Communication requirements. When firing, units must maintain two (2) means of communication with Range Control. The primary means of communication is by FM radio. Telephone or cell phone may be the secondary means of communication. At no time will a cell phone be the Primary means of communication.

2-14. Range Operations

- a. Each range must have a qualified medic with aid bag, litter, litter-bearing vehicle, and driver.
- b. A red range flag must be flown (from the range location and the flagpole located on Range Loop Road) while the range is occupied. During periods of limited visibility, beacon lights will be displayed from the specific range and the flagpole on Range Loop Road. Additional range-specific guidance is also provided in Appendix A and the specific Range Packet.
- c. Hearing protection must be worn at all times by personnel on the range.
- d. Only authorized firing points will be used for live firing.

2-15. Personal Protective Equipment (PPE)

- a. Commanders must ensure that all personnel conducting range/training operations use the required PPE as specified for each range.
- b. Personnel conducting operations are required to wear the type hearing protection as required for the applicable hazard zone as specified in Appendix A and the specific FM for the weapon system being used.
- c. At a minimum, hearing protection is required for all live fire ranges. See specific range documentation for additional requirements. (Eye protection is highly recommended).

2-16. Cease-Fire Procedures

- a. Any individual, military or civilian, who observes an unsafe act or condition, may stop firing by commanding a "CEASE-FIRE."
- b. All personnel must remain alert and watchful for unauthorized personnel, wildlife, vehicles, or aircraft that might inadvertently wander into danger areas. If this occurs, cease firing and notify Range Control immediately.
- c. A "CEASE-FIRE" command applies to all individuals regardless of the individual initiating the cease-fire.
- d. The initiating individual will report to Range Control immediately the reason for cease-fire by the quickest means possible.

2-17. Clearing of Weapons

- a. Upon completion of firing or when changing firing orders/crews and prior to any weapons leaving the range, the OIC or RSO will ensure that each weapon is cleared of all live ammunition and/or expended ammunition.
- b. Each weapon that is cleared will have the bolt or breech locked in the open position.

2-18. Medical Requirements

- a. A medic with the following capabilities and equipment must be present on all ranges/specified facilities during the conduct of live fire/training as outlined in NGR 385-63, MEDCOM PAM 40-12 and this regulation. (see appendix G)
 - (1) The medic must be MOS qualified. A civilian equivalent Emergency Medical Technician (EMT) is also authorized. A Combat Lifesaver (CLS) is not a substitute for a Combat Medic (or equivalent) present during live fire training.
 - (2) The medic must have a standard aid bag and litter.
 - (3) Unit commanders or representatives must be prepared to give the grade and name of all qualified medical personnel.
- b. A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter-born patient. The driver must know the quickest route to:
 - (1) The unit's aid station, if any.
 - (2) Troop Medical Clinic (when operational), Camp Gruber Building 130.
 - (3) Muskogee Regional Medical Center.
- c. Range Control will announce current wet bulb status over the primary FM frequency when the heat category is two (GREEN) or above on an hourly basis or upon change of category as it occurs. Units within the cantonment area may contact Range Control for this information.

2-19. Emergency MEDEVAC Request

- a. Requests for medical assistance should be communicated immediately to Range Control (918-549-6041 or FM 40.80Mhz/alt. FM 31.30Mhz). If unable to contact Range Control, contact the Military Police or Camp Gruber Security at 918-549-6021.
- b. If MEDEVAC is requested (air or surface) unit must determine if casualty may be safely transported to the Troop Medical Clinic or MEDEVAC Helipad in the cantonment for evacuation. If casualty is deemed too critical for surface transportation to the MEDEVAC Helipad, then unit must be prepared to give 6-digit grid location to

Range Control for coordination with the air ambulance of a more proximate evacuation point. If necessary, unit will be instructed to assist in marking of the landing zone by smoke, vehicle headlights, or other means as required. Unit must provide Range Control with all pertinent information regarding nature, type, severity, and number of casualties. This information will also be provided in a 9-line MEDEVAC format if specifically requested by Range Control.

2-20. Ammunition and Pyrotechnics

- a. Ammunition will be stored on the range IAW AR 385-63, DA Pam 385-63, DA Pam 385-64, and TM 9-1300-206.
- b. Vehicle storage will be IAW published FM, TM, and DA Safety Message guidance.
- c. No unit will be authorized to fire demolitions unless a completed copy of the e581 "issue" and DD 3020 is on file at Range Control.
- d. Pyrotechnics will be used for their original intended purpose (effect) and will not be modified.
- e. A Deliberate Risk Assessment Worksheet (DD 2977) will be filled out for all ammunition and explosive activities to include storage and transportation as outlined in DA PAM 385-64.

2-21. Ammunition and Explosives Safety/Field Storage of Ammunition/Ammunition Holding Area (AHA) Procedures See Ammunition and Explosives Safety SOP in Appendix K

2-22. Misfire, Hangfire and Malfunction Procedures

- a. A misfire is a complete failure to fire. It is caused by a faulty firing mechanism or element in the propelling charge. A hangfire is a delay in the functioning of a propelling charge explosive train at the time of firing. In most cases, the delay ranges from a split second to several minutes. Thus, a hangfire cannot be distinguished immediately from a misfire. FMs and TMs for the weapon(s) concerned give specific information on the proper method of handling misfires and hangfires. Their guidance will be followed explicitly on all ranges and firing points.
- b. In the event of a misfire and hangfire that presents an immediate hazard to personnel or a cease-fire is necessary, the OIC is responsible for ensuring:
 - (1) All personnel are relocated to a safe distance from the incident.
 - (2) Proper procedures are followed.
 - (3) Technical assistance, if needed, may be requested from Range Control.
- c. A misfire of a hand grenade is extremely dangerous. Therefore, live hand grenades will not be thrown simultaneously. If there is a misfire, CEASE-FIRE immediately. Do not throw any more grenades. Observe the location of a grenade, evacuate personnel behind the safety berm and call Range Control.
- d. Malfunctions:
 - (1) Material involved in malfunctions or accidents, along with any evidence (components, weapon/ammunition fragments) will be carefully preserved in the position and location is occupied at the time of the incident.
 - (2) Material involved in a class A or B accident IAW AR 385-40 must remain on site until cleared by the investigating authority unless an immediate hazard to life or property is present.
 - (3) Damaged or malfunctioned guided missiles and rockets will be handled per the applicable TM and reported IAW AR 75-1.
 - (4) Notify Range control. Notification will include the following:
 - (a) Weapon system and ammunition involved.
 - (b) Lot and serial number of the ammunition and weapon involved.
- e. Range Control will notify the Oklahoma Army National Guard Safety Office of all malfunctions and misfires.

2-23. Explosives and Blasting Operations

- a. Each commander will comply with all applicable Department of Defense (DOD), federal, and state regulations concerning the use of explosives. All blasting operations on Camp Gruber will be conducted under the direction of a qualified OIC and Range Safety Officer.
- b. The OIC and Range Safety Officer will be present on the range for each blast.
- c. Anticipated blast schedule (target folder) and risk management worksheet (IAW DA PAM 385-30) will be submitted to Range Control for approval. This schedule must be submitted prior to issuance of the range (refer to FM 3-34.214). Range Control may limit the area covered, timing, and sequence of blasting as listed in the blasting schedule.
- d. All blasting will be conducted between sunrise and sunset.
- e. Blasting/demolitions will not be conducted on Camp Gruber when the estimated cloud cover is greater than 80 percent and the cloud ceiling is estimated at less than 2000 feet AGL.
- f. OIC/RSO requirements: See Appendix G.

- g. Communication requirements. When firing, units must maintain two means of communication with Range Control. When the range is occupied, only FM communication is required.
- h. Range operations:
 - (1) The Light Demolition Range is restricted to non-fragment producing explosives.
 - (2) The Breach Range and Light Demolition Range cannot be operated simultaneously.
- i. Detailed demolition/explosive limits/restrictions are listed in Appendix A.
- j. Units must request approval from Range Control to employ field expedient procedures or explosives.

2-24. Unexploded Ordnance (UXO)

- a. UXO is any explosive munitions such as a projectile, grenade, or bomb that has either been fired from a gun, propelled by a rocket, or otherwise met the requirements for arming, but has failed to detonate. Any object that appears to be a UXO will be presumed as such.
- b. UXO will not be disturbed under any circumstances. UXO will be clearly marked, not closer than ten (10) feet, and a guard will be posted until relieved by Range Control/EOD personnel. When personnel locate UXO the Range OIC must submit the following information to Range Control:
 - (1) Coordinates of the UXO.
 - (2) Number of items (rounds).
 - (3) Type of UXO (if known--artillery shell grenade, etc.) and description.
 - (4) How item location is marked by the unit/personnel discovering the item.
 - (5) Name/grade/unit of individual reporting the UXO.
- c. In the case of grenades or other munitions that may be immediately hazardous to personnel, firing/training will be halted until qualified EOD personnel have cleared the dud.
- d. Commanders and Range OICs must brief their personnel of the danger that UXO presents, the requirement to mark the location of UXO, and to report the marked location to the commander or OIC as soon as possible.

2-25. Erratic Firing

- a. Any projectile that impacts outside of safety limits as prescribed by this regulation or as depicted on the Camp Gruber Surface Danger Zone (SDZ) map will require immediate investigation and corrective action.
- b. Any individual detecting rounds landing outside of their authorized limits or the established impact area will immediately initiate a "CEASE-FIRE-FREEZE" and contact Range Control and report the following:
 - (1) Individual identification.
 - (2) Date and time round observed.
 - (3) Location of observed round.
- c. Range Control will notify the Oklahoma Army National Guard Safety Office.
- d. The Range will be in a cease fire until the SDZ for erratic rounds is determined and investigation by RC is complete.

2-26. Collective Live Fire Ranges

- a. The following ranges are used to support collective live-fire requirements:
 - (1) Fire and Maneuver Range (Buddy Team)
 - (2) Squad Assault (Knockout Bunker)
 - (3) Live Fire Shoot House (LFSH)
- b. The using unit's chain of command retains responsibility for safety on the ranges. Unit observer controllers/cadre must emphasize safety during the conduct of these ranges. Leaders enforce safety throughout the execution of the live fire event. The goal is a safe/realistic execution of the event.
- c. Using units will provide detailed risk assessments (IAW DA PAM 385-30) to Range Control prior to the collective live fire event. Additional instructions on specific risk assessments are contained in TC 7-9 (Infantry Live Fire Training) and the specific Range Packet. The Range OIC will complete and turn in to Range Control a Collective Live Fire Checklist (Appendix I in this publication) with all supporting documentation prior to the range being issued.
- d. OIC/RSO requirements: See Appendix G.
- e. Communications requirements. When firing, units must maintain two (2) means of communication with Range Control. There are no telephones located on any of the collective range facilities.
- f. Range operations.
 - (1) An approved risk assessment worksheet must be on file at Range Control prior to the collective live fire range going "hot."
 - (2) Each range must have a qualified medic with aid bag, litter, and litter-bearing vehicle with driver
 - (3) Red range flags must be flown (one from the occupied range, and, one from the flagpole on Range Loop Road) while the range is occupied. Additional requirements are listed in the specific range packets.

(4) Helmets and hearing protection must be worn at all times by personnel on the range. Additional protective equipment (based on weapons/ammunition employed) may be required. Range Control will notify using units of additional requirements prior to issuance of the range.

(5) Barriers and road guards will be emplaced IAW Appendix A.

2-27. Non- Standard Live Fire Ranges

a. Non- Standard Range Fire is the conducting of a course of fire on any standard range in a manner that exceeds or changes the purpose that the range was built to accomplish. For example: using a Zero Range for Short Range Marksmanship, Close Quarters Combat Training, Weapons Transition training, or any other Live Fire that uses an existing range for other than the standard qualification tables. Non-standard training is also includes using different weapons on a range other than what was designed.

b. Units will submit all non-standard live fire requests to Range Control and complete all of the documentation required on the Non-Standard Live Fire Checklist.

c. Per DA PAM 385-63: Units will conduct live-fire exercises as part of properly identified and trained-to-standard mission essential task list (METL) tasks. Tactics, techniques, and procedures employed during the live-fire exercises must be consistent with the standards published in the applicable Army Techniques Publication (ATP); Army Tactics, Techniques, and Procedures (ATTP); mission training plan and/or battle drills. Command approval from the next higher command (Minimum BN Commander) is required for any live-fire exercise not consistent with the unit's established METL.

d. Units must submit a memo of Approval to Range Control to conduct any training outside of their established METL Tasks. Request Suspense Timeline:

(1) LOI, Course of Fire, Sketches and Overlays, and Special Target requirements must be submitted 90 days prior to execution.

(2) Risk Assessment, and completed Non-Standard Live Fire Checklist must be finalized at least 30 days prior to execution.

2-28. Maneuver Training Areas

a. The Camp Gruber Military Installation Map (1:50,000) depicts the Training Areas available for use by units. All areas (less TA200) are open for maneuver training. Several training facilities are located within TA200, and must be requested specifically. Previous Camp Gruber Maps identifying the 500-series training areas are obsolete.

b. The Cherokee Wildlife Management Area (WMA) may be used through prior coordination with the Oklahoma Department of Wildlife Conservation. Range Control must make the request at least 90 days prior to the desired dates. Cherokee WMA may be used for maneuver training only. No live fire training is allowed.

c. All brigade, battalion, and separate companies will contact Range Control prior to occupying a training area. The unit will report to Range Control for the following actions:

(1) Complete the opening form for the affected training area(s) (note: unlike the Live-Fire Range Opening/Closing Form, one (1) form can be utilized for training areas that are being used as NON-Live Fire Areas for a maximum of 3 days. Every Fourth Day the OIC will need a new Range Opening/Closing Form).

(2) Provide six digit coordinates or map identifying physical location of the headquarters and platoons to include observation posts and patrol bases.

d. Communication. All units occupying training areas will continuously monitor FM frequency 40.80Mhz (Range Control) and make required communication checks on minimum four (4) hour intervals.

2-29. Wildlife Management and Public Hunting

a. By agreement with the Oklahoma Department of Wildlife and Conservation, portions of Camp Gruber have been designated as available for public wildlife activities on select dates during the Oklahoma Public Hunting seasons and when training areas are not reserved for military operations. Training areas available for military operations are reduced during those dates as defined in the current Memorandum of Understanding (MOU) between the Oklahoma Military Department and the Oklahoma Department of Wildlife Conservation.

b. Military operations are not allowed in training areas that are open for wildlife activities.

c. All other wildlife activities throughout the year will be based on area availability.

d. Specific requirements, to include access and area locations, are listed in CG Regulation 200-3, Wildlife Management.

2-30. Aviation and Airborne Operations

a. There are several Drop Zones (DZs) listed in the Assault Zone Availability Report (AZAR)--Headquarters - Air Mobility Command that are approved for various airborne operations. Using unit will check with Range Control to determine availability and restrictions.

b. All users will comply with the restrictions and instructions contained in the NOTAM or Drop Zone Survey.

2-31. Smoke Operations

- a. Units desiring to conduct smoke operations must provide an overlay to Range Control showing the area that will be affected. The unit will cease operations if climatic conditions result in smoke spreading beyond the overlay limits.
- b. Smoke operations are prohibited in the cantonment area, enclosed spaces (i.e. tunnels/basements), and surrounding civilian highways/roads.
- c. Smoke operations will not be used within 200 meters of the installation boundary.
- d. Units will contact Range Control when smoke operations commence and cease.
- e. Units will wear protective masks when using HC smoke.

2-32. Military Operations in Urban Terrain (MOUT) Facilities

- a. The Military Assault Course (MAC) and the Combined Arms Collective Training Facility (CACTF) require additional safety requirements that are included in the range packets.
- b. Range OIC/RSO, Communications, and medical support requirements are listed in Appendix A and the specific range packets.
- c. Facilities require intensive clearing procedures, using units are advised to coordinate turn-in requirements with Range Control when they are issued the facilities.

2-33. Obstacle Course

- a. This facility consists of nine (9) obstacles: Tough One, Confidence Climb, Six Vaults, High Step Over, Low Belly Over, Belly Crawl, Swing Stop Jump, Incline Wall, and the Weaver.
- b. Obstacles are arrayed along the east side of the Air Assault course.
- c. Specific safety precautions are published in the applicable range packet.
- d. FM communication and a medic with litter-bearing vehicle are required for use of this facility (see Appendix A).

2-34. Land Navigation Courses (TA200 and EIB)

- a. TA200 Land Navigation course is located within the cantonment area. EIB Land Navigation course is located within Training Areas 103 and 104.
- b. Specific safety precautions are published in the applicable range packet.
- c. A safety briefing is required prior to issuance of this facility.
- d. FM communication and medic with litter-bearing vehicle are required for use of these facilities (see Appendix A).

2-35. Nuclear, Biological, Chemical (NBC) Chamber

- a. This facility consists of a building utilized for individual exposure to chemical agents (confidence chamber).
- b. Specific safety precautions are published in the applicable range packet.
- c. FM communication and a medic with litter-bearing vehicle are required for use of this facility (see Appendix A).

2-36. Use of Chemical Smoke (CS) and Riot Control Agents (RCAs)

- a. CS/RCAs are only authorized for use in the NBC chamber and the training areas.
- b. CS/RCAs are prohibited from use within 200 meters of the cantonment area and the installation boundaries, on any firing point, and any firing range.
- c. Units desiring to use CS/RCAs will coordinate with Range Control. If these agents are being used, the unit will also provide an overlay(plume cloud) detailing the scheme of intent of CS/RCA employment.
- d. Units will ensure all necessary CBRN protection measures are observed.

2-37. Ponds and Amphibious Training Events

- a. Camp Gruber has multiple ponds, rivers, streams, creeks, lakes, reservoirs and waterways in the training areas and within the cantonment area. These body of waters pose a inherit risk to personnel due to waterborne wildlife and from the general risk of swimming, fording, wading, walking, floating and crossing without proper precautions.
- b. Units with a requirement for training in any body of water on Camp Gruber are required to coordinate their training with Camp Gruber scheduling and range control prior to the event.
 - (1) Amphibious training events are required to be conducted IAW with all applicable regulations and training doctrine to include all safety procedures and safety equipment as prescribed.
 - (2) Swimming in any Camp Gruber pond, river, stream, creek, lake, reservoir or waterway is prohibited unless approved by Garrison Commander or his designee and can only be conducted as a unit training event. Approval is requested thru the Range Management Authority. Risk management must be conducted and must

include a list of safety equipment that will be on hand for the training prior to the request being approval. At a minimum, life jackets, rescue floats and a throw line along with a designated life guard and medic will be on site during the training event. Units should in no way assume that all requests will be approved.

Chapter 3

TADSS

3-1. General

Camp Gruber has a variety of training aids, devices, simulators, simulations (TADSS) items and other training equipment available for loan or use on site. Other TADSS as needed and not currently in Camp Gruber inventory may be acquired locally, through a Training Support Center (TSC), or possibly developed with Camp Gruber assistance. For a more detailed description of the items listed below, including quantities, see Camp Gruber TADSS BOOK dated 14 MAY 2010 (or current edition).

3-2. TADSS items available

- a. Training Aids:
 - (1) Grenade identification kit.
 - (2) Mock IEDs.
- b. Training Devices
 - (1) IED, booby trap, and anti-personnel mine simulators which generate an audible and visual effect.
 - (2) CCMCK (Close Combat Mission Capability Kit).
 - (3) Smoke generators.
 - (4) Practice mines.
 - (5) Dummy grenade bodies (M67 frag)
 - (6) IEDES (Improvised Explosive Device Effects Simulator)
- c. Simulators
 - (1) Call For Fire Trainer (CFFT).
 - (2) HMMWV Egress Assistance Trainer (HEAT).
 - (3) Laser Collective Combat Advanced Training System (LCCATS).
 - (4) Laser Marksmanship Training system (LMTS).
 - (5) Sniper Training System (STS).
 - (6) Engagements Skills Trainer (EST).
 - (7) Virtual Convoy Operations Trainer (VCOT).
 - (8) Mobile Virtual Training Capability (MVTC).
 - (9) Individual Gunnery Trainer (IGT).
 - (10) Virtual Battlefield Simulation (VBS3)

3-3. Other training equipment

For our purposes, TADSS also includes such training equipment as pry axes and other breaching devices, portable ladders, fragmentation vests and other miscellaneous items. For a more complete and current listing check with the Camp Gruber Operations and Training Branch.

3-4. Requesting use of TADSS

- a. Portable items. All items listed in 3-2, with the exception of EST, HEAT, and VCOT may be checked out as available using DA Form 2062 (Hand Receipt) on a first come, first served basis.
- b. Facilities. EST, HEAT, and VCOT are considered facilities subject to request by use of the Range Facility Management Support System (RFMSS). For these items, time of operation and number of personnel trained is required to be reported to the TADSS Fire Desk on a daily basis.
- c. Items requiring trained operators. All simulators (3-2.c), simulations (3-2.d) and most devices (3-2.b.1 thru 3-2.b.3) listed above will require a qualified operator. If requesting unit does not have a qualified operator, Camp Gruber may opt for one of the following:
 - (1) Provide operator training, if available, to requesting unit personnel prior to use of the equipment.
 - (2) Provide an operator, if available, for the equipment if requested at a minimum of ten days in advance.

Chapter 4

LASERS

4-1. General

a. Laser devices can seriously injure the unprotected eyes of any individual located within the laser beam. Intra-beam viewing of either the direct laser beam, or of a laser beam reflected from a mirror-like surface, will expose an unprotected eye to potential hazard or injury. This unsafe condition or situation must be avoided. The goal of laser range safety is the prevention of the accidental intra-beam viewing of a laser beam, or of laser energy, by unprotected personnel. This chapter prescribes the minimum safety procedures that must be followed when using any laser devices.

b. The operation of a laser system is restricted to specific ranges and locations. Range Control will provide a list of the approved ranges, or positions that are authorized for the conduct of a lasing operation.

4-2. Precautions for Laser Device use

a. Range OIC/LRSOs must know the Nominal Optical Hazard Distance (NOHD), as well as the NOHD-M (with magnifying optics), limit of the laser device being used. The Range OIC/LRSO will have a graphic representation of the laser range surface danger zone (LRSDZ) for the laser training being conducted, accurately posted and displayed on a Camp Gruber Training Center map, which is located at the lasing point or range.

b. Units will provide laser-safe eye protection for unit personnel as required. Night Vision Goggles (NVGs) are NOT laser-safe, and do not provide protection from a laser beam.

c. Direct viewing of the MILES laser beam from a close range must be avoided. Laser systems other than MILES will NOT be used during the conduct of any two-sided tactical training exercise.

d. The NOHDs for any laser, when in the range-finding mode, is less than the range that is achieved or that can be realized when the laser is operated in the designator mode.

4-3. Laser Firing Range Operations

a. All lasers will be regarded as a direct fire weapon. Airspace requirements for using a laser must be requested through Range Control.

b. The conduct of any lasing operation without the approved laser system eye-safe filters attached is restricted. The effects of any lasing operation will be confined to the common impact area. All lasers without Eye Safe Systems for Laser Ranges (ESSLR) devices installed are restricted to specific areas for employment. The laser blister covers, or exit ports, on all vehicles will be closed and locked any time a vehicle is being operated at a location other than those previously approved for laser use.

c. Only mission essential personnel will be at or near the laser firing point during any lasing operation.

d. Any case of a suspected eye exposure to a laser beam will be immediately reported to Range Control. Medical evacuation of the suspected injury may be required. An eye examination of the individual is required within 24 hours of an exposure to a laser beam. An Incident Report will be completed by the unit range OIC/LRSO and submitted to Range control within 12 hours of the incident.

e. Besides the specific technical instructions covering the use of a particular laser device, or of a laser simulator, the following information applies to laser operations at this training center:

(1) Any range that will employ a laser system will appoint a LRSO and any assistant LRSOs as required. All range safety personnel must be certified and have a working knowledge of laser range safety as contained in this regulation and in Chapter 18, DA Pam 385-63.

(2) The unit must have a laser safety SOP. The using unit WILL furnish a copy of this SOP to Range Control.

(3) The OIC, RSO and LRSOs must receive a specific laser range operations and laser safety briefing from Range Control before opening any range that will use a laser system.

(4) The RSO/LRSO will conduct a detailed safety briefing for all personnel concerning all specific laser operational safety issues and covering details on the laser operations to be conducted at the site. This briefing will be accomplished before the conduct of any laser operation on the range.

(5) Medical support personnel are not required to be located on a laser range. However, the proper channels for obtaining medical assistance for personnel at the range should be coordinated and identified before opening the range.

(6) The OIC/LRSO will maintain positive and continuous radio communication with Range Control.

(7) "Laser In Use" warning signs must be posted and protective barricades, as required, will be emplaced by the Range OIC/LRSO. These actions are designed to prevent unprotected personnel from moving forward of the laser firing line.

(8) A red range flag will be displayed any time a laser range is open or in use.

(9) Lasing limit markers to include left, right, minimum and maximum lasing ranges, and range to the vertical backstop must be prominently marked by the unit.

(10) An approved laser range safety card will be provided to Range Control, and will be used by the unit LRSO for obtaining the approved left and right deflection limits. Lasing operations will not be conducted without an approved laser range safety card.

(11) Any laser firing point with safety data that is different from the data as listed on the approved laser range safety card, i.e. different right or left limits, must have a separate OIC/RSO/LRSO designated for that specific laser range firing point.

(12) Emplace the laser directly over the surveyed position stake when the laser is operated in a dismounted mode. If the laser is employed from a vehicle, position the vehicle next to the position stake.

(13) Ensure that an adequate backstop is provided for all targets that will be lased. Ensure that the target area is free from specular (mirror-like) surfaces. Glossy foliage, raindrops and other natural objects are not considered to have specular surfaces. Avoid any specular surface within the authorized zone for lasing operations. OIC/LRSO will inspect target area and do a range reconnaissance observation with binoculars prior to lasing operations.

(14) The range OIC/LRSO will complete a terrain sketch depicting the sectors of fire authorized for the laser before the conduct of any laser operation.

(15) Never lase personnel, wildlife, or any specular surfaces. Never lase any targets within 30 meters of a reflective or specular surface.

(16) Cease all lasing operations if control of the laser beam is lost.

(17) Maintain a two (2) mil safety buffer below the vertical backstop and below the horizon during all lasing operations.

(18) Laser systems will not be activated until the target has been positively identified.

Chapter 5

AVIATION OPERATIONS

5-1. General

To set forth aviation policies and procedures for the commander, aviation personnel, and visiting units training at or assigned/attached to Camp Gruber Training Site Command (CGTC). The policies and procedures contained herein are directive in nature and implement existing Department of the Army, TRADOC, and FORSCOM publications.

All UTM coordinates are in WGS-84 grid zone designation

5-2. Review

This chapter will be reviewed annually for revision and update. This annual revision does not preclude changes being made when required. Direct all suggested changes through Aviation State Standardization Officer to the CGTS DPOT-S, 918-549-6048, CGTC, PO Box 29, Braggs, OK 74423-0029.

5-3. Scope

To provide a thorough knowledge of directives and policies to conduct aviation operations in a safe and efficient manner.

5-4. Applicability

This chapter applies to all aviators and units operating on or around CGTC.

5-5. Airfield Operations

- a. Landing Zone (LZ) Blue Devil (vic. UV02905024) and LZ Track (vic. UV00845031) will be the primary Remain Overnight (RON) locations at CGTC. As such, all helicopter operations in and out of CGTC will be monitored by Range Control on FM (primary 40.80 MHz, alternate 31.30 MHz).
- b. When a Air Traffic Control(ATC) section is available and heliport is operational, the ATC section will:
 - (1) Establish a LZ and Flight Operations Center (FOC)
 - (2) Assign parking and ramp space to visiting units.
 - (3) Ensure visiting unit compliance with appropriate aviation rules and procedures.
 - (4) Coordinate daily activities with Range Control, the appropriate Federal Aviation Administration (FAA), and other aviation authorities.
 - (5) Perform other services as necessary.
 - (6) FOC will conduct all necessary Range Control coordination for aircraft operations.
- c. When ATC is unavailable visiting aviation units will establish a unit flight operations section during extended training at CGTC. Units will be responsible for local area flight plans and flight-following for their aircraft, including air-to-ground radio communications. Units may coordinate/obtain such support through Range Control, when available.
- d. When there is no ATC or unit flight operations section is not available, aircraft may be operated at CGTC with coordination through Range Control. If Range Control is not operational aircraft will use Range Control primary frequency as Common Traffic Advisory Frequency (CTAF).
- e. A training request should be submitted to the Operations and Training Branch IAW CGR 210-1.
- f. Units bringing Air Traffic Control (ATC) elements must ensure that the ATC element coordinates its activities IAW this SOP and agreements in force between CGTC and the FAA.
- g. Foreign Object Damage (FOD) prevention is the responsibility of all aviation personnel. When the flight operations section is operational, the airfield operations officer will assume the duties of FOD Control Officer. FOD Control Officer will ensure that:
 - (1) Weekly ramp inspections are conducted. Information copies should be given to Range Control.
 - (2) Spot checks of operational and maintenance areas of all aviation units are completed.

5-6. Helipads

- a. MEDEVAC Helipad vic. UV00775013 (Main Post) is to be used for emergency air evacuations only. Permission for use of pad for other purposes must be strictly coordinated with Range Control.
- b. Range Control/VIP Helipad (LZ Thunderbird) vic. UV025504 is used for offloading of military personnel and VIPs.

5-7. Arrival and Departure Corridors and Procedures

- a. Scheduling of ranges and training areas will be IAW Camp Gruber Regulation (CGR) 210-1.

b. Pre-flight Brief Information concerning the availability of training facilities will be obtained telephonically and through the daily Camp Gruber Range Brief, located on Range Control GKO, prior to departing Air Station. However, training facilities/areas are scheduled and reserved only thru the Range Facility Management Support System (RFMSS). RFMSS is the primary means for requesting and scheduling resources at Camp Gruber for all units. Organizations may request access thru the RFMSS website. <https://rfmss.belvoir.army.mil/>

c. Cancellation of training facilities/areas previously approved may be initially accomplished telephonically, but requires written documentation from the ATC or FOC.

d. All scheduled aircraft supporting ground elements or air mobile training must coordinate with Range Control (FM 40.80 or alternate 31.30 SINCGARs 32.200) prior to entering the restricted area. All aircraft entering airspace must contact Range Control at a minimum of 5 miles out to confirm opened and closed airspace and training areas for maneuvers. Minimum information required is:

- (1) Aircraft call sign or tail number.
- (2) Estimated time of arrival.
- (3) Estimated time on station.
- (4) Number of personnel on the aircraft.
- (5) Type of aircraft.

e. All aircraft entering the CGTC airspace will comply with minimum enroute altitudes IAW NG Supplement 1 to AR 95-1.

f. The following aerial entry and exit check points will be utilized for entry and exit to and from CGTC. Aviators will notify Range Control prior to arriving or departing Camp Gruber and will have the following checkpoints marked on their maps:

- (1) From the north:
 - (a) Highway 10/Hilltop Gate vic UV 015582
 - (b) Red berry MT vic UV 098631
 - (c) Buzzard Roost vic UV 159617
- (2) From the east:
 - (a) Buzzard Roost vic UV 159617
 - (b) White Oak vic UV 161547
 - (c) Tenkiller Lake vic UV 140457
- (3) From the south:
 - (a) Tenkiller Lake vic UV 140457
 - (b) Greenleaf Point vic UV 060464
 - (c) Main Gate vic UV 005496
 - (d) Sicily Gate vic UV 007510
- (4) From the west:
 - (a) Main Gate vic UV 005496
 - (b) Sicily Gate vic UV 007510
 - (c) Highway 10/Hilltop Gate vic UV 015582

g. Entry and exit at these points will be conducted at the following altitudes:

- (1) Entry – at or below 300 AGL
- (2) Exit – at or above 500 AGL

5-8. Aircraft Operations

a. Aviators are responsible for visually separating their aircraft from other aircraft operating on Camp Gruber Training Center (CGTC).

b. The capability of rotary wing aircraft to operate from unimproved training areas is recognized. Subject to CGTC approval, rotary wing aircraft may land and take off from any part of CGTC other than the cantonment area, with the following exceptions:

(1) Any area closed by Range Control for weapons firing, para-drop operations, or in conflict with flight restricted areas.

(2) Landings will not be made to areas occupied by troops and vehicles unless the aircraft is/are participating in that exercise, or if the aircraft is/are involve in an actual MEDEVAC mission. Pilots are responsible for ensuring that such operations pose no hazard to personnel or equipment on the ground.

(3) Landings will not be made in the Wildlife Management Area of the Cherokee County.

(4) Training areas other than cantonment are not available during designated hunting seasons. Hunting is permitted IAW ODWC regulations provided they do not conflict with DOD and/or DA regulations or CGTC

training requirements. Training areas available for military operations are reduced during specific dates outlined in the current calendar year OMD/ODWC MOU

c. Requests to land in closed and/or restricted areas will be submitted in writing to the Plans, Operations and Training Division for approval. If granted, approval will be limited to use during the unit's training cycle only, and must be submitted no later than two full working days prior to the intended use.

d. All landings are the responsibility of pilot-in-command.

5-9. No Fly Areas

The following are to be considered no fly areas and will not be over-flown below an altitude of 1500 ft. AGL. Other no fly areas may be designated by the Plans, Operations and Training Division on an as-needed or temporary basis.

a. Braggs, OK grid area defined within coordinates UV015494, TV994494, TV994477, and UV015484.

b. Ranger house vic. grid 1360, 1 kilometer circle.

c. Greenleaf Lake recreational area including Greenleaf Lake, area south of grid line 46, east of grid line 02, west of grid line 05, and north of grid line 43, including swimming beach area and Greenleaf Lodge.

d. City of Taft, OK (west of Muskogee Davis Field), N 35.46 / W 095.33

5-10. Sling Load/External Load Operations

a. Sling load operations will be conducted IAW applicable ARs, FMs, DA directives, and appropriate Aircrew Training Manuals (ATMs).

b. Aircraft carrying sling loads shall not fly over populated areas, buildings, troop concentrations, or built-up areas.

5-11. Night Operations

a. Unaided/aided (NVG) night operations shall be conducted IAW AR 95-1, applicable ATMs, unit SOP, and current service directives. Units are responsible for providing their own tactical lights and must request to perform such training through Range Control or the Plans, Operations and Training Division.

b. Night vision devices.

(1) Night vision goggle (NVG) operations will be conducted in accordance with all appropriate ARs, FMs, ATMs, unit SOPs, and CGTC directives.

(2) Aviators are responsible for operating aircraft in such a manner as not to endanger life or property. It is the responsibility of each individual crewmember to be physically and psychologically fit to assume aircrew duties.

(3) NGV training may be conducted when the following conditions are met:

(a) Weather IAW AR 95-1 and unit's SOP.

(b) Crew endurance is within established guidelines IAW AR 95-1 and unit's SOP.

(4) Aircraft may be operated under blackout conditions in the Camp Gruber training areas. Aircraft operating outside the training areas must have navigation lights and rotating beacon or strobe when above 500 ft. AGL. Aircrews operating under blackout conditions over CGTC must coordinate with Range Control.

5-12. Practice Rotary Wing Emergency Procedures Training

Training in rotary wing emergency procedures will be IAW AR 95-1, applicable DA directives, unit SOPs, and appropriate ATMs. The following restrictions apply:

a. Performance of emergency procedures training must have prior approval of the Plans, Operations and Training Division, CGTC.

b. Practice touchdown emergency procedures will not be performed at CGTC with the exception of hovering auto-rotations for single engine helicopters. Exceptions may be granted by submitting written requests to the Plans, Operations and Training Division, CGTC (with an information copy to the Camp Gruber Safety Officer).

5-13. Local Flying Area

a. The local flying area for Camp Gruber is defined as the area located within a 50 nautical mile radius of LZ Blue Devil (UV029504) at CGTC.

b. When conducting extended training at CGTC, all aviation units should prepare a local area flying map to be displayed within their respective flight operations. The following sectional aeronautical charts, scale 1:500,000, can be used for this construction: Dallas-Fort Worth, Memphis, Kansas City, and Wichita.

c. The local flying area should be divided into four sectors using Highway 10 and grid line 50. The northeast quadrant designated as Sector A, the southeast quadrant Sector B, the southwest quadrant Sector C, and the northwest quadrant Sector D. CGTC will be designated as Sector E.

5-14. Local Orientation

a. Each Reserve Component and Active Army aviation unit's commander is responsible for ensuring that individual aviators receive a comprehensive briefing on the local flying regulations and that each aircrew receives a

local area orientation flight. Restricted areas, range and impact areas, boundaries, authorized landing areas, reporting points, and other significant features will be emphasized.

b. Units conducting mission training within the Camp Gruber training areas that will not receive local area orientation flights due to the nature of their training mission will, however, be given a comprehensive range and safety briefing by Range Control, CGTC prior to the start of the exercise and be held responsible for compliance with all procedures and policies set forth in this publication (CGR 385-1) and all other aviation and range safety policies published by Camp Gruber.

c. To assist unit commanders in completing the local area orientation requirements, a representative of the Plans, Operations and Training Division should accompany a designated aviator (preferably an instructor pilot) on an initial local area orientation flight prior to the conduct of training missions. All aviators shall be briefed by the aviation commander within 48 hours of the unit's arrival.

d. All MEDEVAC pilots will received an in-depth briefing and become familiar with all regulations, SOPs, and letters of agreement concerning MEDEVAC operations. MEDEVAC local orientation will include an approach into local hospitals and will include day approach to hospital helipads. Multiple training approaches will not be made to the hospital. All pilots-in-command will become acquainted with the approach procedures.

5-15. Operations in Camp Gruber Training Areas

a. Aviation unit commanders are responsible for ensuring that suitable Camp Gruber range maps are available to individual aviators flying on the reservation. The Camp Gruber Military Installation Map may be downloaded electronically from the Camp Gruber web page.

b. In addition to a Camp Gruber map, all aircraft operating at Camp Gruber will have a Crash Grid System/Pre-Accident Plan in effect prior to conducting operations. Aviation units will coordinate with Range Control to ensure Crash Grid Systems are compatible.

c. Prior to conducting day, night, NOE, or NVG flight operations, a current Camp Gruber map depicting all current known hazards will be on board each aircraft and posted in the unit's flight operations. The CGTC Safety Officer will ensure the CGTC hazards map is current and on file with Range Control.

d. The following landing zones have been established on Camp Gruber to expedite control of aircraft using the range areas. These landing zones are not automatically approved landing zones and must be safety checked prior to use during authorized cycles of training. Aviators using these areas will have the following checkpoints marked on their maps:

POINT	COMMON NAME	GRID COORDINATE
	MEDEVAC PAD (59OK)	UV 00775013
	LZ BUILDING 900	UV 04304950
	LZ PUMPKIN CENTER	UV 06105417
	LZ HILL TOP	UV 05605918
	LZ CENTRAL	UV 02245791
	LZ AMPHIBIOUS (Engineer Point)	UV 04604680
	LZ BLUE DEVIL	UV 02905024
	LZ CAC-TF	UV 04225040
	LZ THUNDERBIRD North	UV 02505040
	LZ THUNDERBIRD South	UV 02475000
	LZ THUNDERBIRD HOUSE	UV 04664894
	LZ HODGE (C130 Assault Strip)	UV 02494871
	LZ RAINBOW	UV 03934754
	LZ ASSAULT	UV 01575843
	LZ AMBUSH	UV 03605750
	LZ HUNTERS CAMP	UV 06095501
	LZ BROWN OUT	UV 06115200
	LZ CHAPEL	UV 00985005
	LZ TRACK	UV 00845031
	LZ ROOFTOP	UV 04674886
	LZ PINNACLE	TV 99775714

e. When assigned, the Camp Gruber Safety Officer will coordinate the safety certification of these areas annually. Use of the listed checkpoints as LZs must be coordinated with the Plans, Operations and Training Division, CGTC.

f. Within 8 hours of arrival, aviation units will provide Range Control the number and type of aircraft, tail numbers, flight operations number, and location of key personnel in their organization. Units will be responsible for

their internal pre-accident plan and will coordinate with Range Control to maintain radio or landline communications.

5-16. Para-drop Operations

Para-drop operations shall be conducted IAW CGR 385-1, current edition, and FAA Reg. part 105. Drop zones will be requested IAW CGR 210-1.

5-17. Fixed Wing Operations at Camp Gruber

Operation of fixed wing aircraft in and around Camp Gruber will be coordinated through the Plans, Operations and Training Division, CGTC.

5-18. Communications

a. Radio contact with Range Control on 41.10 FM, 248.60 UHF, and 141.200 VHF will be made as specified in Tab D. If Range Control is not in operation, aircraft movements will be at the pilot's own risk and aircraft will use FM 41.10 to advise others of their intentions

b. When tactical ATC facilities are established on CGTC, Letters of Instruction (LOIs) and/or unit addendum to this Aviation Procedure Guides (APGs) will be published. All aircrews will comply with the communications and ATC requirements of such LOIs, APGs, and addendums when operating in the affected areas.

c. Units will request air-to-air and air-to-ground frequencies needed for internal command and control through their appropriate channels/CEOI/SOI prior to arrival at Camp Gruber.

d. Communication requirements in areas outside the installation and Camp Gruber designated airspace will be in accordance with appropriate ATC Flight Service and FAA directives.

5-19. Accident Prevention Program

The Camp Gruber Aviation Accident Prevention Program is presented in NGB Pamphlet 385-95.

5-20. Installation Safety Council

This Joint Forces Headquarters (JFHQ) council is established in accordance with AR 385-95 to manage the installation's safety program. The Camp Gruber Safety Officer will be a member of this council. An aviation safety council will not be maintained at Camp Gruber.

5-21. Aviation Safety Meetings

Aviation safety meetings will be conducted IAW each visiting unit's SOP. At a minimum, one aviation safety meeting will be conducted while at Camp Gruber and will be attended by the Camp Gruber Safety Officer or his designated representative.

5-22. Operational Hazard Reports (OHRs)

Use of OHR (DA Form 2696-R) is encouraged. OHRs will be dealt with IAW AR 385-95.

5-23. Ramp Discipline

An airfield/heliport ramp is by nature a hazardous environment. Precautions must be taken at all times to avoid personal injury as well as damage to equipment.

- a. Smoking is prohibited on the ramp within 50 feet of aircraft, fuel trucks, or waste fuel disposal points.
- b. The speed limit on the ramp is 5 MPH around aircraft. This will be observed by all personnel operating vehicles at Camp Gruber.
- c. All vehicle antennas will be lowered and secured prior to entering the ramp area.
- d. No horseplay will be tolerated on the LZ or in aircraft parking areas.
- e. Prior to entering flight operations or the ramp area, all weapons will be cleared.
- f. Vehicles other than aircraft are prohibited on LZ Blue Devil and LZ Track unless cleared by Range Control.

5-24. Aviation Life Support Equipment (ALSE)

All personnel acting as crewmembers will wear appropriate ALSE. ALSE will be inspected IAW AR 95-1 and will be in a serviceable condition.

5-25. Noise Abatement

Aviators will maintain appropriate altitudes when entering and departing the CGTC area and participate in noise abatement/fly-neighborly programs to minimize annoyance to persons on the ground when missions and safety are not adversely affected. Noise complaints received by training unit operations will be forwarded to Plans, Operations and Training Division within 24 hours of receipt. See Para 5-43 for list of abated noise areas

5-26. Crew Endurance

Crew endurance is the responsibility of the unit commander and the individual aviator. All units training at Camp Gruber will have a crew endurance program in effect. Crewmembers will not exceed crew endurance limitations as set forth in AR 95-1 and their unit's SOP.

5-27. Maintenance Test Flights

Maintenance test flights will be conducted per appropriate TM, checklist, DA regulations, and unit SOPs. Aviators performing maintenance test flights must be qualified and current in mission, type, design, and series group of the aircraft for which the test flight is required. Test flights will be performed in the vicinity of the C130 Assault Strip (east traffic), Muskogee Davis Airfield, or east of CGTC above 1000 ft. AGL over populated areas. Aircrews will maintain radio contact at all times with their appropriate unit or ATC facility to ensure emergency response if required.

5-28. Pre-Accident Plan

- a. The CGTC pre-accident plan shall be posted in Range Control, and have a copy maintained with each visiting aviation unit operations. The plan will be tested quarterly, and a record kept of the test and results. The Camp Gruber pre-accident plan will be supplemented by each aviation unit's own pre-accident plan. Responsibility for executing the aviation specific portions of the pre-accident plans will be upon the aviation unit. CGTC will assist to the extent that resources will allow.
- b. When an aircraft has been determined to be overdue, the flight-following facility, unit, or person first aware of the overdue aircraft shall:
 - (1) Initiate the appropriate pre-accident plan and begin a communications search.
 - (2) After an aircraft has been overdue 15 minutes from last required report, notify Plans, Operations and Training Division, that a communications search for the aircraft has been initiated.
 - (3) After the aircraft has been overdue 30 minutes, notify CGTC Operations Section or Range Control that a communications search has failed to locate the aircraft.
 - (4) Notify Operations or Range Control when communications have been reestablished with the aircraft or if the aircraft has been located.
- c. After being notified by the flight-following facility of an overdue aircraft, CGTC Operations or Range Control will take the following action:
 - (1) Contact owning unit operations to inform them of an aircraft 15 minutes overdue and request they perform a ramp check.
 - (2) If an aircraft becomes 30 minutes overdue, search and rescue procedures will be initiated IAW individual unit search and rescue plans.
- d. In all cases, Range Control will be kept informed of the situation as it develops.
- e. Camp Gruber Range Control is responsible for the pre-accident plan. When Range Control is not operational, responsibility is shifted to Camp Gruber Security.
- f. Camp Gruber has the following services:
 - (1) Range Control. Phone 918-549-6041. Radio frequencies FM 41.10 or UNICOM 122.8. Operational when ranges are active or when training dictates.
 - (2) Security. Phone 918-549-6021. Two (2) MPs or security officers will close or limit access to post in case of an accident. They will be of limited use in case of an off post-accident.
 - (3) Ambulance services. Camp Gruber is serviced by Muskogee EMS for both surface and air emergency medical evacuations. Military MEDEVAC services are not normally available. When Range Control is operational, all requests for emergency medical evacuation shall be coordinated through, and initiated by Range Control.
- g. Additional contact information
 - (1) Muskogee EMS 918-683-0108
 - (2) State Aviation Officer (SAO) 405-228-5606
 - (3) DPOT-S 918-549-6015
 - (4) Operations and Training Officer 918-549-6076
 - (5) Safety Officer 918-549-6076
 - (6) UTES#1 Supervisor 918-549-6033
 - (7) Facility Engineer 918-549-6072
 - (8) Flight operations (visiting units) 918-549-6041
- h. Oklahoma Military Department or 90th Troop Command provides the following for Camp Gruber:
 - (1) Public Affairs Officer
 - (2) Staff Judge Advocate
 - (3) Airfield Weather Officer
 - (4) Aviation Officer
 - (5) Accident Investigation Board
 - (6) Aircraft Maintenance Officer.

- i. Camp Gruber Range Control will be notified of any accident, mishap, or precautionary landing in the training areas.
- j. SAO or OKSAFE will notify the U.S. Army Safety Center.

5-29. Aircraft Mishap Procedures

- a. All aircraft mishaps occurring at CGTC will be reported to the Plans, Operations and Training Division, the Camp Gruber Safety Officer, visiting Operations and Training Officer, State Army Aviation Officer (SAAO), and appropriate commanders as soon as possible if injuries or damage is involved. If no damage or injuries result, notification must be made within eight (3) duty hours. Unit Aviation Safety Officers (ASOs) will submit required reports IAW AR 385-40. Coordination will be made with the Plans, Operations and Training Division prior to submitting reports, who will render any assistance necessary in preparation and submitting of reports as required.
- b. In the event of a precautionary landing not resulting in damage or injuries, the aircraft shall not take off until released by appropriate authority (i.e. qualified maintenance personnel).
- c. In the event of a crash involving numerous personnel, guidance will be provided by the Plans, Operations and Training Division, CGTC.

5-30. Airspace Management

- a. Aviation units are required to make sure that adequate measures are taken to ensure aircraft separation is maintained during multi-ship, combined operations, night flight, and when NVG operations are involved.
- b. In the interest of training realism and airspace safety, CGTC may periodically institute airspace management programs. Such programs will be issued in writing and will be mandatory for all aircraft operating on Camp Gruber. Aviators should note that Range Control is a range safety agency, not an airspace management agency. Camp Gruber initiated airspace management may integrate Range Control considerations into the airspace management element's responsibilities.
- c. Visiting units training at Camp Gruber are encouraged to develop appropriate airspace management programs. Such programs shall be submitted in written form to the Plans, Operations and Training Division, CGTC for approval. When more than one visiting unit has airspace concerns, the Plans, Operations and Training Division will resolve any conflicts and ensure that all aviation units' requirements do not conflict.
- d. All airspace programs will be subordinate to range safety considerations and shall be structured to ensure no conflict with the safety requirements of CGR 385-1 and other pertinent directives addressing range safety.

5-31. Clearance Authority

All army aircraft operations from Camp Gruber must have a flight plan on file or aircraft flight log register IAW AR 95-1 and unit SOP.

5-32. Weather Briefings

Prior to filing a flight plan at Camp Gruber, aviators will obtain a weather briefing. Briefing aids and telephone instructions will be available through the unit or may be available through Range Control or the applicable Flight Service Station (FSS) at 1-800-WX-BRIEF.

5-33. Flight Plans/Logs

- a. Rotational units will file flight plans through their unit operations section.
- b. Administrative aircraft and transient aircraft will have either an IFR or VFR flight plan on file with Camp Gruber Heliport Operations (if operational) or with the McAlester FSS prior to departure. OKARNG aircraft may operate on a local flight plan from Tulsa or Lexington home units.
 - (1) Instrument Flight Rules (IFR) will be handled through flight service. At this time, no instrument approach is available to Camp Gruber. Emergency recovery airfield will be Muskogee Davis Airfield or Tulsa IAP. Contact DFW Center for any emergency condition on VHF 132.2 or UHF 338.35. Consult NOTAMS/DOD FLIP for any frequency changes.
 - (2) Visual Flight Rules (VFR) flight plan (DD Form 175 or local flight log) will be prepared for all VFR flights IAW AR 95-1.
 - (a) Local flight plans (flight log) will be filed with the unit's operations section, and aviation unit operations will provide flight-following services/instructions. When the Unit's flight operations section is operating, a Letter of Instruction (LOI) will be issued prescribing specific procedures for flight plans.
 - (b) For other than local VFR flight, a DD 175 and 175-1 will be filed with/through the aviation unit's duty dispatcher. At other times, the pilot-in-command will be responsible for filing with the local FAA.

5-34. Cross country, Remain Overnight (RON) and Operational Support Airlift (OSA) flights

Such flights are the responsibility of the appropriate unit commander and will be performed IAW AR 95-1, other appropriate directives, and unit SOPs.

5-35. Terrain Flight Training

- a. Unit commanders are responsible for scheduling and monitoring the safety of terrain flight training conducted at Camp Gruber. Such training will be conducted IAW AR 95-1, appropriate ATMs, unit SOPs, current service directives, applicable TCs and FMs.
- b. Only approved terrain flying areas on the reservation may be used for operations involving terrain flight. Terrain flight will be conducted only in areas designated by the Camp Gruber Range Control Officer. Use of such areas shall be requested in advance of the desired date, and when scheduled for use, terrain flight areas will be considered to be active ranges, thereby restricting use by non-participating aircraft.
- c. Scheduled terrain flight training will not be conducted unless the prevailing weather for a period from one hour prior to the scheduled start of training through one hour following the scheduled end of training is forecast to be at or above:
 - (1) On-post facilities: Ceiling 500 ft. AGL or visibility one (1) mile or per unit SOP.
 - (2) Off-post facilities: The lower of unit SOP, FAA, or AR 95-1.
- d. Terrain flight training will be terminated immediately whenever reported weather conditions become less than those stated above.

5-36. Aircraft Security

A physical security plan, to include key control procedures, will be implemented by aviation units operating from CGTC. Physical security will be accomplished IAW individual unit physical security plans, to include establishment of security procedures to preclude individuals from making unauthorized flights. Each visiting unit will brief the Plans, Operations and Training Division concerning the unit's physical security plan after arrival at CGTC.

5-37. In-flight Emergency Procedures

- a. During Annual Training and IDT periods identified as aircraft intensive by the Plans, Operations and Training Division, crash rescue may be available at LZ Blue Devil (Heliport). The availability or non-availability of crash rescue support will be covered in the local area orientation briefing.
- b. During all other times (low aircraft usage) Davis Field should be considered as the primary landing site. Notify Camp Gruber Range Control on FM 41.10 or Davis Unicom 122.80 for crash rescue assistance.

5-38. Severe Weather, Tornado Alert, Disaster, and Evacuation

- a. All visiting units should maintain a severe weather scatter plan. Aviators will be advised by their unit flight operations or Range Control of severe weather warnings issued by USAF Air Weather Service, McAlester FSS, CGTC Operations, or Range Control.
- b. Visiting and rotational unit commanders will contact appropriate major commands for instructions in evacuating aircraft if required.
- c. If aircraft evacuation is deemed inappropriate, the aviation unit commander and Operations and Training Officer will prepare the aircraft as required (i.e., chains, mooring, blade tie downs, rotor locks, etc.) and contact the Plans, Operations and Training Division for assistance if necessary.
- d. To turn on MEDEVAC helipad lights from aircraft tune to VHF 122.800 and key the mike five (5) times.

5-39. Refueling

All refueling of aircraft at Camp Gruber will be accomplished IAW all applicable FMs, TMs, OSHA, EPA, and unit SOPs. Refueling operations shall be conducted IAW applicable regulations, appropriate FMs and unit SOP. Refueling shall occur at LZ Blue Devil or LZ Hodge (C130 Assault Strip) and be coordinated with Range Control. Refueling operations will not be conducted until the unit has submitted their Spill Control Contingency Plan to the Camp Gruber environmental supervisor for approval.

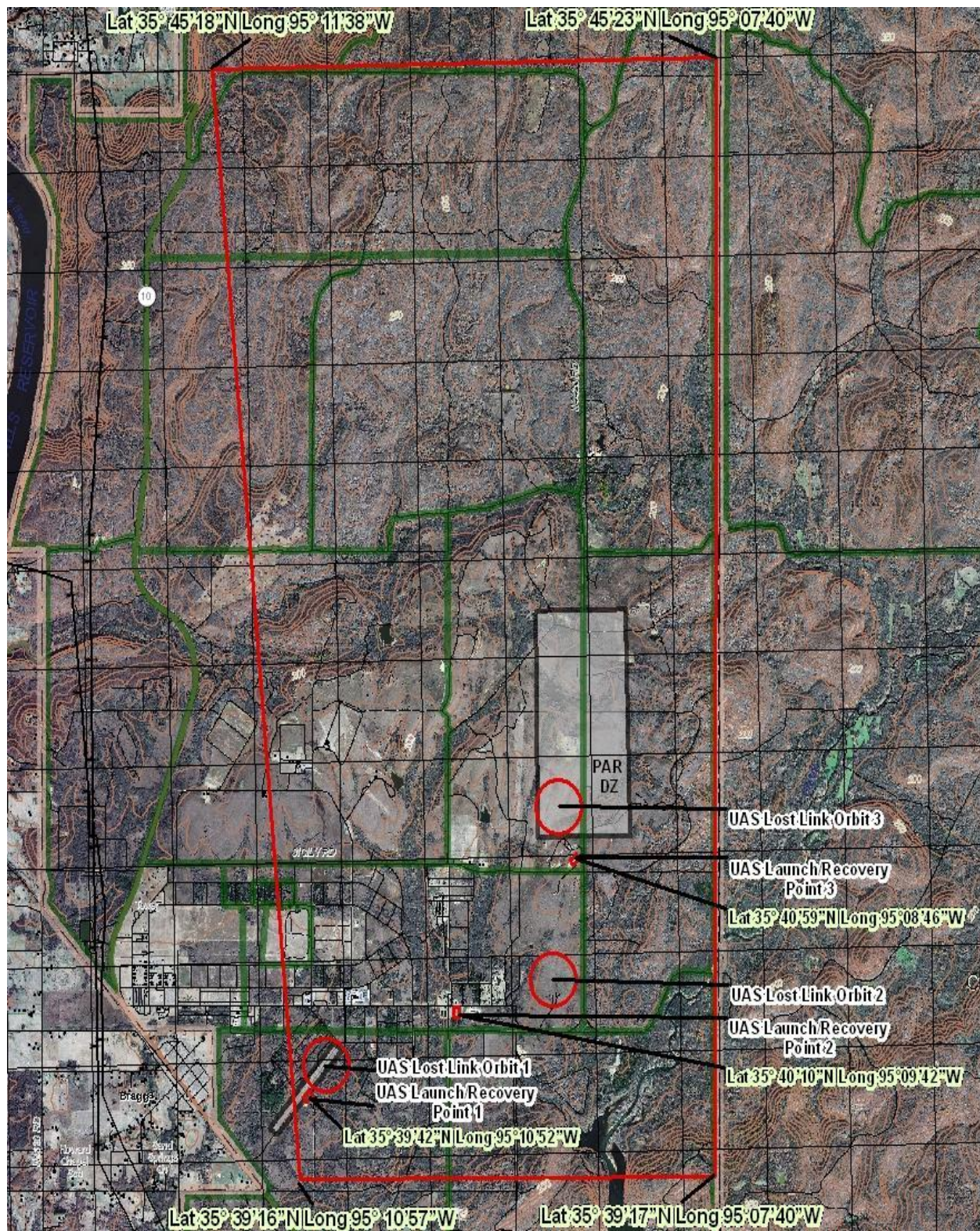
- a. Visiting units may not dispense aviation fuel until an inspection of their equipment has been conducted by their unit ASO. Equipment must pass this inspection prior to being placed into service. Inspection will be IAW FMs and will be conducted using FORSCOM Form 387-R as a guide. The FORSCOM Form 387-R will be maintained at the refueling site.
- b. Visiting unit aviation POL facilities and records are subject to spot checks by the Plans, Operations and Training Division, CGTC. When deficiencies are found, facilities are subject to closure until corrections are made.
- c. Units desiring to conduct hot refueling must have a current hot refueling SOP. One copy of this SOP must be submitted to the Plans, Operations and Training Division for approval by the CGTC Environmental Supervisor prior to conduct of hot refueling.
- d. A fire guard shall be present anytime an aircraft is being refueled or de-fueled at CGTC.

5-40 Flight into Instrument Meteorological Conditions (IMC)

Aviators shall attempt the following prior to entering IMC:

- a. Avoid flight in areas of poor or deteriorating weather by:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Units must provide the following to Range Control prior to conducting flight operations in the ROZ:
 - (a) Commander's Certification Memorandum listing qualified OIC(s) and RSO(s)--minimum of one each. Certification shall be valid only for the duration of the training event.
 - (b) Commander's Certification Memorandum listing qualified UAS Pilot/Mission Commander/Instructor, to include a valid copy of credentials for each individual listed.
 - (c) Mission Profile Checklist per the applicable regulations.
 - (d) Completed SUAV Coordination Checklist.
 - (e) Small Unmanned Aircraft System (SUAS) Mission Request per the applicable TM, including launch and recovery site locations. Mission Request shall be submitted at a minimum of 48 hours prior to the activity to ensure timely submission of a NOTAM request by Range Control.
 - (f) Risk assessment IAW DA PAM 385-30.
- (3) A qualified medic must be present on the ROZ during the conduct of flight operations. Additional medical requirements are as follows:
 - (a) Medic must be CLS qualified.
 - (b) Medic shall have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the name, grade, and SSN last 4 of all CLS qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the CLS and capable of transporting a litter-born patient.
- (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E6. Using unit may request waiver to lower minimum requirements based on unit organizational structure.
- (5) Multiple flight activities conducted by unit may use one each OIC and RSO provided OIC and RSO remain in close proximity to all concurrent flight operations.
- f. Special Instructions:
 - (1) The three (3) existing launch and recovery sites are UV0255348642, UV0434449450, and UV0577950940. Use of any site within the ROZ, to include alternate sites other than those existing, shall be subject to the approval of Range Control. Unit may be requested to provide Range Control an overlay of any alternate locations.
 - (2) The ROZ is limited to a maximum of three (3) UASs aloft at any one time.
 - (3) The ROZ has a vertical limit of 1,000 feet above ground level (AGL)
 - (4) Multiple UAS launches from the same launch/recovery site must be staggered in minimum intervals of 15 minutes.
 - (5) Multiple UASs concurrently aloft shall maintain a minimum 1,000 ft. horizontal and/or 500 ft. vertical separation.
 - (6) Use of any area within the ROZ for UAS activity is limited to daylight hours only. Night operations are prohibited.
 - (7) Using unit will have a pre-accident and recovery plan per the applicable regulations.
 - (8) All unit safety SOPs will be in effect while flight operations are conducted.
- g. Air guard requirements: Using units must have a designated air guard to observe surrounding airspace in the area where flight operations are being conducted. Flight operations will be terminated immediately if unauthorized aircraft enter maneuver airspace.
- h. Weather: All UAS flights require a weather brief from an appropriate weather facility.
 - (1) A weather void time of one and one-half (1-1/2) hours applies.
 - (2) Minimum cloud ceiling of 1500 ft. AGL required.
 - (3) Minimum horizontal visibility of three miles required at the launch/recovery site.



Range and Training Facilities

(Ranges Listed by RFMSS Number and Nomenclature)

Live Fire Ranges

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Range Opening Closing Procedures

OIC will sign for the Range from Range Control, and turn in a DRA worksheet and a daily Range Opening Sheet.

- a. OIC will Inform (Radio, Phone) Range Control when unit has occupied the Range.
- b. OIC will call Range Control and request a "HOT" time.
- c. OIC will ensure that hourly Radio checks for Live Fire Ranges are made and that the radio is monitored at all times. (every four hours for Non-Live Fire Ranges)
- d. OIC will request a "COLD" time from Range Control when training is complete.
 - (1) OIC will furnish Range Control with quantity and type of ammunition fired on the Range.
 - (2) OIC will furnish Range Control with total number of personnel on site and that were trained.
- e. OIC will inform Range Control when Range is ready to be cleared and request a clearing time.
- f. OIC will inform Range Control when unit has unoccupied the Range.
- g. OIC will turn in all equipment/ items issued for the Range.

Live Fire Ranges

R0150. Safety precautions

KD RNG (Known Distance Range)

- a. References:
 - (1) FM 3-22.9.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV01615182
- c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifle. This range has 32 firing points and firing lines at 100m, 200m, 300m, 400m, and 500m. Targets are mounted on lifter type frames. Ammunition authorized for use on this range is 5.56mm. This range is also used for Squad Designated Marksmanship (SDM) training, and certain competition shooting matches for which 9mm and 7.62mm ammunition may also be fired and is subject to approval by Range Management Authority no less than 60 days prior to the day of the training event. Authorized DODICs are A058, A059, A062, A136, A170, A171, A362, A363, AA11, AA33, AA49, AA85, AB57, AB58.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Known Distance Range flagpole and from the flagpole on Range Loop Road.
 - (3) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Officer in Charge and Range Safety Officers will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection.
 - (3) The target lifter area requires an additional RSO E5 or above who is responsible for operations and safety in that area.
 - (a) Communications must be established and maintained between the OIC/RSO on the firing lines and the RSO in the target lifter area.
 - (b) Communication requirements are the using unit's responsibility.
 - (c) NO EQUIPMENT OR VEHICLES WILL BE FORWARD OF THE FIRING LINE.
 - (d) NO EQUIPMENT OR VEHICLES WILL BE STAGED ON THE ROAD WHERE THE LIFTERS ARE LOCATED.
 - (4) Lifter area RSO is responsible for the safety of the target lifter operators.
 - (a) This includes but not limited to maintaining command and control of operators staying within the safety limits in the lifter area.
 - (b) North Safety boundary during course of fire is identified by a yellow stripe (Do Not Cross during Live Fire).
 - (c) West Safety boundary of the Lifter area is identified by a Red line (End of Range).
 - (d) All target Lifter personnel will enter into the Lifter area using one of the three steps painted yellow. Entry is located on the east, center and west of the Lifter area.
 - (e) THE LIFTER AREA RSO AND OPERATORS ARE NOT AUTHORIZED TO LEAVE THE SAFETY AREA DURING COURSE OF FIRE. THE OIC INSTRUCTS CEASE FIRE AND CLEARS THE FIRING LINE AND RELAYS TO THE LIFTER AREA RSO WHEN ABLE TO LEAVE THE SAFETY AREA.
 - (5) No other firing other than that stated in paragraph c. above can be conducted on this range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).

i. Range(s) closed during firing: The firing of 7.62 ammunition closes MPMG, Zero West and MFR1. Access to MPMG will be closed at range loop road and access to MFR1 and Zero W will be closed at the entrance to those ranges. Use of M855A1 5.56mm AB57 and AB58 closes access to Zero W. Firing 9mm ammo from the 500M line closes Zero W.

j. Barriers:

- (1) Gates 10, 11, 12, 17, 19, 20, 21, 21B, 22, 23, and 61.
- (2) Cables Gates 124, 125, 126, 134, 135, and 142.

R0300. Safety precautions

MG RNG MULTIPURPOSE (Multi-Purpose Machine Gun Range)

a. References:

- (1) FM 3-22.10.
- (2) FM 3-22.27
- (3) FM 3-22.65
- (4) FM 3-22.68.
- (5) AR 385-63.
- (6) DA Pam 385-63.
- (7) Specific TM and FM for the weapon being utilized.

b. Location: UV0147253591.

c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to engage targets with the M249 SAW, M60 MG, M240 MG, M2 MG, MK19 GMG, and M24 Sniper Rifle. Range may also be used for Squad Designated Marksman (SDM) training with the M16/M4 series rifle. Range consists of eight (8) firing points, each with a 10 meter zero. The M2 and MK19 are restricted to lanes 2 through 5 only; the M24 Sniper course of fire is on lanes 6 and 7. 7.62mm and .50 cal ammunition may not be used on lane 1. Targetry, depending on weapon type, consists of stationary infantry targets, stationary armor targets, and moving armor targets. 5.56mm and 7.62mm MGs engage targets at 100, 200, 300, 400, 500, 600, 700, and 800 meters. Additional targets are positioned at 1100 and 1500 meters for the M2 and MK-19, 900 and 1000 meters for the M24. Ammunition authorized for use on this range is 5.56mm, 7.62mm, .50 caliber, and 40mm (TP only). The primary purpose of Aviation Gunnery is to train units during live fire exercise to operate, engage targets, and practice target discrimination in a non-urban environment. The range targetry utilized during training can register hits with LIVE rounds or stationary targets can be emplaced. **HIGH EXPLOSIVE AMMUNITION IS PROHIBITED ON THIS RANGE.** Authorized DODICs on this range are A058, A059, A062, A064, A111, A119, A128, A130, A131, A136, A143, A151, A152, A163, A164, A165, A168, A170, A171, A191, A554, A555, A557, AA11, AA33, AA85, AB56, AB57, AB58, AB86, BA12, BA30.

d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

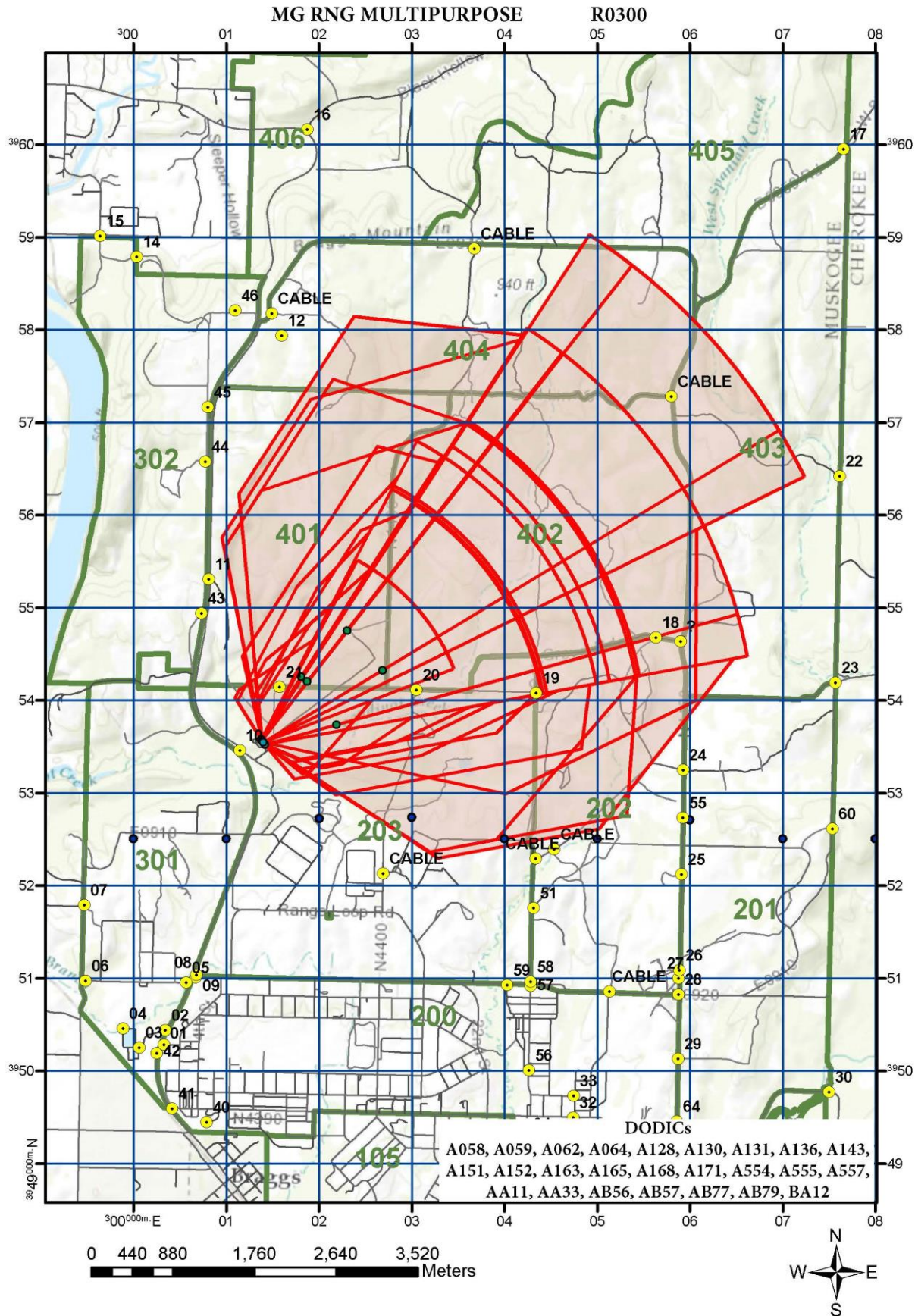
e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the MPMG Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) For all weapon systems except MK19, OIC must have a minimum grade of E6 and Safety Officer must have a minimum grade of E5.
 - (6) For MK19 fire, OIC must have a minimum grade of E7 and Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
- (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) Units will conduct a zero exercise per the applicable FM prior to conducting transition fire with the M2 or M60/M240 MGs.
 - (3) Night Firing: Prior to any night firing on the MPMG range, units will emplace each weapon and have a range card drawn before dark to ensure firers do not fire across adjacent lanes.
 - (4) Each firing point utilized on the firing line will have a dedicated Assistant Range Safety Officer (ARSO) to ensure the weapon is operational, to assist the gunner in the application of remedial action when necessary, to observe for any unsafe condition, to ensure the gunner fires only in his/her assigned lane, and to prevent injury to personnel.
 - (5) For all weapon systems except MK19, personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection.

(6) For MK19 fire, personnel on the firing line and within a 20 meter radius of each weapon will wear approved protective helmets, body armor without plates (i.e., FLAK Jacket, IOTV, IBA, MTV, PASGT), single hearing protection, and eye protection.

(7) Aviation unit's conducting Table II will develop a detailed written training plan, which will be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario which addresses the following:

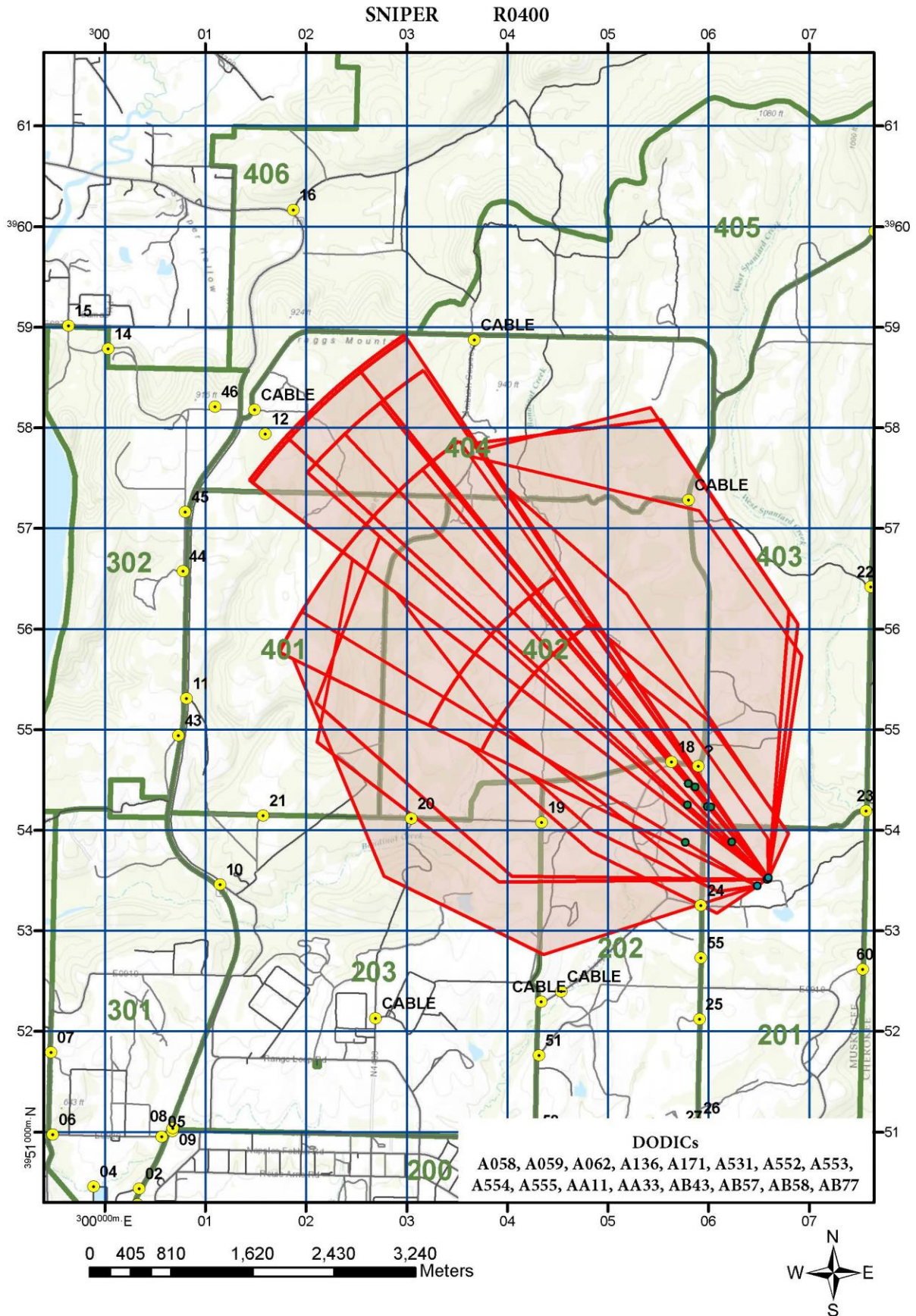
- (a) Maneuver plan.
 - i. Flight plan and orientation of aircraft.
- (b) Weapons and ammunition to be used.
- (c) Command, Control, and Communications plan.
 - i. OIC, RSO and OC's will be on site at all times.
 - ii. At no time during training will the aircraft have moving propellers.
 - iii. All personnel will go thru a communication brief
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing:
 - (1) M16/M4/M249/ MK19/: None.
 - (2) M60/M240/M24/M2: Buddy Team LF, Trench line.
- j. Barriers:
 - (1) M16/M4/M249/ MK19/:
 - (a) Gates 11, 12, 17, 21, 21B, 22, 23, 60, 61.
 - (b) Cable Gates 121, 124, 125, 126, 128, 135, 136, 138, and 142.
 - (2) M60/M240/M24/M2:
 - (a) Gates 11, 12, 17, 21, 21B, 22, 23, 23A, 24, 58, 60, 61, 64, 67, and 68.
 - (b) Cable Gates 118, and 144.



R0400. Safety precautions

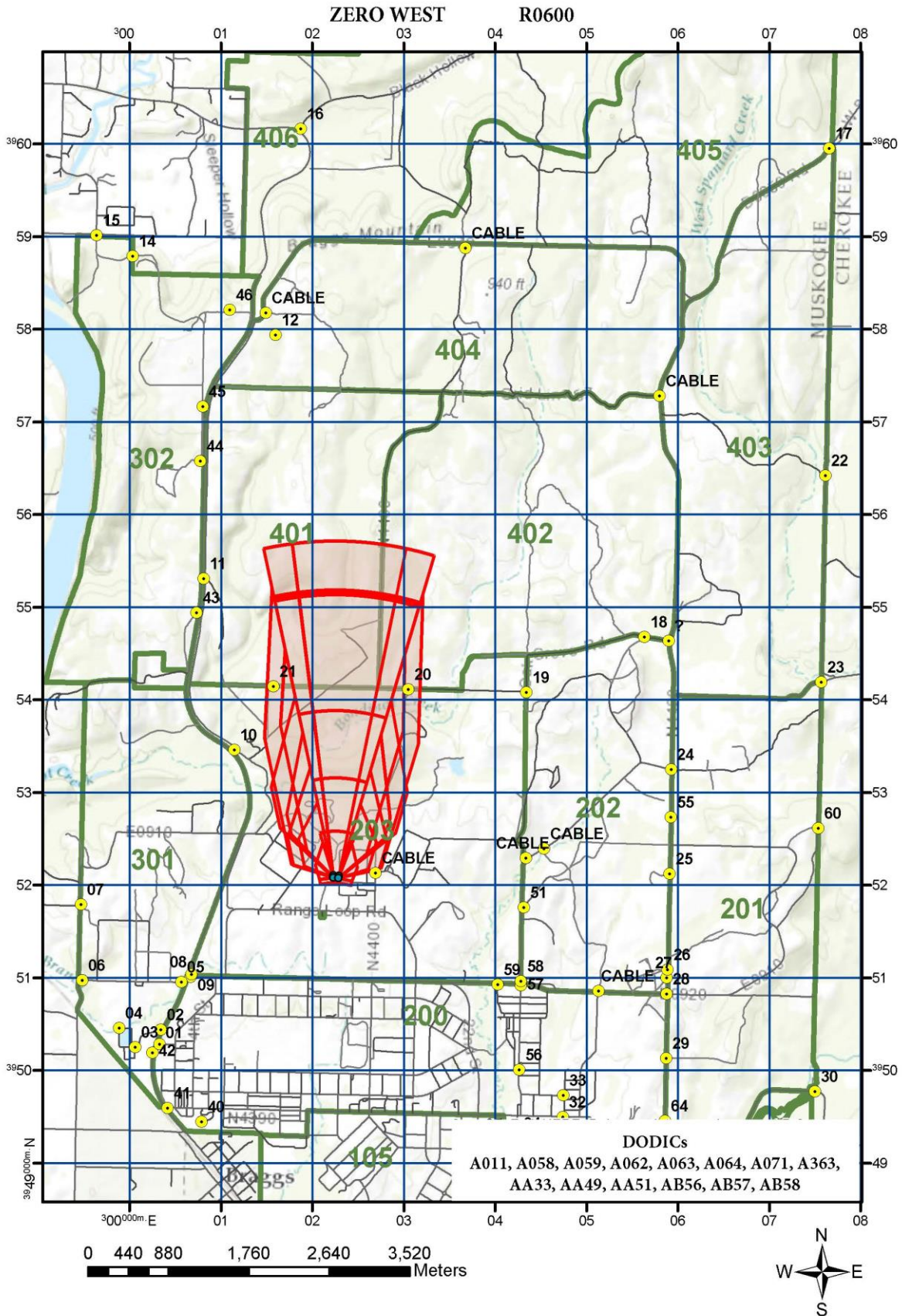
SNIPER RANGE

- a. References:
 - (1) FM 3-22.10.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV0659053464.
- c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to detect, identify, engage, and defeat stationary infantry targets and stationary armor targets in a tactical array. Weapons/ammunition authorized for use on this range are M24/7.62mm and M85, M107, M110/.50 cal. **M85/.50 Cal firing will be restricted to lane 4 and 5 only.** Range may also be used for Squad Designated Marksman (SDM) training with the M16/M4 series rifle (5.56mm). Targetry must be coordinated with Range Control for placement and operation prior to drawing the range. Authorized DODICs are A058, A059, A062, A136, A170, A171, A552, A553, A554, A555, A522, A531, AA11, AA33, AB43, AB57, AB58, A191.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags will be flown from the Sniper Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) **M85/.50 Cal firing will be restricted to lane 4 and 5 only.**
 - (3) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection.
 - (4) Units using this range to conduct tactical operations (not field fire) are responsible to certify that all Observer/Controllers (OCs) are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, grade, SSN last 4, and unit of assignment with the Range Safety Officer's signature block prior to issue of the range.
 - (5) Units using this range to conduct tactical operations (not field fire) will develop a detailed, written training plan to be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario which addresses the following areas:
 - (a) Maneuver and fire support plan.
 - (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
 - (c) Command, control, and communications plan.
 - (d) Training areas/facilities required.
 - (e) Targetry required.
 - (f) Safety plan.
 - (g) Observer/controller plan.
 - (6) Overhead firing techniques will not be conducted on this range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: Light Demo, TOW Live Fire, Breach and Buddy Team..
- j. Barriers:
 - (1) Gates 10, 11, 12, 17, 21, 22, 23, 23A, 24, 58, 60, 64, 67, and 68.
 - (2) Cable Gates 115, 116, 118, 129, 130, 131, 132, 133, 134, and 138.



R0600. Safety precautions**RNG WEST 5.56 ZERO (Zero West Range)**

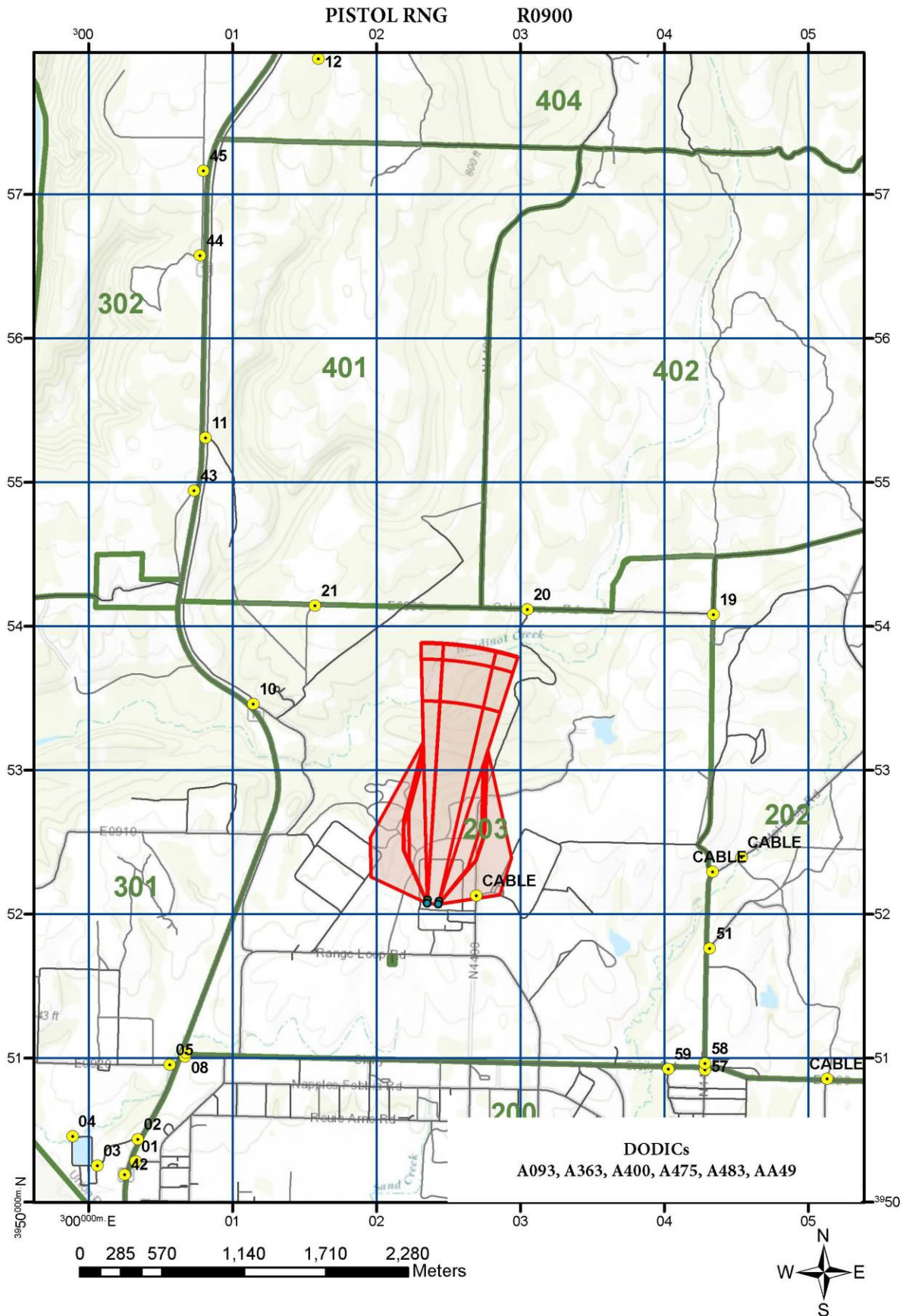
- a. References:
 - (1) FM 3-22.9
 - (2) FM 3-22.68.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon being utilized.
- b. Location: UV0225252083.
- c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifle as well as light crew served machine guns (5.56mm only). This range has 17 firing points. Targets are mounted on fixed frames. This range is used for rifle 25 meter zero, and Short Range Marksmanship (SRM). Range may also be used for 9mm alternate pistol qualification. Weapons/ammunition authorized for use on this range are M16 and M4 series/5.56mm, M249/5.56mm, M9/9mm, and M1200 12Ga. Shotgun. Allowable DODICs are A058, A059, A062, A064, A071, A362, A363, AA16, AA33, AA49, AB57, AB58 and A011, 12 Ga. Buckshot, additionally Less Than Lethal (LTL) Rounds are authorized as follows: 12 GA. Shotgun, AA51, AA52; 40mm Grenade Launcher, BA06, BA13.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Target frame height will not exceed 48 inches from the ground for each firing point being utilized.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero West Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: KD Range. M855A1 5.56mm closes
- j. Barriers:
 - (1) Gates 10, 11, 12, 17, 19, 21, 22, 23, 60, 61, and 64.
 - (2) Cable Gates 121, 124, 125, 126, 135, 136, 138, and 142.



R0900. Safety precautions

PISTOL RNG 9MM/45/38 (Combat Pistol Qualification Range)

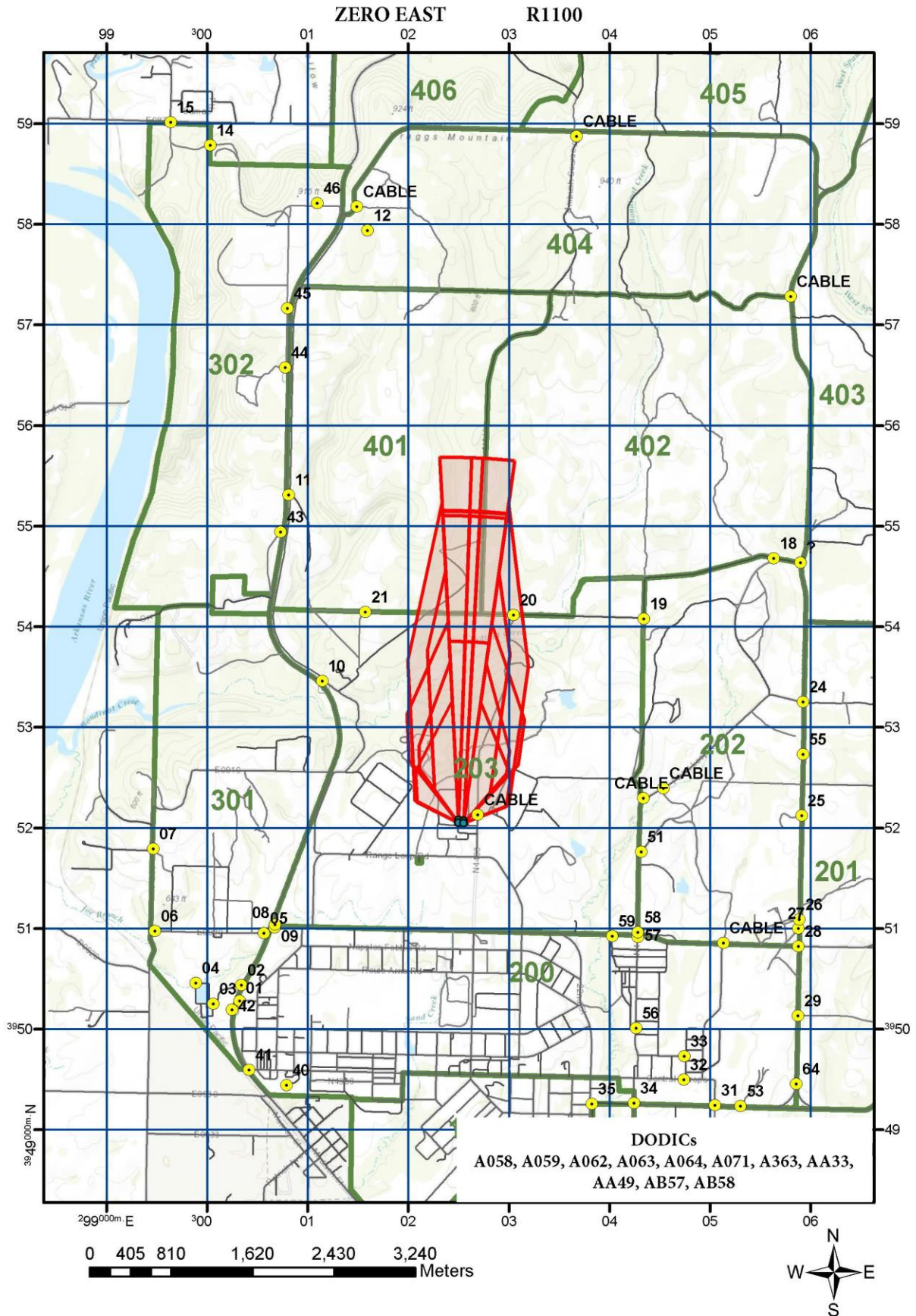
- a. References:
 - (1) FM 3-22.35.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV0238252065.
- c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to detect, identify, engage, and defeat stationary infantry targets in a tactical array. The complex satisfies the training and qualification requirements of the 9mm, .38 caliber, and .45 caliber pistols. This range has ten (10) lanes with pop-up silhouette targets located at 10, 13, 16, 17, 23, 27, and 31 meters in each lane. Targets are electrically activated from the range tower. Weapons/ammunition authorized for use on this range pistol/.22 cal (short & LR), 9mm, .38 cal, and .45 cal. Allowable DODICs are A084, A086, A093, A095, A363, A400, A401, A402, A475, A480, A481, A483, AA49.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range beyond the firing line during range operation. Range Control must approve any deviation of this policy.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Pistol Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: None.
- j. Barriers:
 - (1) Gates 11, 20 and 21.
 - (2) Cable Gate 142.



R1100. Safety precautions

RNG EAST 5.56 ZERO (Zero East Range)

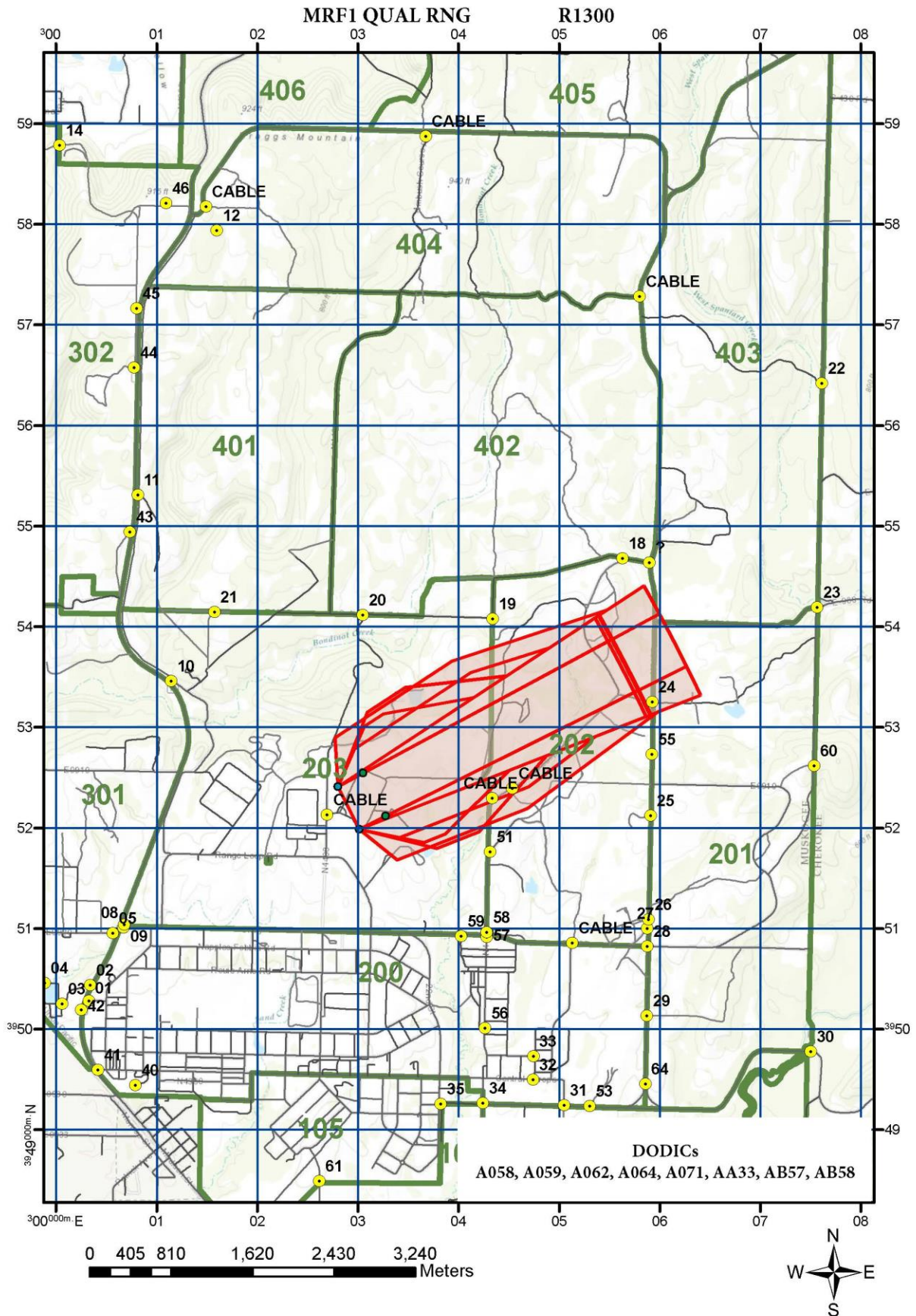
- a. References:
 - (1) FM 3-22.9.
 - (2) FM 3-22.68.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon being utilized.
- b. Location: UV0251352047.
- c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifle and the M249 SAW. This range has 17 firing. Targets are mounted on fixed frames. This range is used for rifle 25-meter, and Short Range Marksmanship (SRM). Range may also be used for alternate pistol qualification. Weapons/ammunition authorized for use on this range are M16 series and M4/5.56mm, M249/5.56mm, M9/9mm., and M1200 12Ga. Shotgun. Allowable DODICs are A058, A059, A062, A063, A064, A071, A075, A363, AA33, AA49, AB57, AB58 and A011, 12 Ga. Buckshot, additionally Less Than Lethal (LTL) Rounds are authorized as follows: 12 GA. Shotgun, AA51, AA52; 40mm Grenade Launcher, BA06, BA13.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Target frame height will not exceed 48 inches from the ground for each firing point being utilized.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero East Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection .
 - (3) Units using of this range for Close Quarters Combat training will submit an LOI and detail target layout to the Range Management Authority for review and approval 60 days prior to training event. Once the LOI and target layout is reviewed and SDZs are developed all additional requirements for the range will be included in an MOI for the range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: Use of M855A1 5.56mm (AB57 and AB58) ammunition closes MRF1 and will be closed at the main entrance to the range.
- j. Barriers:
 - (1) Gates 10, 11, 12, 17, 19, 21, 22, 23, 60, 61, and 64.
 - (2) Cable Gates 121, 124, 125, 126, 135, 136, 138, and 142.



R1300. Safety precautions

MRF1 QUAL RNG 5.56 (Modified Record Fire Range One)

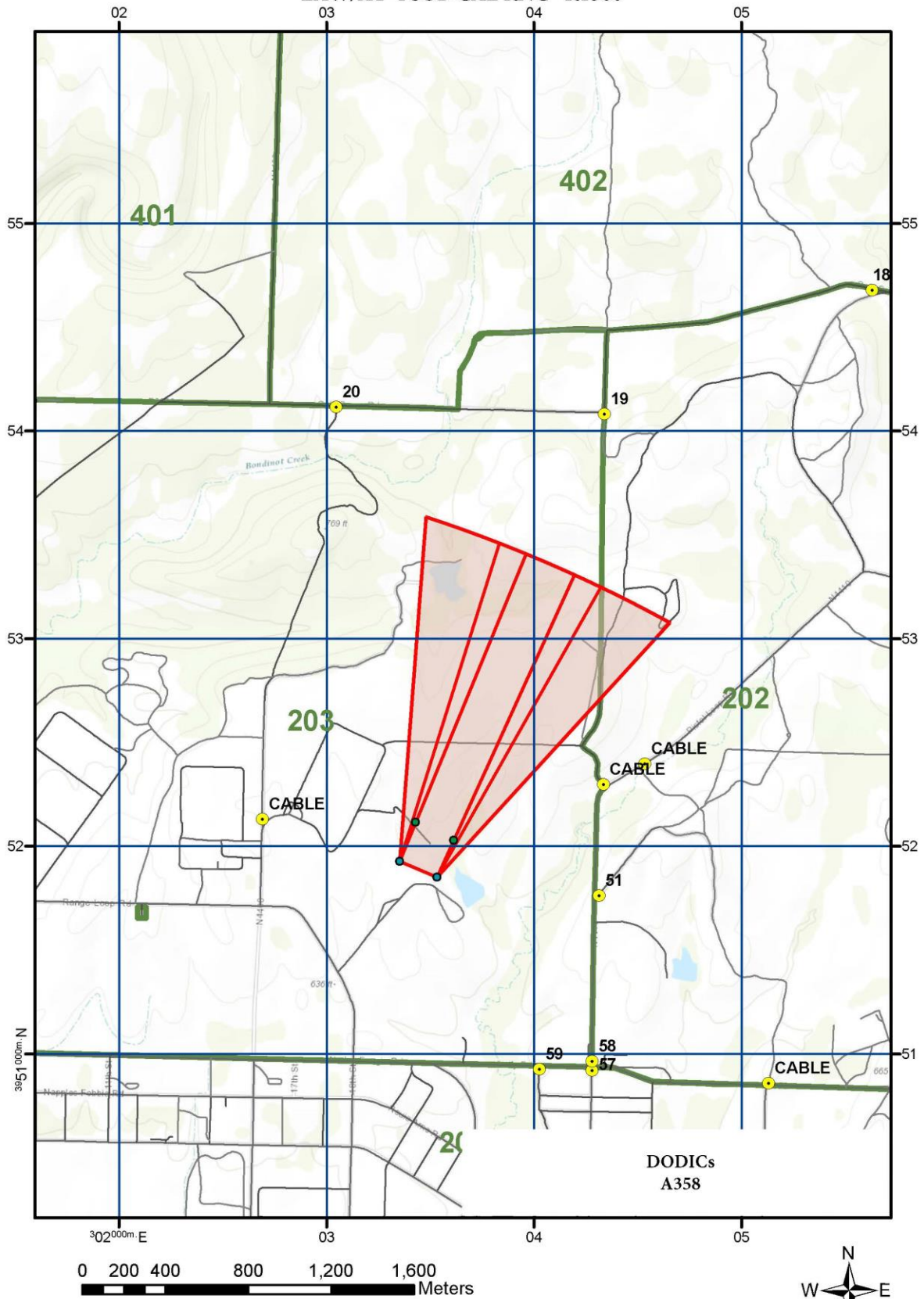
- a. References:
 - (1) FM 3-22.9.
 - (2) FM 3-22.68.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon being utilized.
- b. Location: UV0290552202.
- c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to identify, engage, and defeat stationary infantry targets for day/night qualification requirements with the M16 and M4 series rifle, or the M249 SAW. This range has 16 firing points. Weapons/ammunition authorized for use on this range are M16 and M4 series/5.56mm and M249/5.56mm. Allowable DODICs are A058, A059, A062, A064, A071, AA33, AB57, AB58.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the MRF1 Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection .
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: AT4 Range. Use of M855A1 (AB57 of AB58) closes M203, AT4 and Shotgun ranges.
- j. Barriers:
 - (1) Gates 10, 11, 12, 17, 19, 20, 22, 23, 24, 25, 26, 58, 60, and 61.
 - (2) Cable Gates 115, 116, 118, 119, 137, and 141.
 - (3) Barricades will be placed north of ammo shack on the road at the M203 range complex (reference SDZ for location) when MFR1 is firing M855A1 (AB57 and AB58)



R1500. Safety precautions**LAW/AT-4 SUB CAL RNG (AT4 Range)**

- a. References:
 - (1) FM 3-23.25.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for the weapon being utilized.
- b. Location: UV0344751891.
- c. Description and Capacity: This range is used to train soldiers on the skills necessary to defeat armored vehicles with light anti-armor weapons. Range consists of two (2) firing points. Weapon/ammunition authorized for use on this range is AT4/9mm sub caliber only. Authorized DODIC is A358.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the AT4 Range flagpole and from the flagpole on Range Loop Road.
 - (3) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection .
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: None.
- j. Barriers:
 - (1) Gates 11, 19 and 20.
 - (2) Cable Gates 121, 138, and 141.

LAW/AT-4 SUB CAL RNG R1500

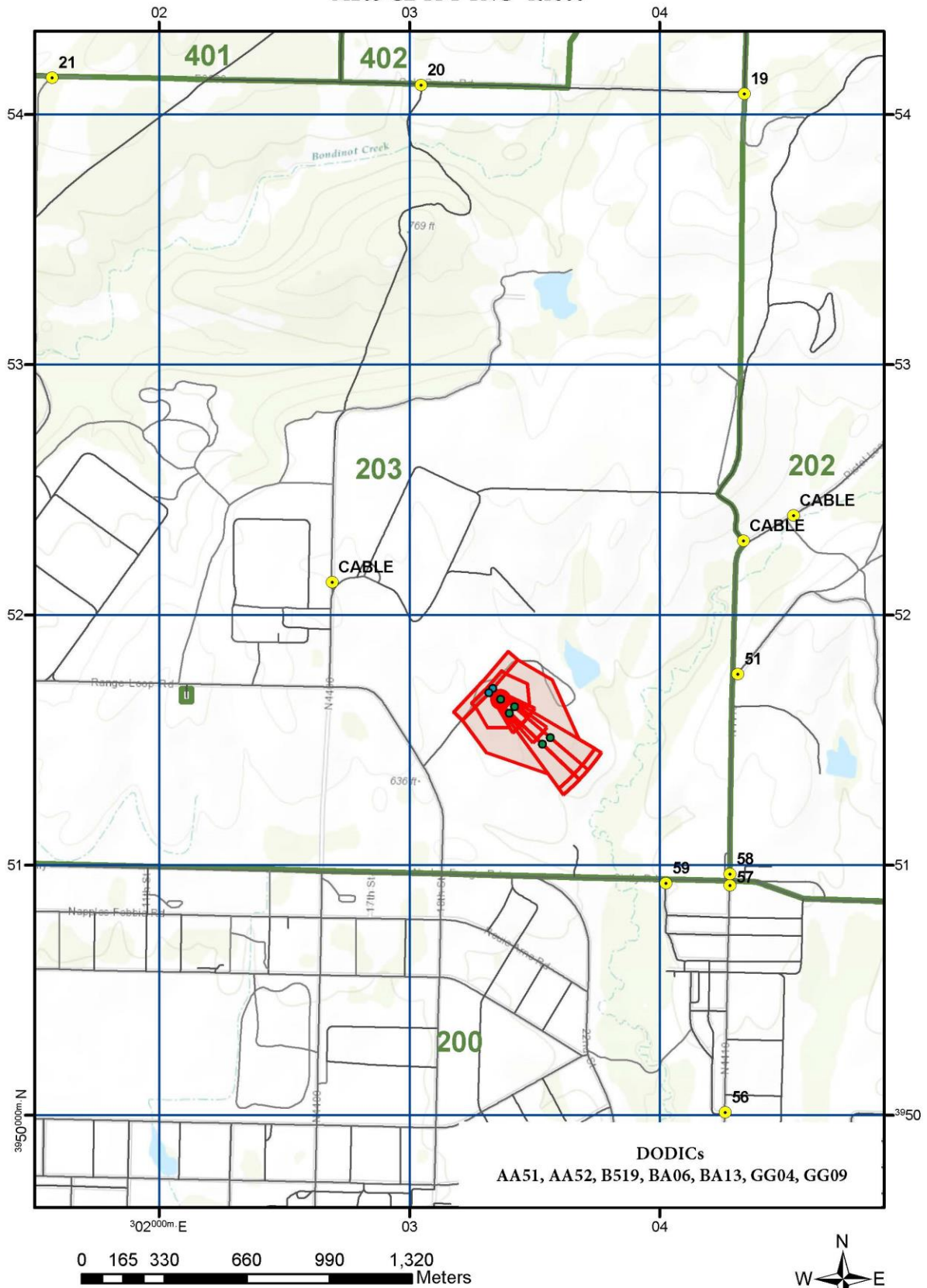


R1600. Safety precautions

M203 GL TPT RNG (Grenade Launcher Range)

- a. References:
 - (1) TM 3-22.31.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0332551698.
- c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to engage and defeat stationary target emplacements with the 40mm grenade launcher. Range consists of four (4) firing points. This range features two (2) zero targets marked with a white "Z" and located 200 meters from the firing line. Weapons/ammunition authorized for use on this range are M79 and M203/40mm TP only. **HIGH EXPLOSIVE AMMUNITION IS PROHIBITED ON THIS RANGE.** Authorized DODIC is B519.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Firers will not engage any target within 100 meters of the firing line.
 - (3) Range flags will be flown from the M203 Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 5 meters to each side, and within 5 meters to the rear of the firing line will wear approved single hearing protection.
 - (3) OIC/RSO will ensure only low-velocity TP cartridges are fired from the grenade launcher.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: None.
- j. Barriers: None.

M203 GL TPT TNG R1600



DODICs
AA51, AA52, B519, BA06, BA13, GG04, GG09

R2100. Special precautions
MORT SUBCAL-FRTR FP1 (Mortar FRTR Ranges 1 and 2)
MORT SUBCAL-FRTR FP2

- a. References:
 - (1) FM 3-22.90
 - (2) FM 3-22.91
 - (3) AR 385-63
 - (4) DA Pam 385-63
 - (5) DA Pam 385-64
- b. Location:
 - (1) FRTR 1: UV0365351086
 - (2) FRTR 2: UV0553750906
- c. Description and Capacity: This range is used to train mortar crews on the skills necessary to apply fire mission data, engage and hit stationary targets in a tactical array. Range consists of two FRTR Ranges with four (4) firing points each and various targets ranging out to 3300 meters. Weapons/ammunition authorized to fire: M224 (60mm)/M769 (FRTR), M252 (81mm)/M879 (FRTR), M120/M121 (120mm)/M931 (FRTR). Authorized DODICs are B647, BA04, BA15, C484, C625, C871, C875, CA07, CA09.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) NO HIGH EXPLOSIVE (HE) AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE-- ONLY FAR RANGE TRAINING PRACTICE (FRTP). ONLY CHARGE 1 WILL BE FIRED WITH THE 81mm FRTR ROUND and CHARGE 1 and 2 WITH THE 60mm FRTR ROUND, ONLY CHARGE 0 AND CHARGE 1 WILL BE FIRED WITH THE 120mm, M931 FRTR ROUND, MINIMUM DISTANCE FOR CHARGE 0 IS 300M, MAX IS 971M, MINIMUM DISTANCE FOR CHARGE 1 IS 800M, MAX IS 2150M. THE MINIMUM DISTANCE THAT WILL BE FIRED WITH THE 60mm FRTR ROUND WITH CHARGE 2 IS 1525 METERS IN ORDER NOT TO EXCEED THE AIRSPACE MAX ORD REQUIREMENT. THERE ARE 2 NO FIRE AREAS THAT ENCLOSE TOW MOVING TARGETS AND BUILDINGS. REFERENCE SDZ MAP FOR GRID LOCATIONS. THESE AREAS HAVE A STRICT 300 METER DIAMETER AND WILL BE LISTED ON THE RANGE CARD AND VERIFIED WITH RANGE CONTROL BEFORE FIRING.
 - (3) The four (4) established Forward Observer areas are as follows:
 - (a) OP 1 vic. UV0579250938 200m NO FIRE AREA
 - (b) OP 2 vic. UV0515050942 200m NO FIRE AREA
 - (c) OP 3 vic. UV0718051791 500m NO FIRE AREA
 - (d) OP 4 vic. UV0307653546 300m NO FIRE AREA
 - (4) Range flags will be flown from the Mortar FRTR Range flagpole and from the flagpole on Range Loop Road.
 - (5) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (6) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E6. Using unit may request a waiver to lower these requirements based on unit organizational structure.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel who take part in mortar firing will wear approved protective helmets and approved eye protection. USMC personnel will also wear protective vests.
 - (3) All personnel within the hearing hazard zone (as defined by mortar/cartridge FM) will wear approved hearing protection. If no zone can be determined, all personnel within 200 meters of firing will wear approved hearing protection.
 - (4) Firing through obstructions is prohibited.
 - (5) Using units will be required to recover fired/expended rounds. Recovery operations will not take place unless a "Cold Status" is in effect and other range SDZs impacting the area are in a "Cold Status."

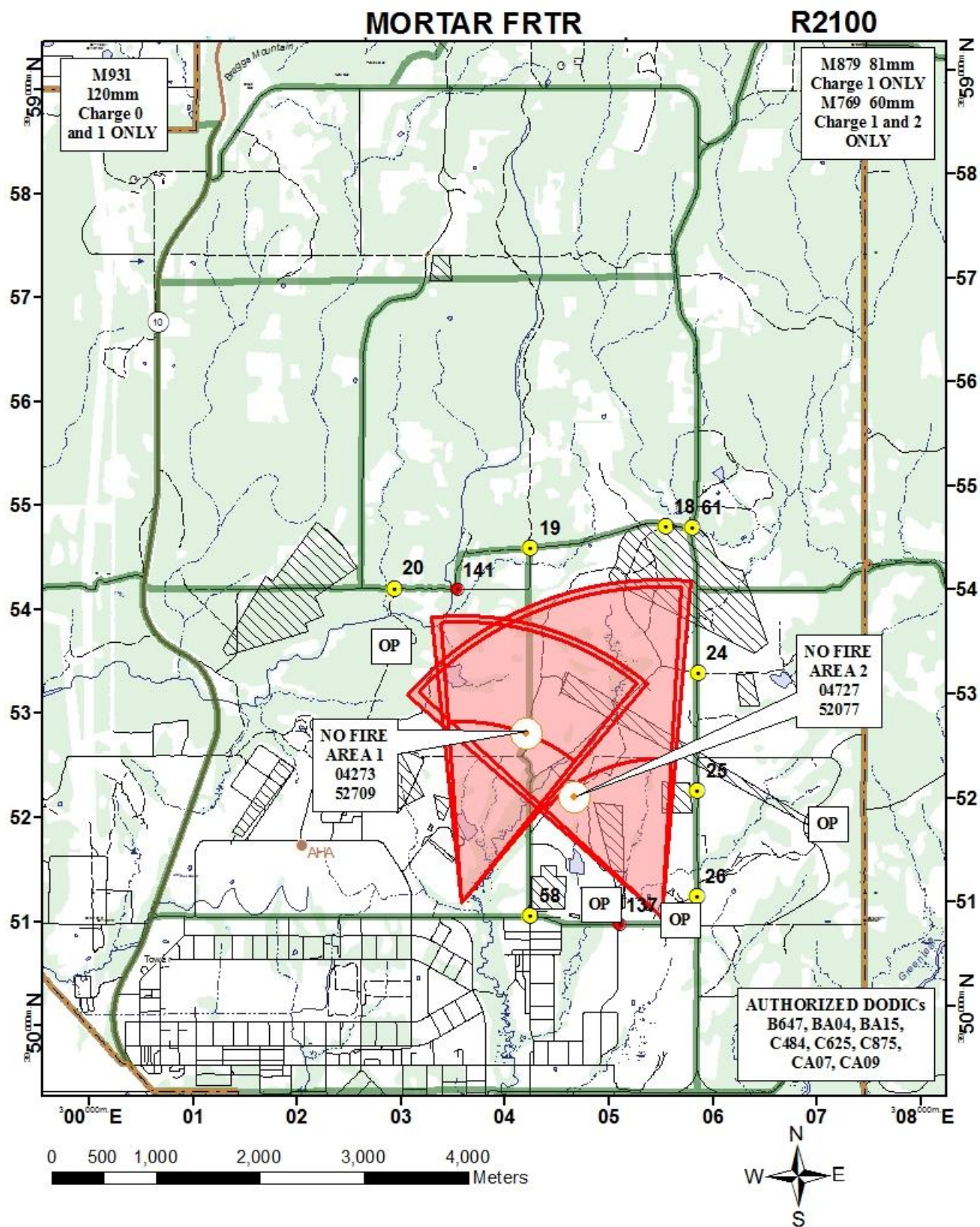
(6) All unit safety SOPs will be in effect while firing is conducted on this range.

g. Road guard requirement: One at UV0351851804 blocking entrance to the range. Road guards are required to maintain FM communication with the Range OIC. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.

h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).

i. Range(s) closed during firing: FRTR1 CLOSES AT4 AND IMPACTS A HUNTING AREA. FRTR1 WILL NOT BE USED DURING HUNTING SEASON. FRTR2 CLOSED THE BREACH RANGE ONLY, AND IS OK FOR USE DURING HUNTING SEASON.

j. Barriers: Gates 11, 18, 19, 20, 24, 25, 26, 58, 61, 137, 141.

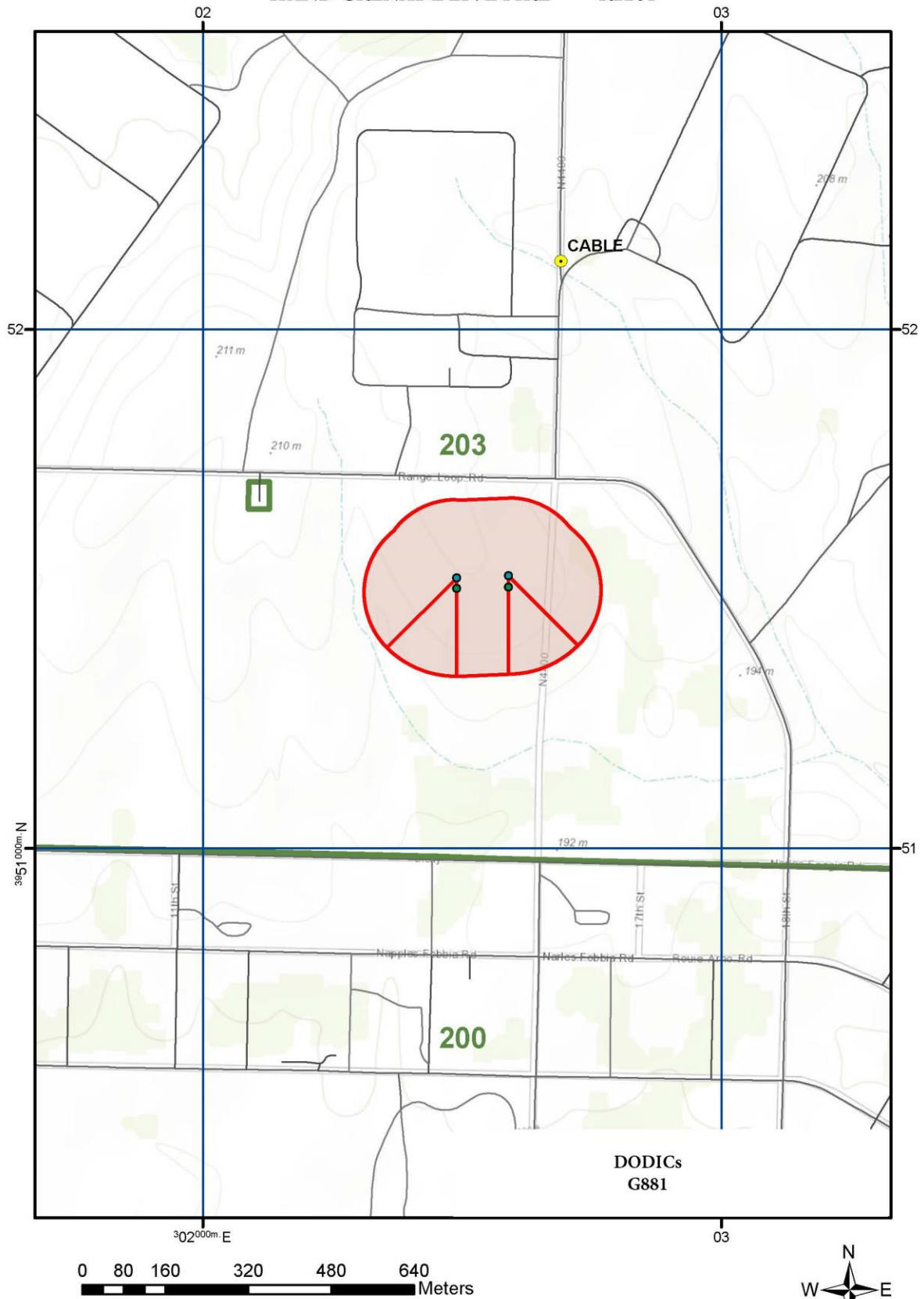


R2201. Safety precautions

HAND GREN LF RNG (Hand Grenade Live Fire)

- a. References:
 - (1) FM 3-23.30.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) Specific TM and FM for grenade being utilized.
- b. Location: UV0466052038.
- c. Description and Capacity: This range is used to train individual soldiers in the employment of live fragmentation hand grenades. Range consists of four (4) throwing bays, one (1) control bay, and one (1) ready bay. Throwing bay target areas are separated by earthen berms. Each throwing bay area contains one (1) target. Ammunition authorized for use on this range is the M67 fragmentation grenade. Authorized DODIC is G881.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) ONLY ONE (1) GRENADE MAY BE THROWN AT A TIME ON THIS RANGE. RANGE OIC WILL VERIFY DETONATION OF EACH GRENADE.
 - (3) NO DIRECT VIEWING IS AUTHORIZED ON THIS RANGE. MIRRORS ARE PROVIDED ON THE CONTROL BAY FOR SUPERVISION OF THE RANGE.
 - (4) RANGE OIC WILL ENSURE COMPLETE DETONATION OF EACH GRENADE. IN THE EVENT THAT A GRENADE FAILS TO DETONATE (DUD), RANGE OPERATIONS WILL IMMEDIATELY CEASE (NO FURTHER THROWING OF GRENADES IN THE AREA OF THE DUD) AND THE RANGE OIC WILL CONTACT RANGE CONTROL. NO PERSONNEL ARE AUTHORIZED TO GO DOWNRANGE, ONLY EOD PERSONNEL ARE AUTHORIZED DOWNRANGE (APPENDIX B, FM 3-23.30 CONTAINS DETAILED SAFETY PROCEDURES TO FOLLOW).
 - (5) Range flags will be flown from the Hand Grenade Live Fire flagpole and from the Range Loop Rd. flagpole.
 - (6) Grenades will not be thrown into standing water, deep snow or dense vegetation.
 - (7) Range OIC will ensure all personnel are proficient in the safety precautions used for handling and throwing grenades before live grenade training begins. Successful completion of practice grenade training (mock bay) is mandatory prior to live grenade training.
 - (8) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (9) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range. Appendix B, FM 3.23-30 provides an example risk assessment for a grenade range event.
 - (2) All personnel on the firing line and within the 150-meter danger area will wear approved protective helmets, protective body armor without plates (i.e., FLAK Jacket, IOTV, IBA, MTV, PASGT), single hearing protection and proper eye protection.
 - (3) Range OIC (E7 or above), Safety Officer (E6 or above), and Assistant Range Safety Officer (E6 or above) must be certified to perform live grenade training events. The following actions will be included in the certification of these individuals: actions in the event of a dropped grenade, short throw, grenade thrown other than downrange, surface danger zone, control of observers, misfire and dud procedures, arming and throwing techniques and pre-live bay training requirements.
 - (4) Personnel inside the Safety and Ready Bays must be at least 18" inside from the rear of each bunker.
- g. Road Guard Requirement: One road guard is required at the entry point of the range.
- h. Vehicles are required be parked in the parking area north of the range. The only vehicles allowed beyond the parking area are those in direct support of the range, i.e. ammo, RTO and medical.
- i. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- j. Ranges closed during firing: None.
- k. Barriers: None.

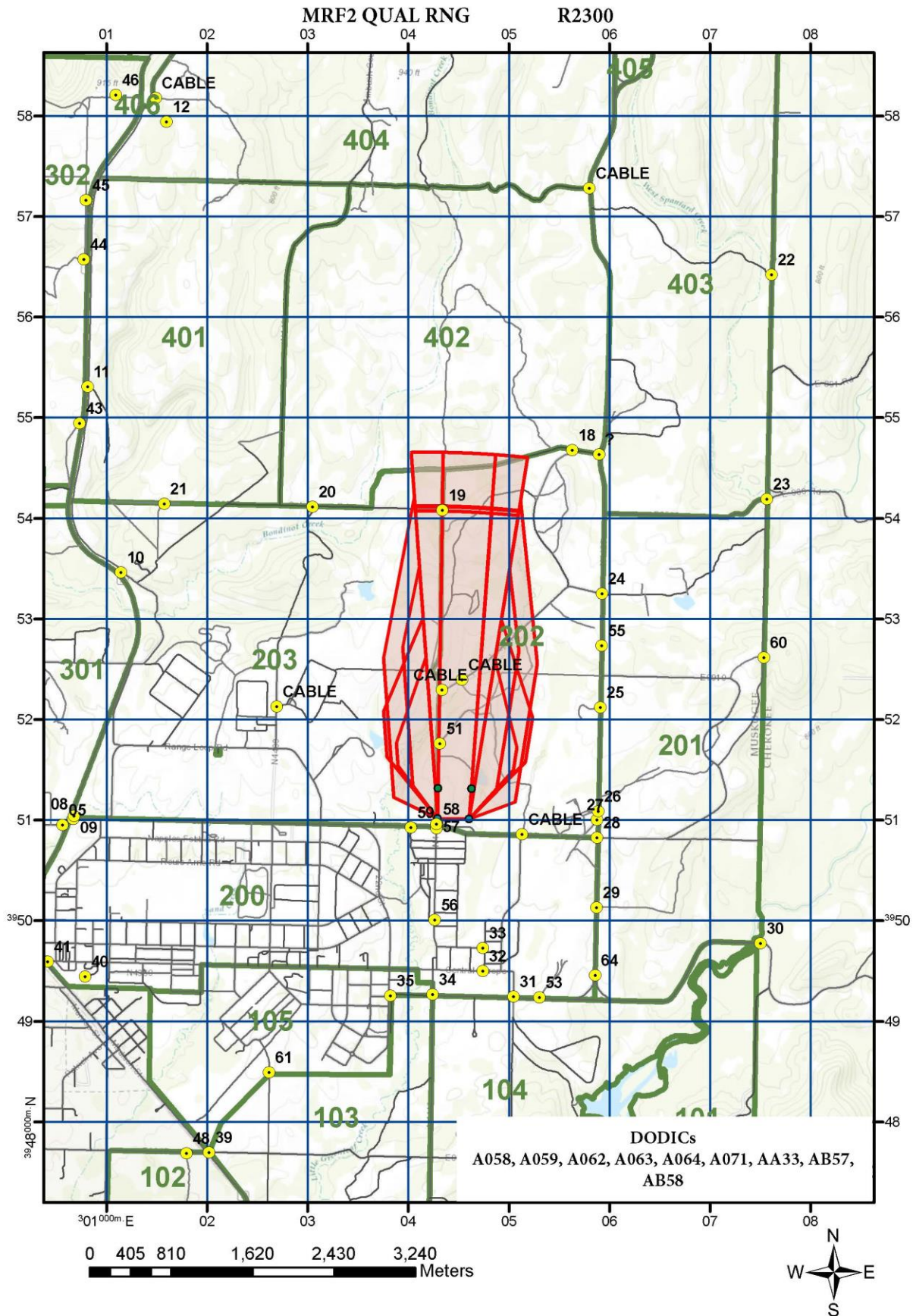
HAND GRENADE LIVE FIRE R2201



R2300. Safety precautions

MRF2 QUAL RNG 5.56 (Modified Record Fire Range Two)

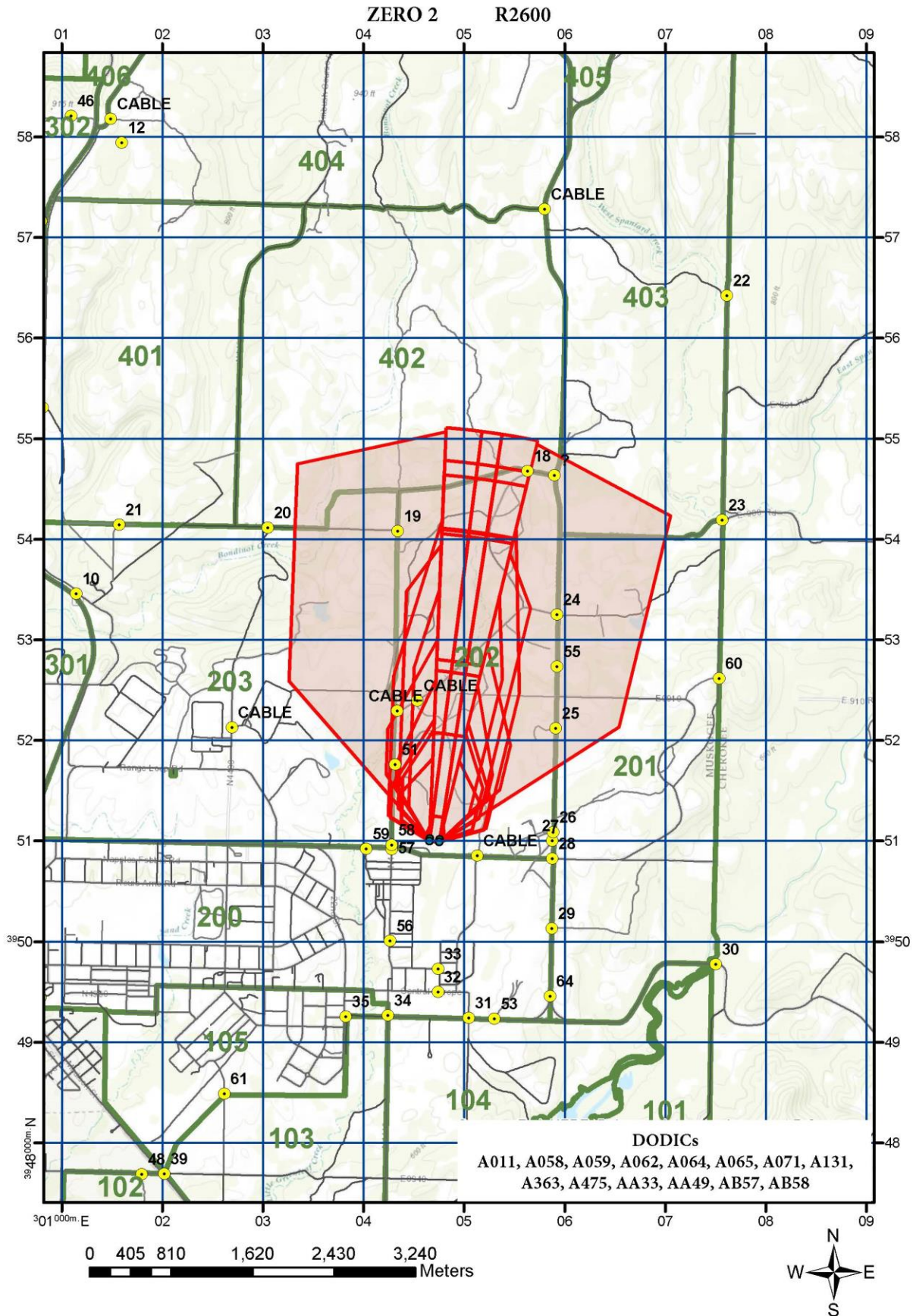
- a. References:
 - (1) FM 3-22.9.
 - (2) FM 3-22.68.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon being utilized.
- b. Location: UV0444851015.
- c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary to identify, engage, and defeat stationary infantry targets for day/night qualification requirements with the M16 and M4 rifles. This range has 16 firing points. Weapons/ammunition authorized for use on this range are the M16 and M4 series/5.56mm. The M249/5.56mm is authorized for use on the center eight (8) lanes. Authorized DODICs are A058, A059, A062, A064, A071, AA33, AB57, AB58.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel are authorized to proceed down range beyond the target frames.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the MRF2 Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection .
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing:
- j. Barriers:
 - (1) Gates 18, 19, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates 116, 137, and 141.



R2600. Safety precautions

RNG 260 5.56 ZERO (Zero 2 Range)

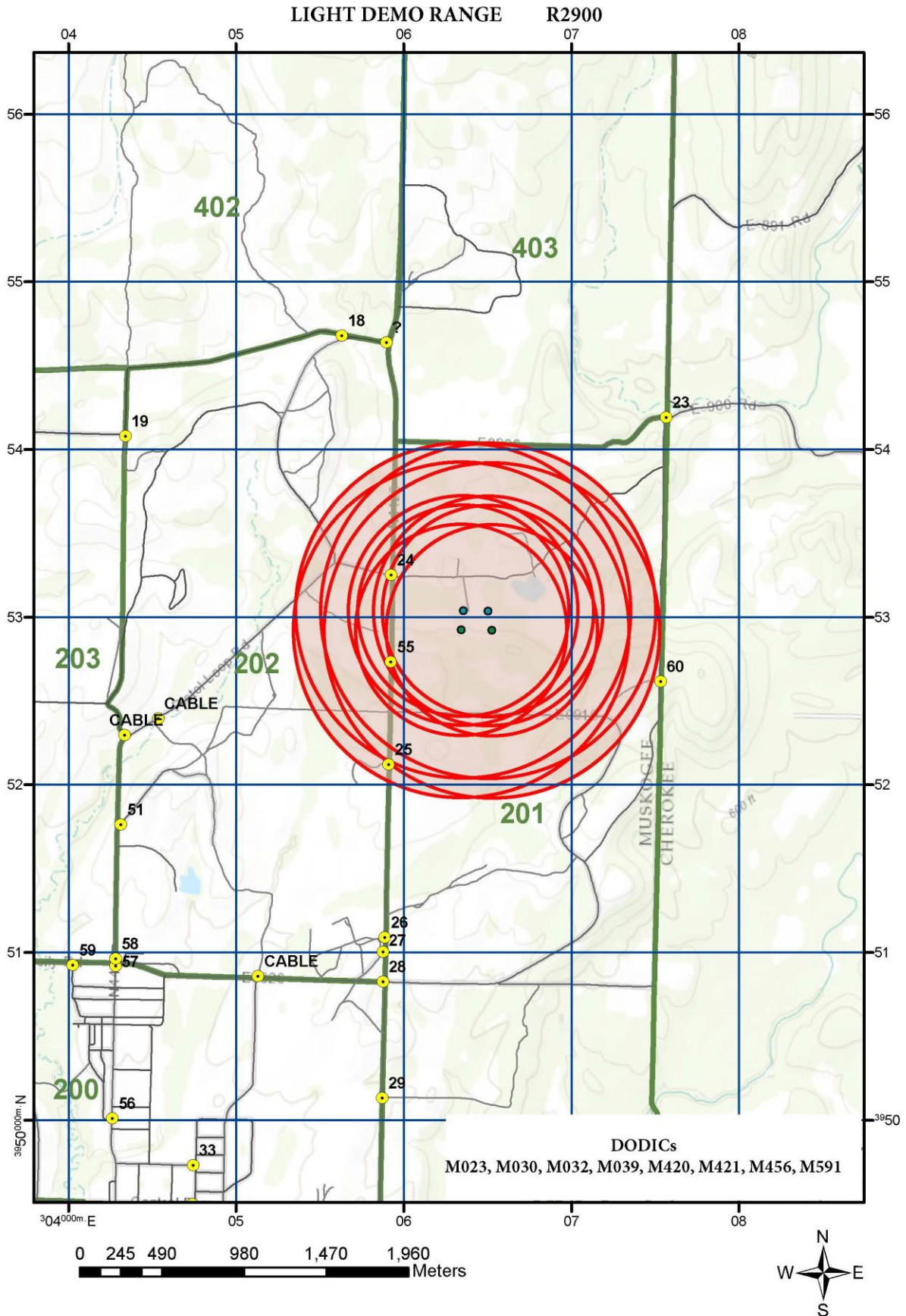
- a. References:
 - (1) FM 3-22.9.
 - (2) FM 3-22.68.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon being utilized.
- b. Location: UV0469050933.
- c. Description and Capacity: This range is used to train individual soldiers on the skills necessary to align the sights and practice basic marksmanship techniques against stationary targets. The range is designed for training shot grouping and zeroing exercises with the M16 and M4 series rifles and the M249 SAW. Range may also be used for alternate pistol qualification on the M9, Short Range Marksmanship (SRM) or qualification on the M1200 shotgun. This range has 32 firing points with foxholes. Targets are mounted on fixed frames. Weapons/ammunition authorized for use on this range are the M16 and M4 series/5.56mm. M249/5.56mm, M9/9mm, and the M1200/12gauge #00 buckshot. Allowable DODICs are A011, A058, A059, A062, A064, A071, A363, AA33, AA49, AB57, and AB58. Additionally Less Than Lethal (LTL) Rounds are authorized as follows: 12 GA. Shotgun, AA51, AA52; 40mm Grenade Launcher, BA06, BA13.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. A radio system is located in the control tower for one frequency. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed down range to repair targetry.
 - (3) Range flags (day) or red beacon lights (night/limited visibility) will be flown from the Zero 2 Range flagpole and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line, 55 meters to each side, and within 12 meters to the rear of the firing line will wear approved single hearing protection .
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing:
- j. Barriers:
 - (1) Gates 18, 19, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates 116, 137, and 141.



R2900. Safety precautions

LIGHT DEMO RNG (Light Demolition Range)

- a. References:
 - (1) FM 3-34.214. (2) AR 385-63.
 - (3) DA Pam 385-63. (4) DA Pam 385-64.
 - (5) Pertinent EOD publications.
- b. Location: UV0638853230.
- c. Description and Capacity: This range is used to train individual soldiers on the employment techniques of explosives and demolitions. Range consists of one (1) open blast area. Two shelters are located at 200 meters and 300 meters from the blast area. This range is restricted to a maximum charge of 250 lb. of non-fragmenting material per surface shot, and 320 lb. of non-fragmenting material per subsurface shot. Use of fragmenting material (Claymores/cutting charges) is prohibited on this range. Authorized DODICs are M023, M030, M032, M039, M420, M421, M456, M591, M635, ML45, MN02, MN06, MN07, MN08, MN41, MN68, MN69, MN79, MN86, MN88, MN90, MP03.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) A MAXIMUM OF 250 LBS. OF NON-FRAGMENTING MATERIAL MAY BE SURFACE DETONATED AT A TIME ON THIS RANGE.
 - (3) A MAXIMUM OF 320 LBS. OF NON-FRAGMENTING MATERIAL MAY BE SUB-SURFACE DETONATED AT A TIME ON THIS RANGE.
 - (4) Range flags will be flown from the Light Demo Range flagpole and from the flagpole on Range Loop Road.
 - (5) Only mission essential personnel will be allowed in the SDZ during firing.
 - (6) Mixing of live and inert demolitions for training is prohibited.
 - (7) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (8) OIC must have a minimum grade of E7. Safety Officers must have a minimum grade of E6.
- f. Special Instructions:
 - (1) All personnel on the range and within the surface danger zone (SDZ), based on the maximum planned blast as listed on the demolition plan, will wear approved protective helmets, protective body armor without plates (i.e., FLAK Jacket, IOTV, IBA, MTV, PASGT), single hearing protection, and proper eye protection. Helmets, ear, and eye protection will also be worn while in the confines of the bunkers. Body armor may be removed while inside the Ready Bunker, but will be worn while inside the OIC/Blasting Bunker.
 - (2) Range OIC (E7 or above), Safety Officer (E6 or above) and Assistant Range Safety Officer (E6 or above) must be demolition certified to perform their duties.
 - (3) Range OIC must submit a demolition plan (IAW FM 3-34.214) and a risk assessment worksheet (IAW DA PAM 385-30) addressing the range operation prior to conducting the event. Range Control will not permit the range to go "hot" without a copy of these documents on file at Range Control (Bldg. 740).
 - (4) Personnel inside the OIC/Blasting and Ready Bunkers must be at least 18" inside from the rear of each bunker before detonation can occur and remain there until the blast is complete.
- g. Road Guard Requirements: One (1) at UV06005320, east of Gate 24, blocking entry on the range. Road guard is required to maintain FM communication with the Range OIC. This will be coordinated during review of the demolition plan at Range Control. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: Sniper Field Fire.
- j. Range conflicts: Live fire events may not be conducted on the Breach range or Tow live fire range while this range is occupied.
- k. Barriers: Gates 11, 12, 17, 22, 23, 24, 58, 60, 63 and 68. Cable Gates 118,119, and 137.

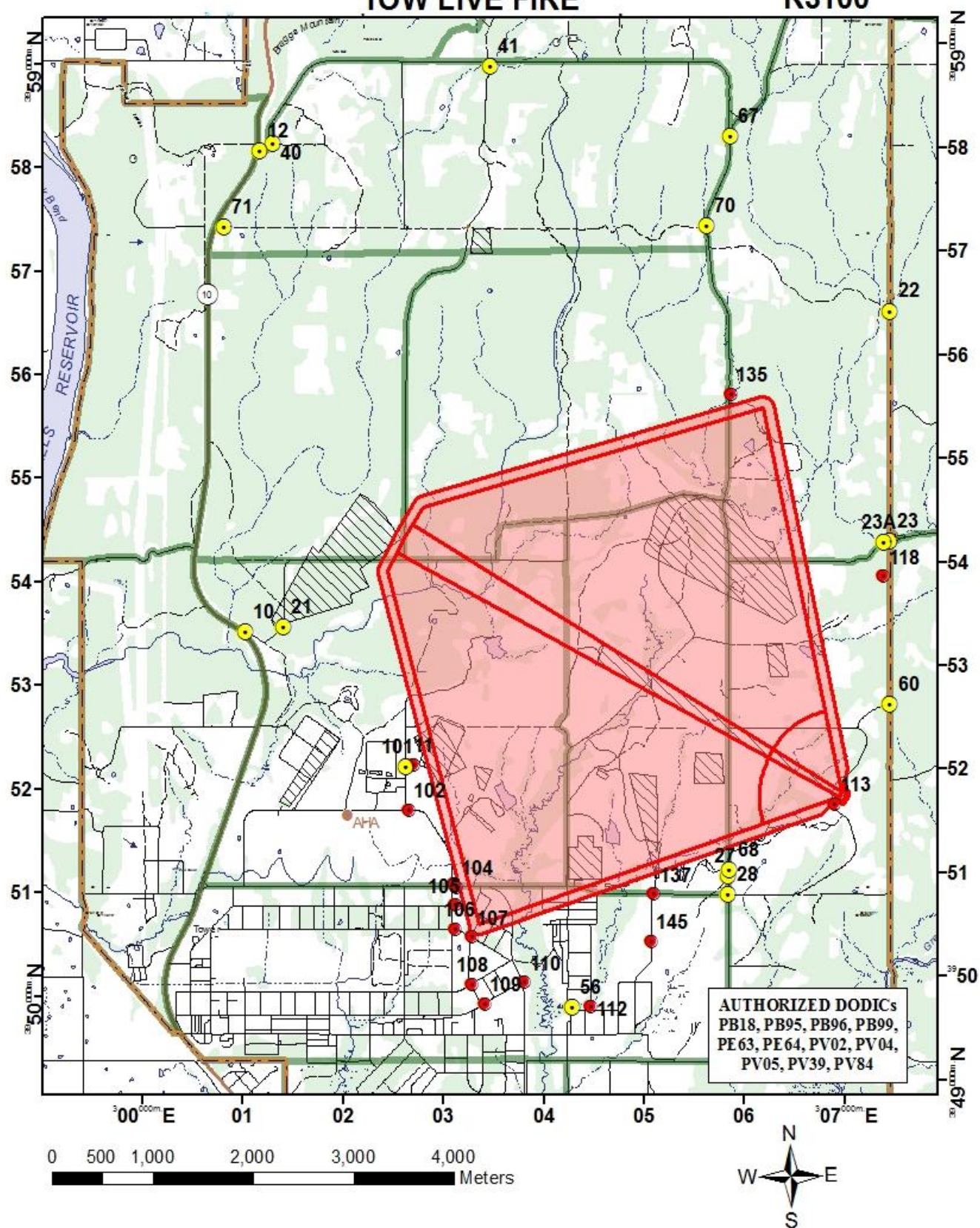


R3100. Safety precautions

TOW LF TPT RNG (TOW Live-Fire Range)

- a. References:
 - (1) FM 3-22.34.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) DA Pam 385-64.
- b. Location: UV0720151764.
- c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to employ weapons, identify, track, engage, and defeat stationary and moving armor targets presented individually or as part of a tactical array. Range consists of two (2) firing points and various targets arrayed at 2000 meters to 2750 meters. Weapon/ammunition authorized for use on this range is the TOW/Training Practice (TP) round. Authorized DODICs are PB18, PB95, PB96, PB99, PE63, PE64, PV02, PV04, PV05, PV39, PV84.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Personnel will not enter the range fan without contacting Range Control. Several live-fire ranges overlay this range fan. The range OIC must get approval from Range Control prior to moving downrange (i.e. for targetry set-up/repair/recovery).
 - (3) NO HIGH EXPLOSIVE (HE) AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE-- ONLY TRAINING PRACTICE (TP).
 - (4) Range flags will be flown from the TOW MILES flagpole and from the flagpole on Range Loop Road.
 - (5) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (6) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Before firing any missile, the SDZ will be cleared of all nonessential personnel.
 - (2) Personnel within 75 meters of a firing point will wear approved hearing protection and eye protection.
 - (3) Personnel located within 100 meters to each side and 200 meters to the rear of a firing point will wear approved hearing protection. USMC personnel (including gunners within this area will wear helmets and protective vests.
 - (4) Assistant Range Safety Officers (ARSOs) will be positioned at each weapon system to ensure the gunner has identified the range safety limit markers. During live fire exercises, the ARSO will verify that each gunner's line-of-sight to the target is within the range safety limit markers.
 - (5) During periods of limited visibility, portable limit beacons will be placed on the left and right limit markers. Range OIC will coordinate issue of these beacons from Range Control.
 - (6) During live-fire exercises, electrical power will be shut off to all overhead power lines that are within the range impact area. Range OIC will verify this with Range Control prior to conducting fire on the range.
 - (7) All missile guidance wire must be retrieved from the range impact area by using unit personnel prior to clearing the range. North/South Road and Pistol Loop Road will remain closed to traffic after firing until all wire has been retrieved. Range Control will reopen the roads to traffic when the range is cleared.
- g. Road Guard Requirement: One (1) and Cable Gate 104, one (1) at Cable Gate 113. Road guards are required to maintain FM communication with the range OIC. Road guards will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guards. Road guards will remain in place until Range Control has cleared the range.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: Sniper Field Fire, Light Demolition, Breach Range, TOW MILES, MK19, Zero 2, MRF2, MOUT CTF, M203, AT4, MRF1, Shotgun, Buddy team and Grenadier Wall.
- j. Barriers:
 - (1) Gates 10, 11, 12, 17, 21, 22, 23, 23A, 27, 28, 40, 41, 56, 60, 67, 68, 70, 71.
 - (2) Cable Gates 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 112, 113, 118, 135, 137, and 145.

R3100



R3200. Safety precautions

MK19 MG TPT RNG (MK19 Grenade Machine Gun Range)

- a. References:
 - (1) FM 3-22.27.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) DA Pam 385-64.
- b. Location: UV0517351004
- c. Description and Capacity: This range is used to train and test individual soldiers on the skills necessary for firing the MK19. The soldiers practice target observation, fire adjustment, machine gun traversing, searching, developing speed during operation, and obtaining an accurate burst. Range consists of two (2) lanes with point and area targets. Weapons and ammunition authorized are MK19/ Training Practice (TP) round only. Authorized DODICs are B584, BA12, BA30.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed downrange to repair targetry.
 - (3) NO HIGH EXPLOSIVE (HE) AMMUNITION IS AUTHORIZED FOR USE ON THIS RANGE-- ONLY TRAINING PRACTICE (TP) ROUNDS.
 - (4) Range flags will be flown from the MK19 Range flagpole (Gate 137 entrance) and from the flagpole on Range Loop Road.
 - (5) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (6) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel on the firing line and within the 20 meter radius of each weapon system will wear approved protective helmets, protective body armor without plates (i.e., FLAK Jacket, IOTV, IBA, MTV, PASGT), single hearing protection, and proper eye protection.
 - (3) Daily noise exposure limit within the contour hazard area (20 meter radius) is 1000 rounds per day.
 - (4) Targets will be engaged only at ranges greater than 75 meters.
 - (5) Firing through obstructions is prohibited.
 - (6) Using units will be required to recover fired/expended rounds, under the supervision of Range Control personnel, at the completion of the range event. All Army personnel recovering 40mm M918 TP projectiles will follow the procedures outlined in TB 9-1310-251-10. The use of protective goggles or face shield, gloves, and tongs while handling M918 TP rounds is mandatory.
- g. Road Guard Requirement: None.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: TOW MILES, TOW Live Fire, Breach Range, Grenadier Wall.
- j. Barriers:
 - (1) Gates 18, 19, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates 116, 138, and 141.

R3600. Safety precautions

BUDDY TM LIVE FIRE (Fire and Maneuver Range)

- a. References:
 - (1) FM 3-22.9.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0355757317
- c. Description and Capacity: This range is used to train individual soldiers and buddy teams on basic fire and movement techniques against stationary infantry targets. Weapons/ammunition authorized on this range are the M16 and M4 series/5.56mm. Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range. Authorized DODICs are A058, A059, A062, A066, A071, A080, AA33, AA40, AA45, AB57, AB58.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed downrange to repair targetry.
 - (3) Range flags will be flown from the flagpole located at the entrance to the range, and from the flagpole on Range Loop Road.
 - (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6. Company level exercises require an officer/warrant officer as OIC and Minimum of E7 as the Safety Officer.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) The Range Safety Officer is responsible for certifying that all Observer Controllers (OCs) are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, grade, SSN last 4, and unit of assignment with the Range Safety Officer's signature block prior to issuance of the range.
 - (3) Each using unit's command will develop a detailed written training plan, which will be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario which addresses the following:
 - (a) Maneuver and fire support plan.
 - (b) Weapons, ammunition, pyrotechnics/smoke and chemicals to be used.
 - (c) Command, control, and communications plan.
 - (d) Training areas/facilities required.
 - (e) Targetry required.
 - (f) Safety plan.
 - (g) Observer Controller plan
 - (4) Minimum uniform requirements for this range will include approved helmet, hearing protection, eye protection, and protective vests as a part of each individual's fighting load components.
 - (5) Overhead firing techniques will not be conducted on this range.
 - (6) Individual/weapon safety requirements:
 - (a) Each weapon will have a safety function check prior to issue of live ammunition on the range.
 - (b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months.
 - (c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.
 - (d) Each weapon system will be physically inspected (rodged) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

g. Road Guard Requirement: One at Cable Gate 132. Road guard is required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.

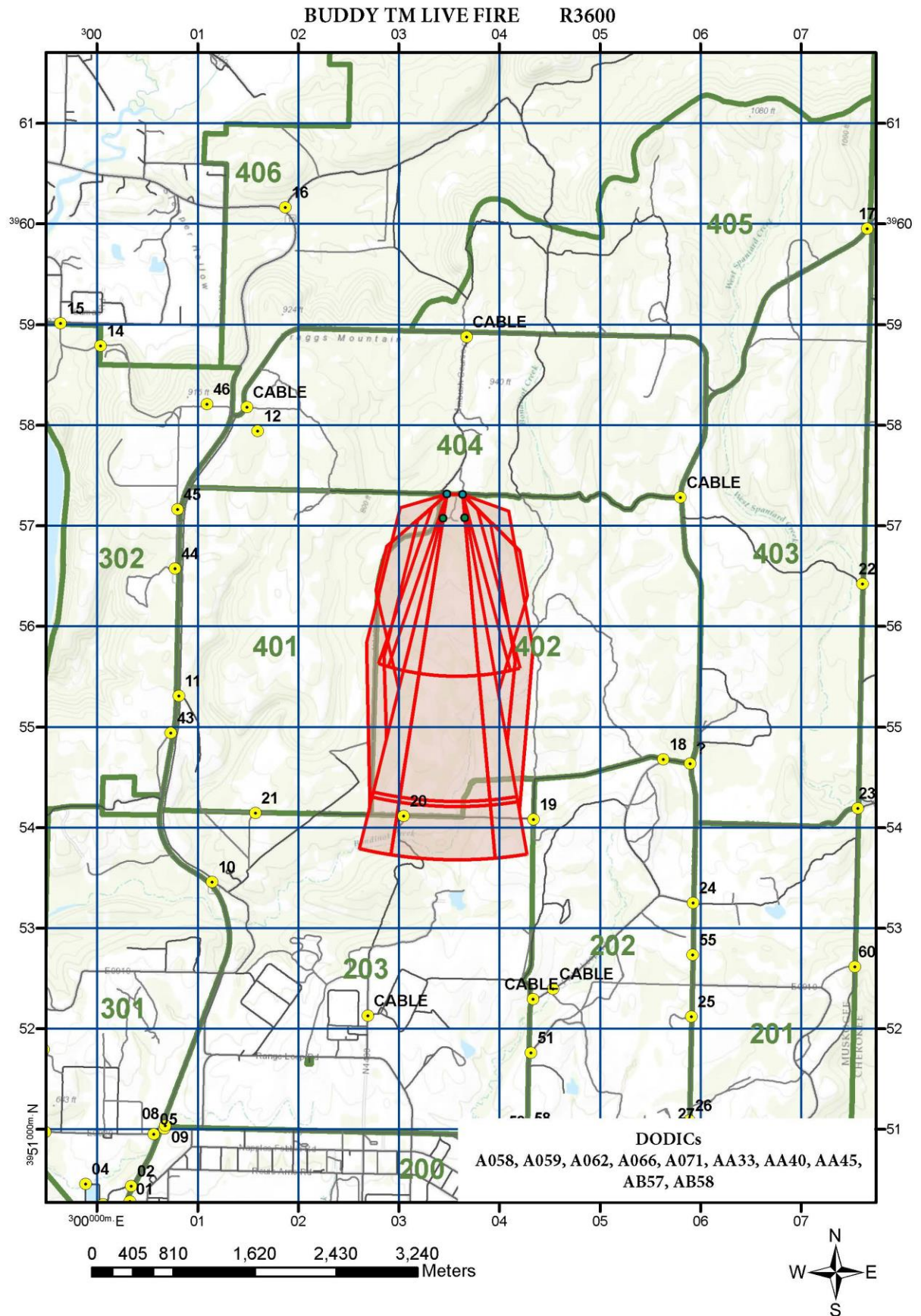
h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).

i. Range(s) closed during firing: Deliberate Attack (Trench Line), Sniper Field Fire, MPMG, and Convoy Ambush.

j. Barriers:

(1) Gates 10, 11, 12, 17, 18, 19, 21, 22, 23, 60, and 61.

(2) Cable Gates 121, 135, 138.



R4300. Safety precautions

GRENADIER WALL

a. References:

- (1) FM 3-22.9. (2) TM 3-22.31. (3) FM 3-23.35.
- (4) AR 385-63. (5) DA Pam 385-63. (6) NGR 385-63

b. Description and Capacity: This range is a sub-facility of MOUT MAC and is used to train M203 gunners on engagement of targets in an urban area. Range consists of an engagement area (30 meters by 150 meters) leading up to a 2-story building façade. Various targets (rifle and M203) are located in both the engagement area and the building façade (windows). Weapons/ammunition authorized for use on this range are M16 and M4 series/5.56mm, M9/9mm, and M203/40mm target practice (TP). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing the range. Authorized DODICs are A058, A059, A062, A066, A071, A080, A362, A363, AA33, AA40, AA45, AA49, AB57, AB58, B506, B508, B509, B519, B535.

d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.

e. Safety Precautions:

- (1) Camp Gruber Range Safety Briefing and Range Packet.
- (2) Only Range Control personnel qualified to maintain target mechanisms are authorized to proceed downrange to repair targetry.
- (3) Range flags will be flown from the TOW MILES Range flagpole and from the flagpole on Range Loop Road.
- (4) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.

- (5) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.

f. Special Instructions:

- (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
- (2) Live-fire Observer Controllers (OCs) are required to accompany each team during the entire mission scenario to assist in the enforcement of range safety. The using organization will provide a minimum of one (1) OC per team or iteration.
- (3) The Range Safety Officer is responsible for certifying that all Observer Controllers (OCs) are knowledgeable and understand the safety policies and procedures for this range. A memorandum will be submitted to Range Control with the OC's name, grade, SSN last 4, and unit of assignment with the Range Safety Officer's signature block prior to issuance of the range.
- (4) Minimum uniform requirements for this range will include approved helmet and hearing protection, and eye protection, as a component of each individual's fighting load.
- (5) Overhead firing techniques will not be conducted on this range.
- (6) Individual/weapon safety requirements:
 - (a) Each weapon will have a safety function check prior to issue of live ammunition on the range.
 - (b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months.
- (c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) Each weapon system will be physically inspected (rodged) off the firing line prior to movement away from the firing range (i.e. final firing positions at the conclusion of the event).

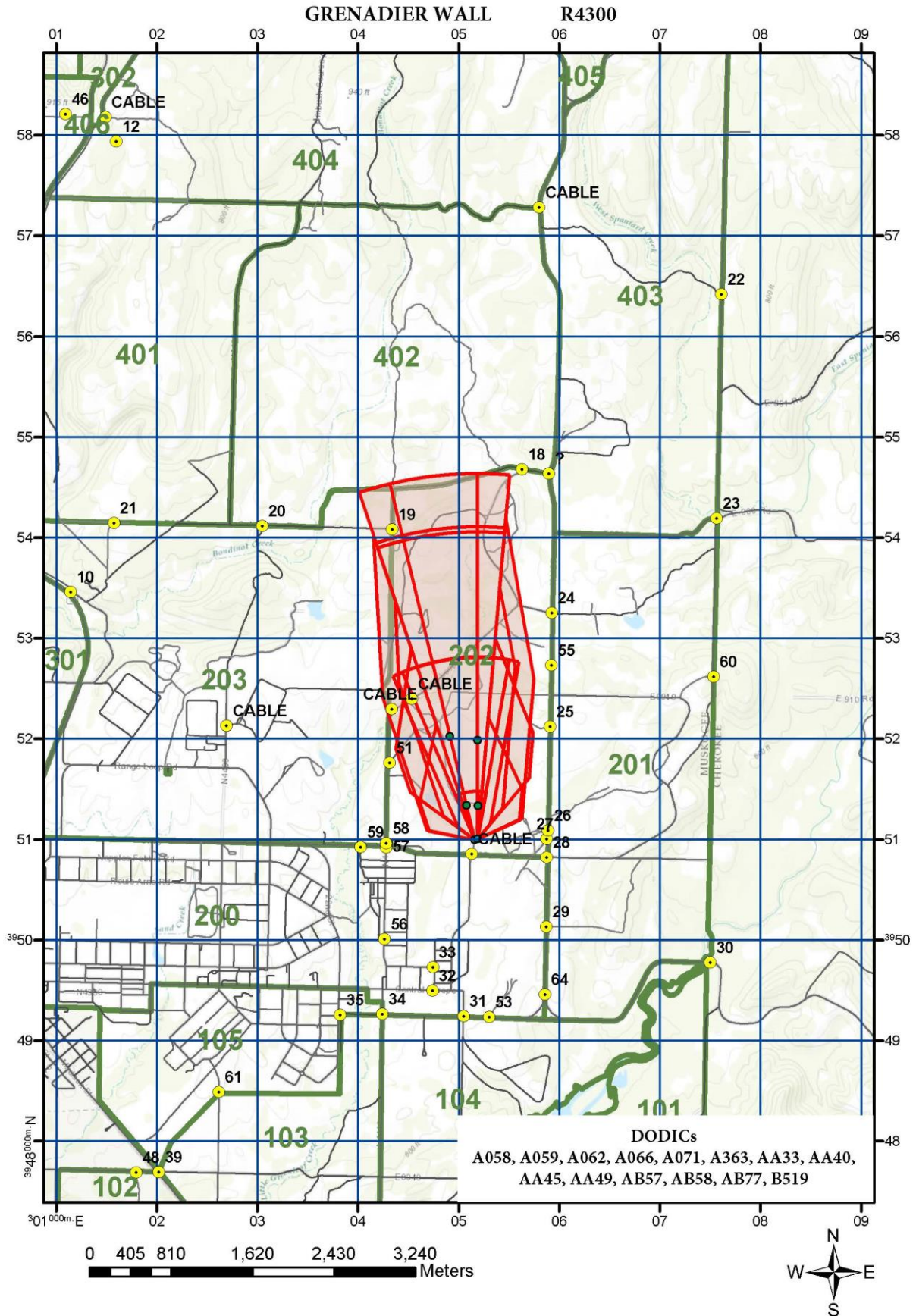
g. Road Guard Requirement: None.

h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).

i. Range(s) closed during firing: TOW MILES, MK19, Breach Range, TOW Live-Fire, and Light Demolition ranges.

j. Barriers:

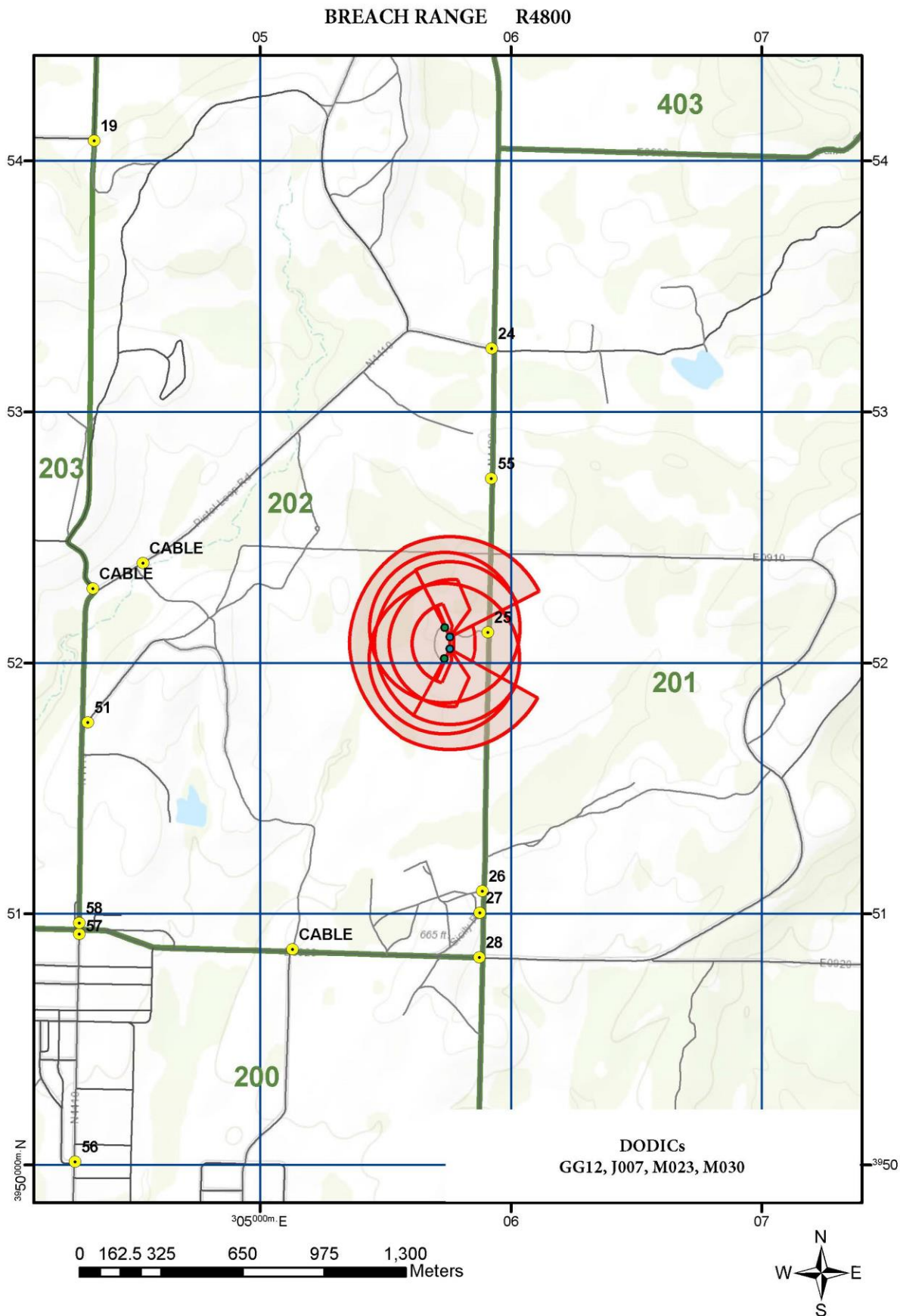
- (1) Gates 10, 11, 12, 17, 18, 19, 22, 23, 23A, 24, 25, 26, 55, 58, 60, 61, 63, 67, and 68.
- (2) Cable Gates 118, 137, and 141.



R4800. Safety precautions

BREACH RNG

- a. References:
 - (1) FM 3-34.214.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) DA Pam 385-64.
 - (5) TC 90-1.
 - (6) Pertinent EOD publications.
- b. Location: UV0583952022.
- c. Description and Capacity: This range is used to train individual soldiers on the technical aspects of breaching techniques. It is also used to train tactics, procedures, and explosive techniques not trained on any other type of facility. Blasts are restricted to a maximum charge of 1 lb. of material per shot. Total weight of explosives maintained on the range may not exceed 25 lbs. Net Explosive Weight (NEW). Authorized DODICs are GG12, J007, M023, M030, M456, M635, ML45, MN02, MN06, MN07, MN08, MN41, MN68, MN69, MN86, MN88, MN90.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) A MAXIMUM OF ONE (1) POUND MATERIAL MAY BE DETONATED AT A TIME ON THIS RANGE.
 - (3) A MAXIMUM OF TWENTY-FIVE (25) POUNDS OF TOTAL EXPLOSIVES MAY BE LOCATED ON THIS RANGE.
 - (4) Range flags will be flown from the Breach Range flagpole (gate entrance) and from the flagpole on Range Loop Road.
 - (5) Only mission essential personnel will be allowed in the SDZ during firing.
 - (6) Mixing of live and inert demolitions for training is prohibited.
 - (7) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (8) OIC must have a minimum grade of E7. Safety Officers must have a minimum grade of E6. Both OIC and RSO must have a commander's certification concerning demolition proficiency.
- f. Special Instructions:
 - (1) All personnel on the range and within the surface danger zone (SDZ), based on the maximum planned blast as listed on the demolition plan, will wear approved protective helmets, protective body armor without plates (i.e., FLAK Jacket, IOTV, IBA, MTV, PASGT), single hearing protection, and proper eye protection. Helmets, ear, and eye protection will also be worn while in the confines of the bunkers. Body armor may be removed while inside the Ready Bunker, but will be worn while inside the OIC/Blasting Bunker.
 - (2) Range OIC (E7 or above), Safety Officer (E6 or above) and Assistant Range Safety Officer (E6 or above) must be demolition certified to perform their duties.
 - (3) Range OIC must submit a demolition plan (IAW FM 3-34.214) and a risk assessment worksheet (IAW DA PAM 385-30) addressing the range operation prior to conducting the event. Range Control will not permit the range to go "hot" without a copy of these documents on file at Range Control (Bldg. 740).
- g. Road Guard Requirement: One at UV0720152423. Road guard is required to maintain FM communication with the Range OIC. Road guard will be required to assist Range Control personnel in the placement/recovery of range firing warning signs and barricades. Using unit will provide driver and vehicle for placement/recovery of road guard. Road guard will remain in place until Range Control has cleared the range.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during firing: Light Demolition Range, MK19, Grenadier Wall.
- j. Barriers: Gates 25,55, 68 and Cable Gate 116
- k. Range conflicts: Live fire events may not be conducted on the Light Demolition Range or Tow live fire range while this range is occupied.



LFSH0. Safety precautions

LIVE FIRE SHOOTHOUSE

- a. References:
 - (1) FM 3-22.9.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) DA Pam 385-64.
 - (5) NGR 385-63
 - (6) CGLFSHSOP
- b. Location: UV0343550273
- c. Description and Capacity: The primary purpose of the Live Fire Shoot House (LFSH) is to train units during live fire exercise to move tactically, engage targets, conduct breaches, and practice target discrimination in an urban environment. The LFSH is equipped with digital video cameras in order to monitor progression through the Shoot House. The targetry utilized in the Shoot House can register hits with LIVE rounds or Simunitions.
- d. **ONLY the following weapons/ammunition is authorized on this range:** M16 and M4 series/5.56mm rifle, and Pistols, Authorized DODICs are AA33, AA48, A058, A059, A065, A080, AB09, AB10, AB11, AB12, AB13, AB14, AB15, AB16, AB17, AB56, AB57, AB58, AB66, AB67, AB77, AB78, AA12, AA21, AA49, A360, A362, A349, A350, A400, A401, A402, A409, A415, A475, A481, DWGW, and DWGX. **All other ammunitions not listed are strictly prohibited.**
- e. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- f. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet
 - (2) OIC must have a minimum grade of E7. RSO must have a minimum grade of E6.
 - (3) Only Range Control personnel qualified to maintain target mechanisms, are authorized to adjust or repair targetry.
 - (4) Range Staff will inspect serviceability of LFSH prior to being issued. This inspection will include but not limited to the following items:
 - (a) Structural integrity of Shoot House walls and condition of bullet resistant materials
 - (b) Examination of the interior walls for projectiles to prevent ricochets.
 - (c) Verify target placement in designated areas and confirm targets are operational.
 - (d) Ensure all rooms are clear of personnel, brass, wildlife, or any other possible hazards.
 - (5) Range flags will be flown at the range entrance and the main flagpole on Range Loop Road.
 - (6) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (7) OIC and RSO will ensure in the separation of live ammunition from blank ammunition.
 - (8) Personnel will not fire above the "NO FIRE" line that is marked around the top of the walls in the LFSH.
 - (9) Observer Controllers (OC's) will maintain positive control on the element that is moving through the LFSH.
 - (10) Weapons will be cleared at provided clearing barrels and verified by OC.
 - (11) Personnel will maintain muzzle awareness at all times and weapons will be carried at the "low-ready" in and around the LFSH.
 - (12) Weapons are to remain clear, on safe, with no magazine in the lower receiver, unless otherwise told to "lock and load" by OIC/ RSO or OC.
 - (13) Personnel will only fire at designated targets that have bullet traps to prevent ricochet. Units will understand and know the floor plan of the LFSH.
 - (14) Overhead firing techniques will not be conducted on this range. **NO personnel will fire above the "NO-FIRE" line which is painted at the top of the walls in the LFSH.**
 - (15) Minimum uniform requirements for BLANK FIRE and LIVE FIRE on this range include the following PPE: ACH or Kevlar helmet, hearing protection, eye protection (glasses/goggles), gloves and body armor without plates (IBAS/IOTV).
 - (16) No targets will be placed closer than two feet from doorway entrance.

(17) Targets in the down position will not be engaged.

(18) **The catwalk will only be used during dry and blank firing. It is not authorized for use during live fire. No weapons of any kind are allowed on the catwalk.**

g. Restrictions:

- (a) No indiscriminate or automatic fire (Burst Firing)
- (b) No Tracer ammunition
- (c) No Frangible bullets
- (d) No Paint Ball ammo
- (e) No chemical agents (including smoke)
- (f) No firing at a target without a bullet trap.

h. Special Instructions:

(1) OIC and RSO will report to Range Control to turn in a risk assessment (DD Form 2977) per DA PAM 385-30 and get issued the range.

(2) The Range Safety Officer is responsible for certifying that all Observer Controllers (OCs) are knowledgeable and understand the safety policies and procedures for this range.

(3) Each using unit's command will develop a detailed written training plan, which will be submitted to Range Control for coordination/approval prior to arrival of the using element. This plan will have a mission scenario which addresses the following:

(a) Maneuver plan.

(1) All personnel will practice their techniques utilizing the "Mock-Up". Using element will conduct a walk through and a blank-fire iteration, prior to conducting any live fire portion of training.

(a) Weapons and ammunition to be used.

(1) Ensure the separation of blank ammunition and live ammunition.

(a) Command, control, and communications plan.

(b) Training areas/facilities required.

(c) Targetry required.

(d) Safety plan. **Commanders will sign a Risk Assessment and provide a copy of the RA to**

Range Control prior to going into a "hot" status.

(e) Observer Controller plan

(4) OC's will move with the element as it maneuvers through the layout of the LFSH.

(5) Individual/weapon safety requirements:

(a) Each weapon will have a safety function check prior to issue of live ammunition on the range.

(b) Each soldier (firing a weapon) will have qualified on his weapon system within the previous 12 months.

(c) All personnel on the range will be trained and demonstrate a thorough knowledge of required safety procedures pertaining to their weapon system, ammunition, and emergency range procedures prior to conducting exercises on the range.

(d) All personnel will have completed training and be qualified IAW FM 3-22.9 chapter 7, using tables 7-18, 19, and 20 Record and Practice fire standards for short range marksmanship qualifications.

(e) Recommend all personnel complete station 1 (individual and team task/technique trainer) or the Urban Assault Course, IAW TC 90-1, chapter 2, paragraph 2-22.

(f) DRY FIRE and BLANK FIRE iteration will be conducted before **ALL** live fire training for both day and night iterations. Personnel will not advance to live fire training if the OIC or Commander's assessment of an individual's or unit's training is not up to standard.

(g) Day live fire will be conducted before night fire is allowed; Soldiers who do not complete day fire will not be allowed to fire at night. Use of Night Observation Devices (NODs) is required for night time training. These include illumination intensification, infrared (IR), and passive infrared (PIR) devices. The most common of these devices are Night Vision Goggles (NVG) or Night Vision Devices (NVD) that use illumination intensification to enhance the soldier's view. Any night time training must be requested in the training packet and annotated in a separate DD Form 2977, Deliberate Risk Assessment Worksheet. Commanders will certify night vision equipment training completion by all users.

(h) An on-site training scenario brief is required prior to any Live or Non-Live Fire exercise. This brief must be given by either the OIC or RSO.

(i) Pickup all brass and debris after each iteration (before the next team goes through)

i. Road Guard Requirements: None.

j. Impact Area closed during training: None.

k. Range(s) closed during training: None.

l. Barriers. None

Non-Live Fire Ranges

CTM01. Safety precautions

TAC MVT CRS (Tactical Movement Course)

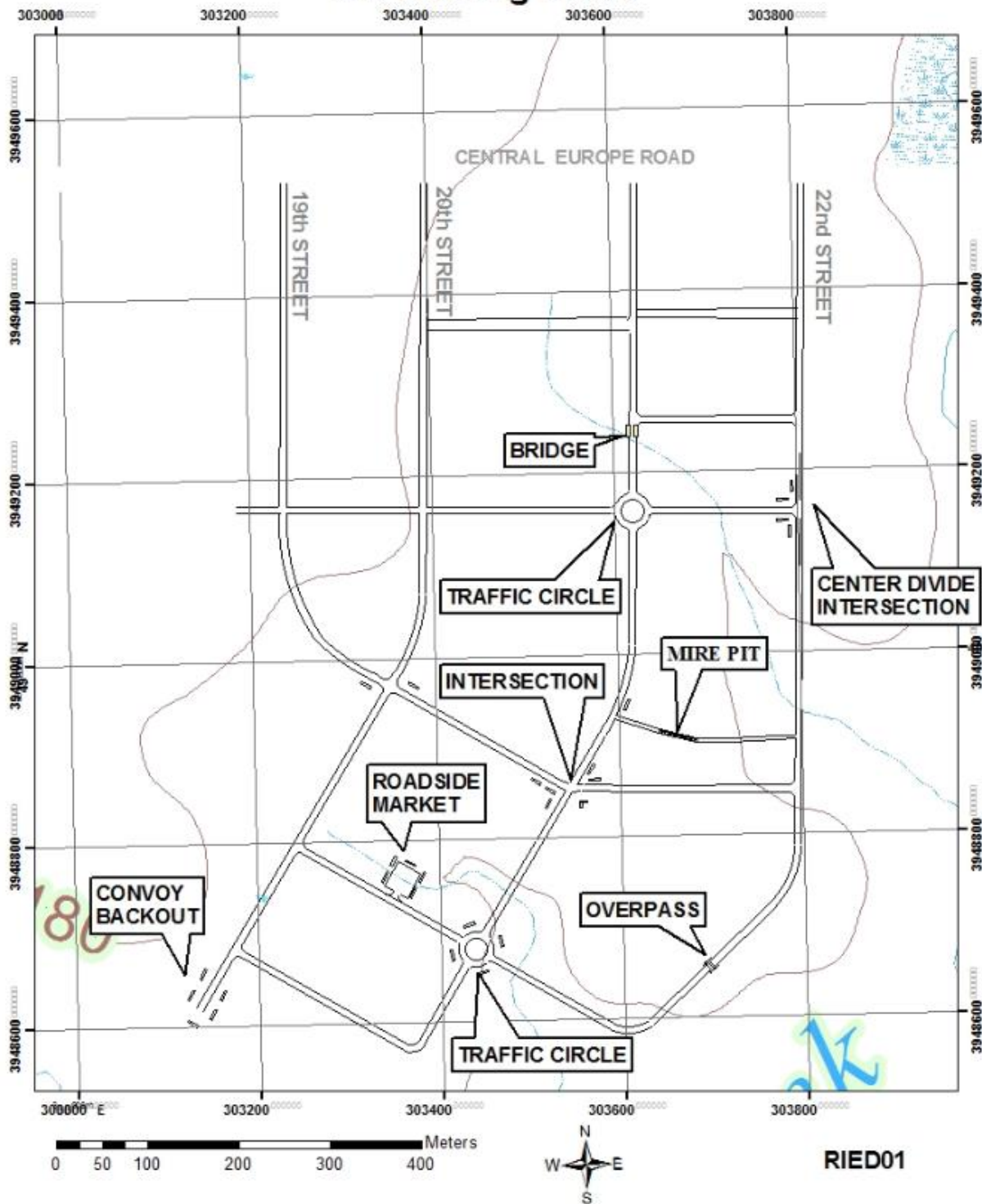
- a. References:
 - (1) STP 21-1 SMCT.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) NGR 385-63.
- b. Location: UV02185018
- c. Description and Capacity: This course consists of an area with obstacles to negotiate while moving in a tactical manner. Course is used to train tactical movements over, through, or around obstacles.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparing/turn-in of risk assessment (IAW DA PAM 385-30) prior to issue of training area and conduct of training.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5.
- f. Special Instructions: Personal Protection Equipment (PPE) requirements shall be to the discretion of the using unit commander provided that minimum requirements of the applicable regulations are met.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

IED01. Safety precautions

IED DEFEAT LANE

- a. References:
 - (1) FM 4-01.45
 - (2) FM 55-30.
 - (3) AR 385-63.
 - (4) DA Pam 385-63.
 - (5) Specific TM and FM for the weapon and/or tactics being utilized.
- b. Location: UV03604910.
- c. Description and Capacity: This range consists of an approximately 340 acre area used to train squad, platoon, and company size elements on the conduct of mounted and dismounted operations in a hostile environment. The range consists of a gridded road network with such features as traffic circles, bridge, overpass, center divide intersection, roadside market, mosque, and convoy blackout area. This range allows for blank fire only of the M9, M16/M4 series, M249, M240, and M2 weapon systems. Use of pyrotechnics and simulators is also allowed depending on the needs of the using unit and subject to approval of Range Control. Range is ideally suited for use of OPFOR and COBs during training exercises.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to firing. Using unit must provide two (2) communication sources. No additional sources are located on the range. Firing will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) A medic must be present on the range during the conduct of live firing. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (3) OIC must have a minimum grade of E7. Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) All personnel will wear a level of PPE appropriate for the training mission and in accordance with unit's SOP. Single hearing protection is strongly recommended.
- g. Road Guard Requirements: None.
- h. Impact Area closed during firing: None.
- i. Range(s) closed during firing: None.
- j. Barriers: None.

IED Training Lanes

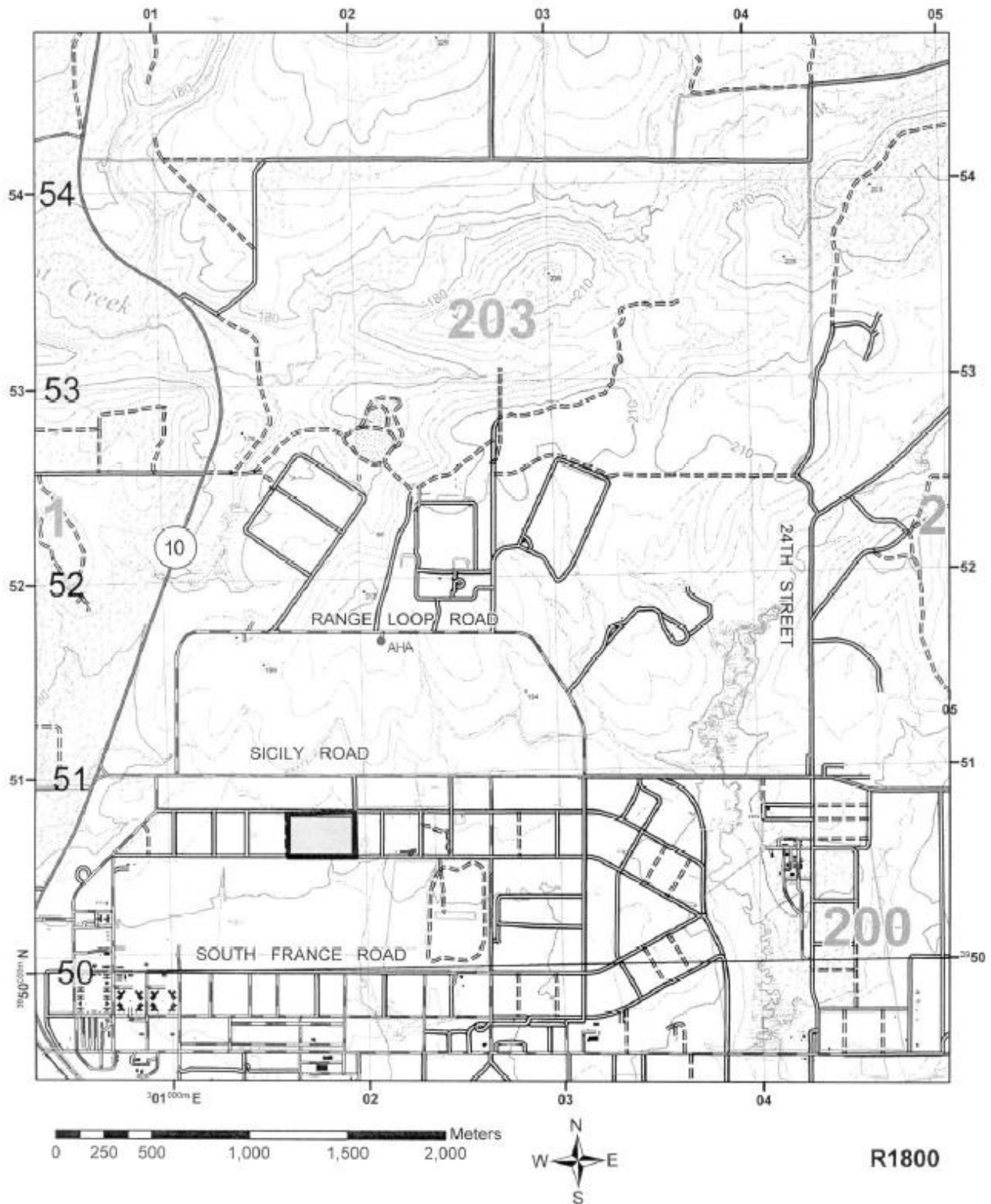


R1800. Safety precautions

HAND GREN QUAL RNG (Hand Grenade Qualification Course)

- a. References:
 - (1) FM 3-23.30.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0177850723
- c. Description and Capacity: This range is used to train and test individual soldiers in the employment of hand grenades using the proper gripping procedures and throwing techniques. Weapon/ammunition authorized: M69 practice grenade/M228 fuse. Course consists of seven (7) stations IAW FM 3-23.30.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Practice grenade fuses will not be used without the practice grenade bodies. Fuses will be secured in the grenade body prior to use.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) At a minimum, all personnel handling grenade bodies with fuses shall have approved eye protection. It is recommended that the use of gloves and single hearing also be employed, but remains at the discretion of the unit commander.
 - (3) Using units may request hand grenade bodies from Range Control.
 - (4) Grenade Identification Kit must be drawn from Range Control.
 - (5) Refer to FMs/TMs for DUD procedures. Contact Range Control to notify of any DUDs on range.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

HAND GRENADE QUAL RANGE

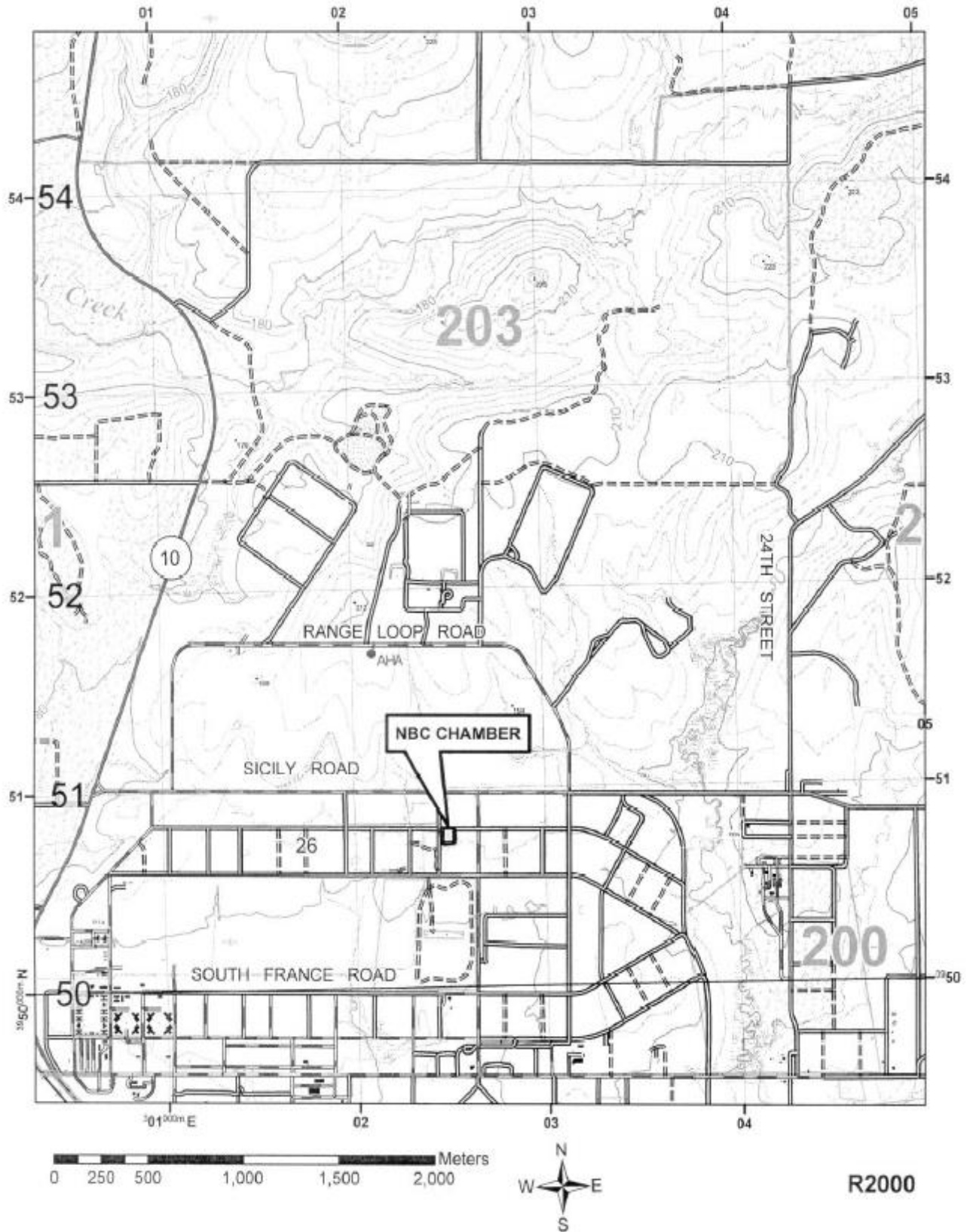


R2000. Safety precautions

GAS CHAMBER (NBC Chamber)

- a. References:
 - (1) FM 3-11
 - (2) FM 3-11.4
 - (3) AR 385-63
 - (4) DA Pam 385-63.
- b. Location: UV0248950733.
- c. Description and Capacity: A single building for training personnel in the employment of protective equipment and the effects of chemical agents. The building consists of a 16 ft. by 32 ft. one room chamber area. Weapons/ammunition authorized for use: CS Riot Control Agents (RCAs). Only CS in capsule form may be used in the CS Chamber. NO BURNING CANISTERS OR SYSTEMS WILL BE USED IN THIS FACILITY.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) The OIC and RSO must be NBC qualified and have received specific and formal training in the characteristics, capabilities, and training applications of RCAs.
 - (3) Protective masks must be available for all soldiers participating in the training.
 - (4) Unprotected personnel will not be exposed to RCAs longer than 15 seconds.
 - (5) RCAs will not be released when personnel located downwind will be affected, unless exposure to a controlled concentration is desired.
 - (6) CS agents will not be released within 50 meters of spectators.
 - (7) Range flags will be flown from the NBC Chamber flagpole and from the flagpole on Range Loop Road.
 - (8) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (9) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5. OIC and RSO must be NBC qualified when conducting NBC or smoke training.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) OIC will also provide an overlay(plume cloud) detailing the scheme of intent of CS/RCA employment. At a minimum, the overlay will identify weather, date time group, formation area, decon area and safety location away from the hazard.
 - (3) Range OIC will ensure three (3) 5lb. fire extinguishers are on site and operational prior to opening the range. These extinguishers may be issued from Range Control.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: Air Assault Obstacle Course, Rappel Towers.
- j. Barriers: None.

NBC CHAMBER RANGE FOOTPRINT



R3800. Safety precautions

RAPPEL TOWERS

- a. References:
 - (1) TC 21-24.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0234950250
- c. Description and Capacity: This course consists of a 16 ft. incline wall, and a 50 ft. tower. The 50 ft. tower is set up to rappel from three (3) sides (1 wall and 2 helicopter configurations). Each side contains anchor points, with five positions for wall rappelling and 10 positions configured for fast rope. The 50 ft. tower is accessed by a series of ladders with landings every 10 feet. The 16 ft. incline wall consist of two separate walls extending from opposing sides of a single training deck with five rappelling positions each side, for a total of 10.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparation and turn-in of risk assessment (IAW DA PAM 385-30) and rappel master certified (if required) when utilizing this facility. Assessment/certification must be turned in to Range Control prior to issuance of this facility.
 - (3) Rappel master personnel must be physically present on each side of the 50 ft. tower and 16 ft. where rappelling is being conducted (i.e. if only the wall side of the 50 ft. tower is being used, one rappel master will be present on the tower. If three sides of the 50 ft. tower are being used, three rappel masters will be present on the 50 ft. tower).
 - (4) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E7. Range Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range OIC will ensure all personnel are familiar with the correct safety procedures as listed in TC 21-24.
 - (2) Range OIC will be responsible for ensuring required equipment and support personnel (IAW TC 21-24) are on site prior to conducting rappelling operations.
 - (3) "Australian Style" rappelling is prohibited on this facility.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

SEE DIAGRAM PAGE A-56

R3900. Safety precautions

OBSTACLE CRS (Air Assault Obstacle Course)

- a. References:
 - (1) TC 3-22.20.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0234950250
- c. Description and Capacity: This course consists of nine (9) obstacles from TC 3-22.20. Bleachers are located in an administration area adjacent to Station 9. Obstacles are as listed below:
 - (1) Tough One
 - (2) Confidence Climb
 - (3) Six Vault
 - (4) High Step Over
 - (5) Low Belly Over
 - (6) Belly Crawl
 - (7) Swing Stop Jump
 - (8) Incline Wall
 - (9) Weaver
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E7. Range Safety Officer must have a minimum grade of E6.
 - (5) Training is postponed/modified when obstacles are slippery due to inclement weather.
 - (6) Landing/fall areas under obstacles raked and refilled as needed before each use. Puddles of water under obstacles need to be filled to preclude a false sense of security.
- f. Special Instructions:
 - (1) Range OIC will ensure all personnel are familiar with the correct procedure for navigating each obstacle prior to conducting the event. This must be accomplished by a physical “walk-through” on the obstacle.
 - (2) Range OIC will ensure two additional safety personnel safeties are harnessed during the engagement of the Tough One and one safety harnessed in on the Confidence Climb to support participants during the training event. Same may also apply to other stations based on the OIC’s risk assessment for the event.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

RAPPEL / OBSTACLE COURSE FOOTPRINTS

50 ft. Tower
The 50 ft. tower is set up to rappel from three (3) sides (1 wall and 2 helicopter configurations). Each side contains anchor points, with five positions for wall rappelling and 10 positions configured for fast rope.

16 ft. Incline Wall
The 16 ft. incline wall consist of two separate walls extending from opposing sides of a single training deck with five rappelling positions each side, for a total of 10.

OBSTACLES ARE
Approx.
68m—70m Apart

Range Control

Obstacles along the right side: Weaver, Incline Wall, Swing Stop, Jump, Belly Crawl, Low Belly Over, High Step Over, 6 Vaults, Confidence Climb, Tough One.

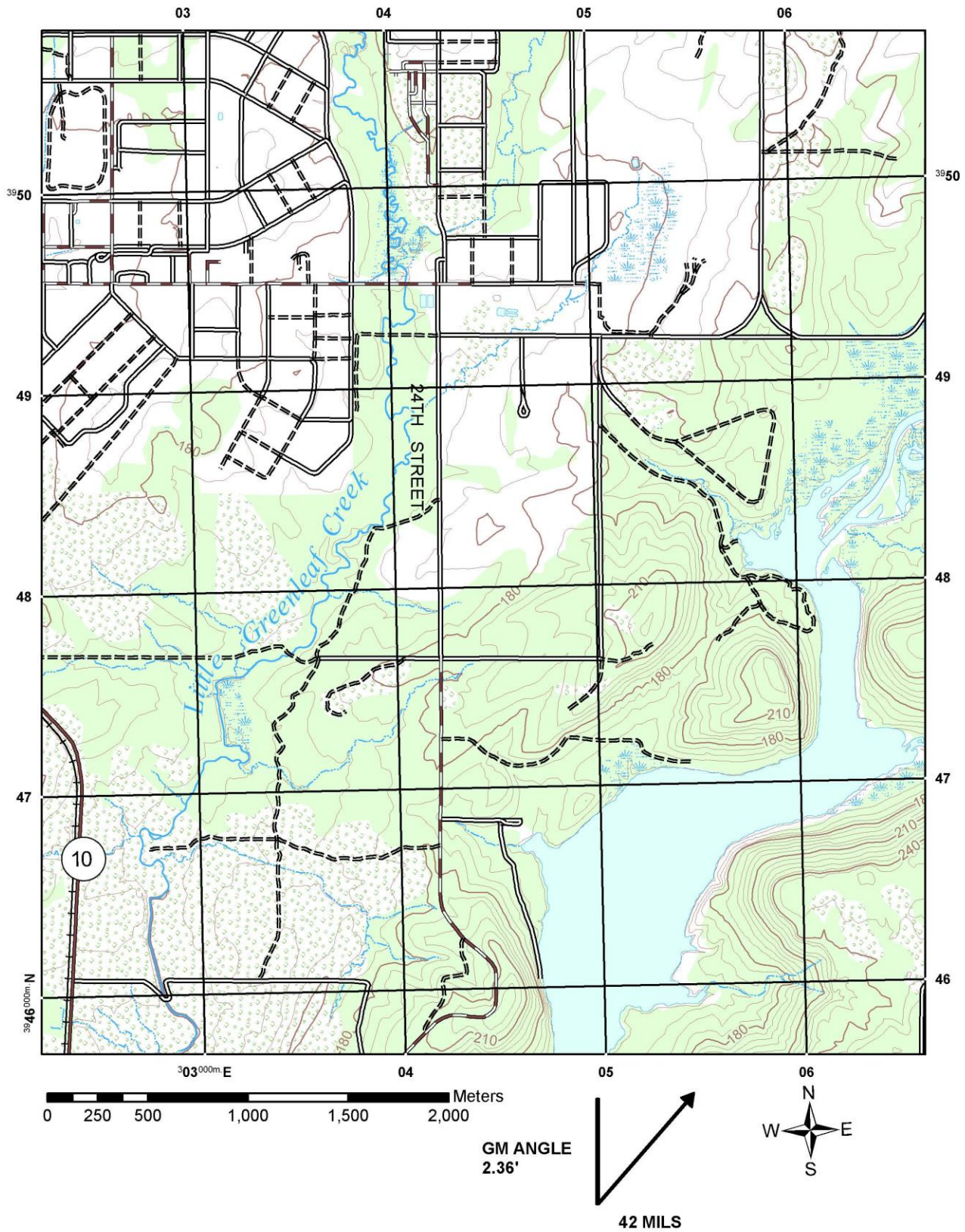
Roads: Rome Arno Rd, Southern France Rd.

R4100. Safety precautions**LAND NAV CRS EIB (EIB Land Navigation Course)**

- a. References:
 - (1) FM 3-25.26.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0423050124
- c. Description and Capacity: An area used for dismounted map reading, terrain association, or unit sustainment navigational training. Course consists of 12 start points and 32 waypoints.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparing/turn-in of risk assessment (IAW DA PAM 385-30) prior to issue of training area and conduct of training.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Due to this range's proximity to Greenleaf Lake, Range OIC will include individual safety precautionary measures taken in and around water hazards (for both daylight and limited visibility environments) in the range safety brief.
 - (2) Using units may require barricades for road/trail entrances to this course. Unit will coordinate this requirement and be responsible for placement/recovery of barricades while utilizing the training area.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None, except as may be required to facilitate unit's training objectives, and only for the duration of the training event.

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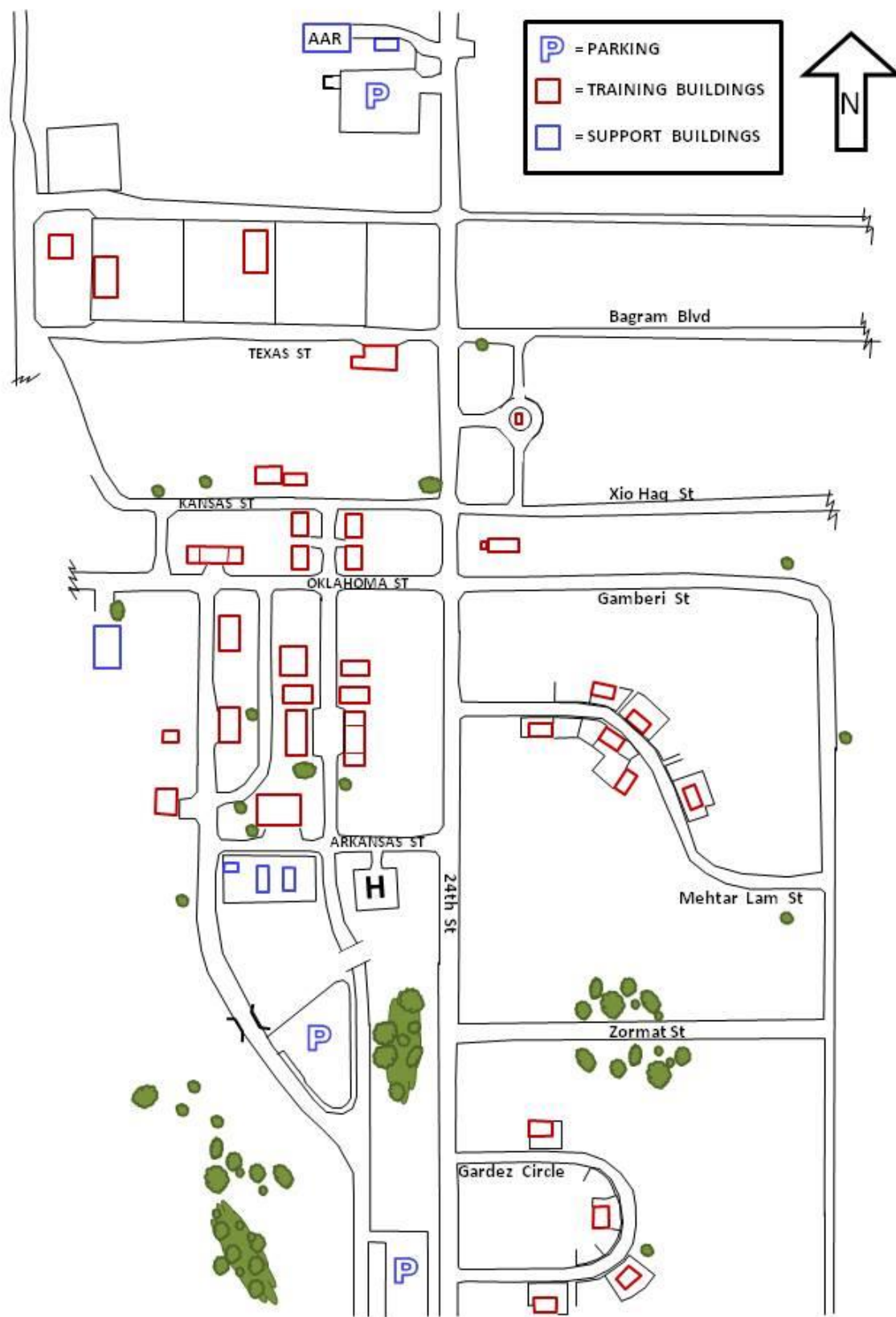
LAND NAV



R4200. Safety precautions

MOUT CACTF

- a. References:
 - (1) FM 3-06.
 - (2) FM 3-06.11.
 - (3) TC 90-1.
 - (4) AR 385-63.
 - (5) DA Pam 385-63.
 - (6) DA Pam 385-64.
- b. Location: UV0419250417.
- c. Description and Capacity: This facility teaches the skills and unit cohesiveness necessary to conduct clearing, breaching, offensive, and defensive operations in an urban setting. Weapons/ammunition authorized for use: organic weapons (no live-fire)/blanks, MILES and CCMCK (Close Combat Mission Capability Kit). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing of the range.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range flags will be flown from the flagpoles (2 ea.) located at:
 - (a) Southwest corner of 24th Street and Sicily Road.
 - (b) Grid coordinate UV0424250018, west access road off of 24th Street (south of the CTF complex).
 - (3) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
 - (4) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E7. Range Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) OC, CS, or CN smoke is not authorized for use on the Collective Training Facility.
 - (2) The use of pyrotechnic simulators, smoke grenades, or surface flares is prohibited within confined areas or against wooden buildings without approval from Range Control. The range OIC must identify hazard protection and mitigation measures (IAW DA PAM 385-30) and present them to Range Control for approval prior to any pyrotechnics being utilized within the structures/confined areas on the facility.
 - (3) No blank ammunition (above 5.56mm), smoke, or pyrotechnics will be discharged in the underground sewer system. Special munitions (i.e. CCMCK) must be approved by Range Control prior to use on the facility.
 - (4) Stun Grenade 1.4 and below. All personnel within 1.52m (5ft) will wear single hearing protection if employing 2 rounds per day. All personnel within this distance will wear double hearing protection if employing 3 to 41 rounds per day.
 - (5) To prevent serious eye injury the only approved eye protection for use with close combat mission capability kit (CCMCK) is the standard-issue sun, wind, and dust goggles (NSN 8465-01-328-8268), which must be worn until all training has ceased.
 - (6) Rappel master personnel must be physically present on each side of the facility where rappelling is conducted.
 - (7) Climbing and descending the outside walls by use of grappling hooks, rappelling ropes, or free climbing is permitted under supervision of a designated Range Safety Officer. Climbing is prohibited on the following facilities:
 - (a) Bus Stop.
 - (b) Warehouse.
 - (c) Train Station.
 - (d) Any trailer house or wooden/metal structure.
 - (8) Soldiers are not permitted on any metal/wooden roof.
 - (9) Rooftop landings by rotor wing aircraft are prohibited on this facility. A designated landing pad is provided at the southeast corner of the main complex.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None
- j. Barriers. None



R4300. Safety precautions

MOUT MAC

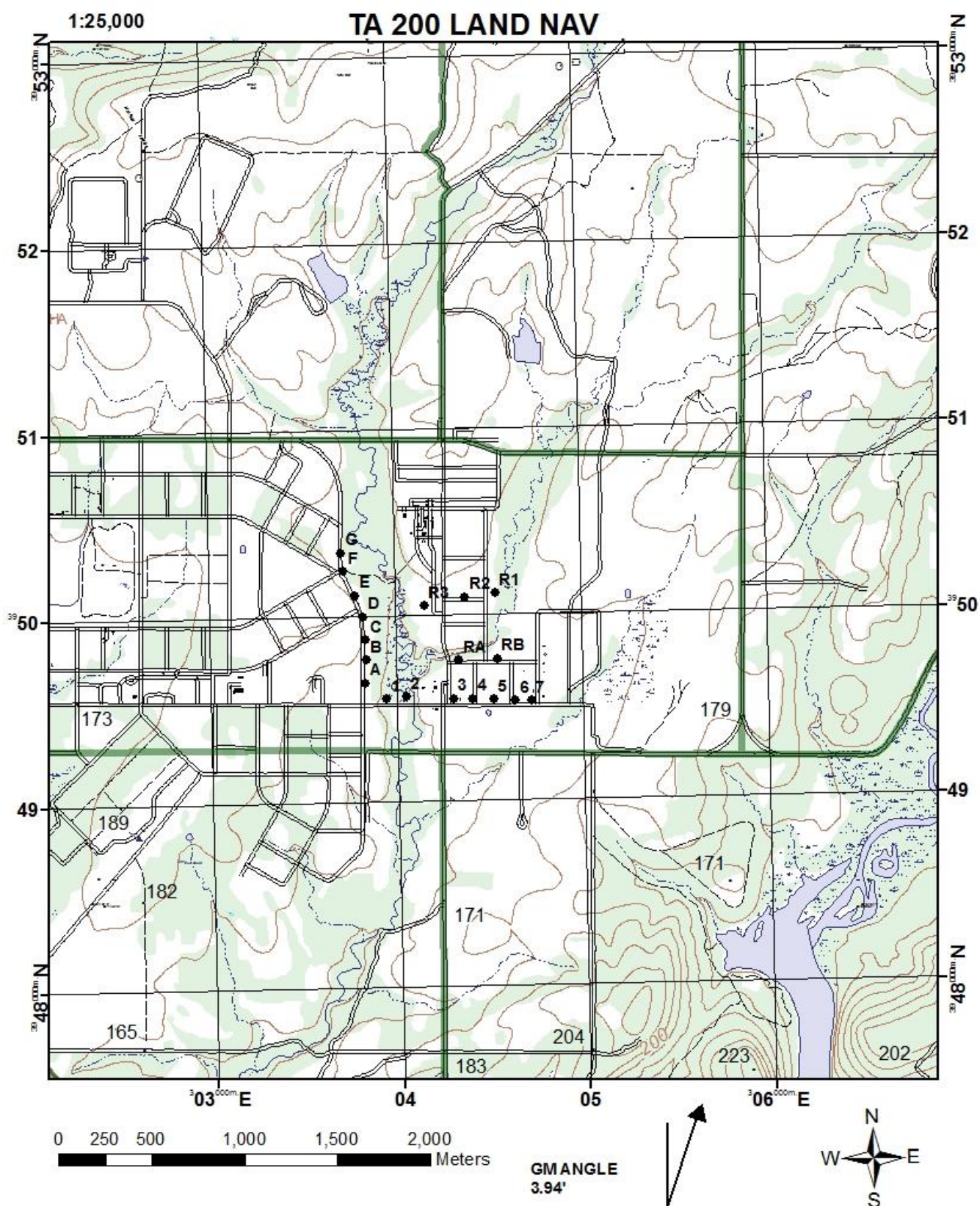
- a. References:
 - (1) FM 3-06.
 - (2) FM 3-06.11.
 - (3) TC 90-1.
 - (4) AR 385-63.
 - (5) DA Pam 385-63.
 - (6) DA Pam 385-64.
- b. Location: UV0484549502.
- c. Description and Capacity: This facility teaches the skills and unit cohesiveness necessary to conduct clearing, breaching, offensive, and defensive operations in an urban setting. Weapons/ammunition authorized for use: organic weapons (no live-fire)/blanks, MILES and CCMCK (9mm). Targetry must be coordinated with Range Control (for placement and operation) prior to drawing of the range.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet. Note: A separate packet is issued to units utilizing Station 3 as a live-fire event.
 - (2) HIGH EXPLOSIVE (HE) 40mm AMMUNITION IS NOT AUTHORIZED FOR USE ON STATION 3--ONLY TRAINING PRACTICE (TP).
 - (3) For non-live fire training (all locations except Station 3), range flag will be flown from the MOUT MAC flagpole (south end near mess shelter).
 - (4) For live-fire training (Station 3 only), range flags will be flown from the UAC Station 3 flagpole (at entrance to range) and flagpole on Range Loop Road.
 - (5) Only Range Control personnel qualified to maintain target mechanisms are authorized to repair or adjust targetry.
 - (6) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (5) OIC must have a minimum grade of E7. Range Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Minimum personnel requirements:
 - (a) Additional OIC required for each station when operating more than one station concurrently.
 - (b) Operation of Station 3 requires a dedicated RSO along with OIC.
 - (c) Certified rappel master(s) when conducting rappelling events.
 - (2) OC, CS, or CN smoke is not authorized for use on the MOUT MAC site.
 - (3) The only structure authorized for rooftop movement is the Offense/Defense Building (Station 4). Movement on all other rooftop structures is prohibited. Movement on Station 4 is permitted under the supervision of an OIC. No more than five soldiers are permitted on the roof by at any one time.
 - (4) Climbing and descending the outside walls use of grappling hooks, rappelling ropes, or free climbing is permitted on the Offense/Defense Building only. Anchor points located on the structure will be used.
 - (5) The use of pyrotechnic simulators, smoke grenades, or surface flares is prohibited within confined areas or against wooden buildings without approval from Range Control. The range OIC must identify hazard protection and mitigation measures (IAW DA PAM 385-30), and present them to Range Control for approval prior to any pyrotechnics being utilized within the structures/confined areas on the facility.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers. None

MOUT MAC / UAC FOOTPRINT



R4500. Safety precautions**LAND NAV CRS T200 (TA200 Land Navigation Course)**

- a. References:
 - (1) FM 3-25.26.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
- b. Location: UV0422149903
- c. Description and Capacity: An area used for dismounted map reading, terrain association, or unit sustainment navigational training. Course consists of 14 start points, 5 waypoints, and one area designated for establishing individual pace count.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparing/turn-in of risk assessment (IAW DA PAM 385-30) prior to issue of training area and conduct of training.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Blank ammunition and pyrotechnics (other than emergency) are prohibited on this facility.
 - (2) Using units may require barricades for road/trail entrances to this course. Unit will coordinate this requirement and be responsible for placement/recovery of barricades while utilizing the training area.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None, except as may be required to facilitate unit's training objectives, and only for the duration of the training event.



RBC01. Safety precautions**BAYONET ASLT CRS**

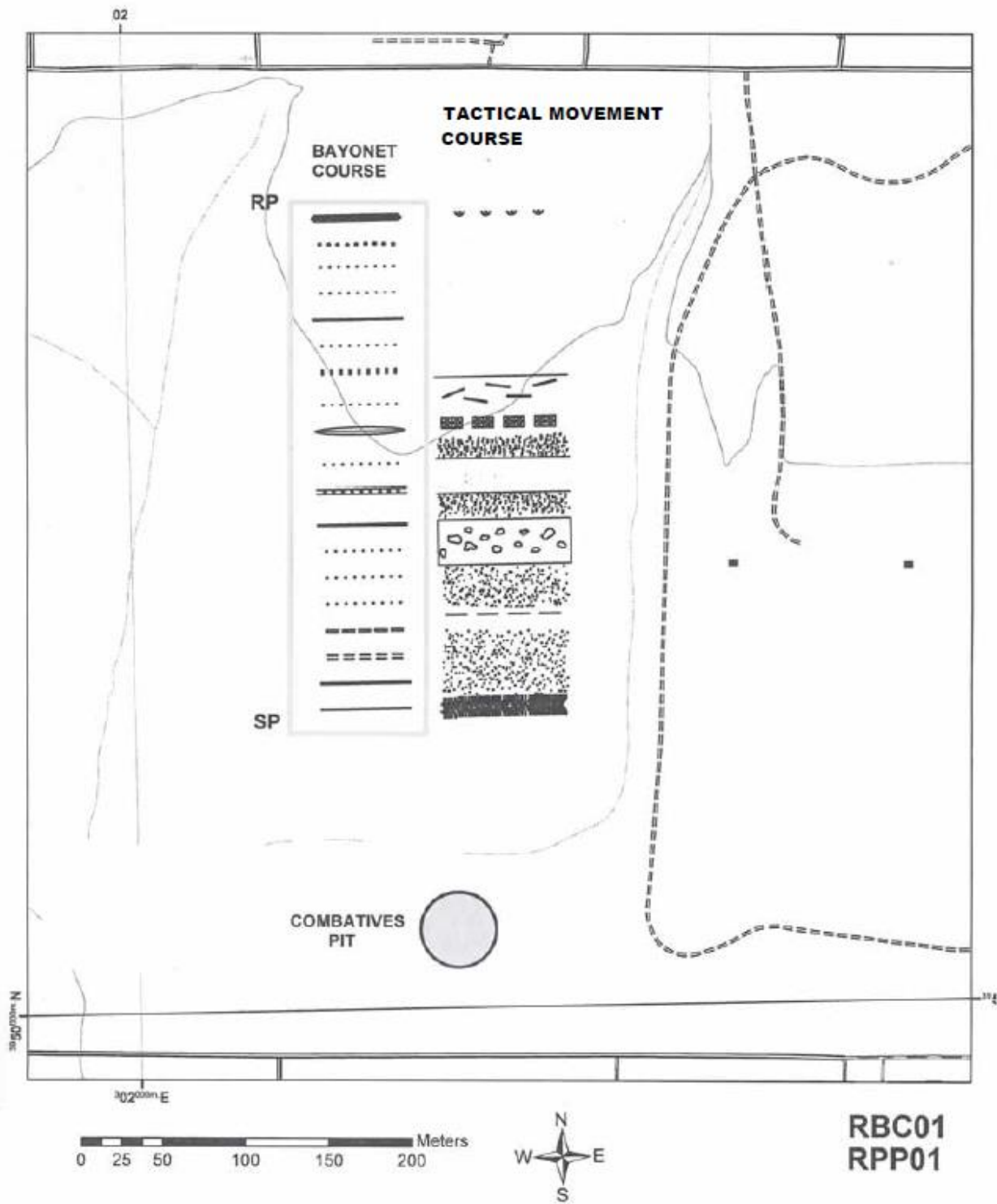
- a. References:
 - (1) FM 3-25.150.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) NGR 385-63.
- b. Location: UV02165048
- c. Description and Capacity: Course consists of nine (9) lanes with eight (8) obstacles and ten (10) target engagements per lane. Course is a standard TC 25-8 layout allowing training of rifle-bayonet fighting skills under simulated combat conditions.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparing/turn-in of risk assessment (IAW DA PAM 385-30) prior to issue of training area and conduct of training.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) The medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Due to the use of bayonets on this range, safety will be a primary concern of the OIC and RSO.
 - (2) Personal Protection Equipment (PPE) requirements shall be to the discretion of the using unit commander provided that minimum requirements of the applicable regulations are met.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

SEE DIAGRAM PAGE A-67

RPP01. Safety precautions
PUGIL PIT (Combative Pit)

- a. References:
 - (1) FM 3-25.150.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) NGR 385-63.
- b. Location: UV02105002.
- c. Description and Capacity: Site consists of a single 150 ft. diameter pit with a demonstration area and standard TC 25-8 layout allowing training of rifle bayonet fighting skills under simulated combat conditions using protective equipment. Hand-to-hand combative training may also be performed on this site.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Range OIC will be responsible for preparing/turn-in of risk assessment (IAW DA PAM 385-30) prior to issue of training area and conduct of training.
 - (3) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (4) OIC must have a minimum grade of E6. Range Safety Officer must have a minimum grade of E5.
- f. Special Instructions:
 - (1) Due to the use of force-on-force training on this range, safety will be a primary concern of the OIC and RSO.
 - (2) Personal Protection Equipment (PPE) requirements shall be to the discretion of the using unit commander provided that minimum requirements of the applicable regulations are met.
- g. Road Guard Requirements: None.
- h. Impact Area closed during training: None.
- i. Range(s) closed during training: None.
- j. Barriers: None.

BAYONET COURSE / COMBATIVES PIT FOOTPRINT

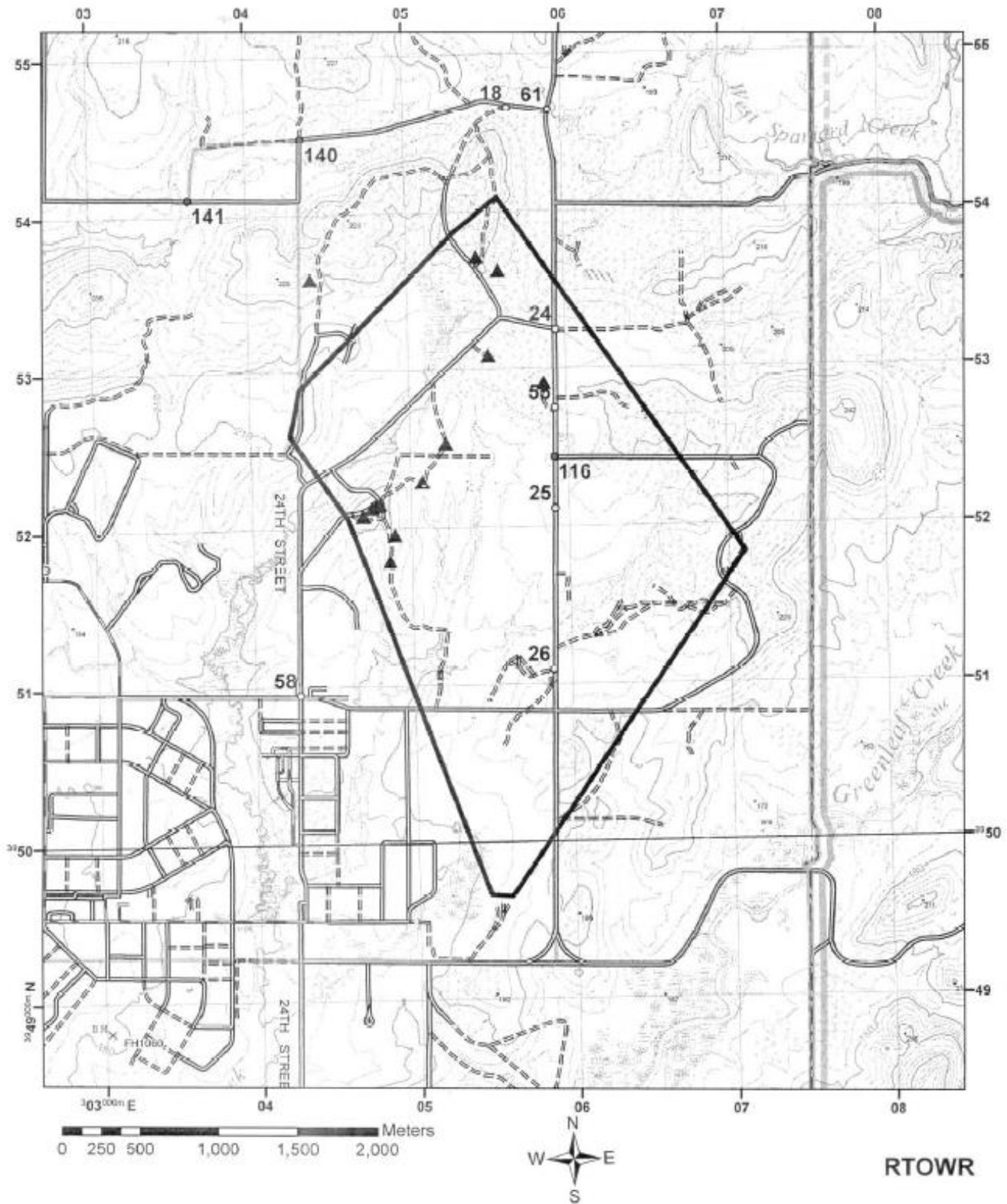


RTOWR. Safety precautions

TOW MILES Range (TOW MILES)

- a. References:
 - (1) FM 3-22.34.
 - (2) AR 385-63.
 - (3) DA Pam 385-63.
 - (4) DA Pam 385-64.
- b. Location: UV0552449657 (TOW MILES), UV0580550981 (Laser Designator Module).
- c. Description and Capacity: This range is used to train and test soldiers on the skills necessary to employ weapons, identify, track, engage, and defeat stationary and moving armor targets presented individually or as part of a tactical array. Range consists of five (5) battle positions with two (2) firing points per position and various targets arrayed from 1000 meters to 3750 meters downrange. Weapons/ammunition authorized to fire: TOW MILES or TOW Field Tactical Trainer (TFTT). Range may also be used to train and test soldiers on the skills necessary to emplace, detect, identify, and designate stationary targets in a tactical array with a Laser Designator Module, utilizing a single firing point.
- d. Communications: Using unit will establish two (2) means of communications with Range Control (40.80 MHz FM primary, 31.30 MHz FM alternate) prior to training. Using unit must provide two (2) communication sources. No additional sources are located on the range. Training will not be initiated or will immediately cease when communications with Range Control is not operational.
- e. Safety Precautions:
 - (1) Camp Gruber Range Safety Briefing and Range Packet.
 - (2) Personnel will not enter the range fan without contacting Range Control. Several live-fire ranges overlay this range fan. Other ranges impact within the TOW MILES engagement areas. The range OIC must get approval from Range Control prior to moving downrange (i.e. for targetry set-up/repair/recovery).
 - (3) Range flags will be flown from the TOW MILES flagpole and from the flagpole on Range Loop Road.
 - (4) OTHER THAN THE ATWESS CARTRIDGE, AMMUNITION OF ANY TYPE IS PROHIBITED ON THIS RANGE, INCLUDING HIGH EXPLOSIVE (HE) AND TRAINING PRACTICE (TP).
 - (5) A medic must be present on the range during the conduct of training. Additional medical requirements are:
 - (a) Medic must be MOS qualified or civilian equivalent (EMT).
 - (b) The medic must have a standard aid bag and litter.
 - (c) Unit commanders or representatives must be prepared to give the grade, name, and SSN last 4 of all medical qualified personnel.
 - (d) A litter-bearing vehicle must be on site with a driver other than the medic and capable of transporting a litter patient.
 - (6) OIC must have a minimum grade of E7. Range Safety Officer must have a minimum grade of E6.
- f. Special Instructions:
 - (1) Range Officer in Charge and Range Safety Officer will report to Range Control for a range safety briefing and turn in a risk assessment per DA PAM 385-30 prior to issue of the range.
 - (2) The following will apply to units using Anti-Tank Weapons Effects Signature Simulators (ATWESS):
 - (a) Ensure all personnel remain clear of the 40-meter (Area F) danger area for each system.
 - (b) Ensure all personnel within 50 meters of the weapon system utilize single hearing protection.
 - (c) Ensure each ATWESS device is only armed when ready to fire.
 - (3) Specified safety procedures IAW FM 3-22.34 will be included in the orientation/safety briefing. This brief will include as a minimum:
 - (a) The prescribed safety procedures listed in Appendices E and F of FM 3-22.34.
 - (b) The specified safety precautions for the type of training device utilized on the range.
 - (c) A general orientation of the range and associated laser hazards if laser-emitting devices are utilized. Laser emitting training devices will be considered/treated as live weapons during the conduct of training.
 - (d) Detailed orientation identifying safety procedures for day/night/limited visibility movements (mounted/dismounted) between battle positions. This will include procedures to ensure vehicles/personnel take specified precautions when crossing/entering/exiting range roads. Additional risk mitigation measures/devices (i.e. flashing barricades, signs, etc.) may be requested from Range Control as available.
- g. Road Guard Requirements: None. However, using units may establish road guards along adjacent roads to limit through traffic when range is operational. Use of additional road guards is subject to Range Control approval.
- h. Impact Area closed during firing: See Range Surface Danger Zone (SDZ).
- i. Range(s) closed during training: TOW Live Fire and Breach Range.
- j. Barriers:
 - (1) Gates 18, 24, 25, 26, 55, 58, and 61.
 - (2) Cable Gates 116, 140, and 141.

TOW MILES RANGE FOOTPRINT



LASER SDZ (TOW MILES RANGE)



APPENDIX B SITUATION REPORT

B-1. Introduction

This appendix lists the information required by each unit/organization conducting training on Camp Gruber. This information will be provided at the daily Range Control Coordination meeting.

B-2. Format

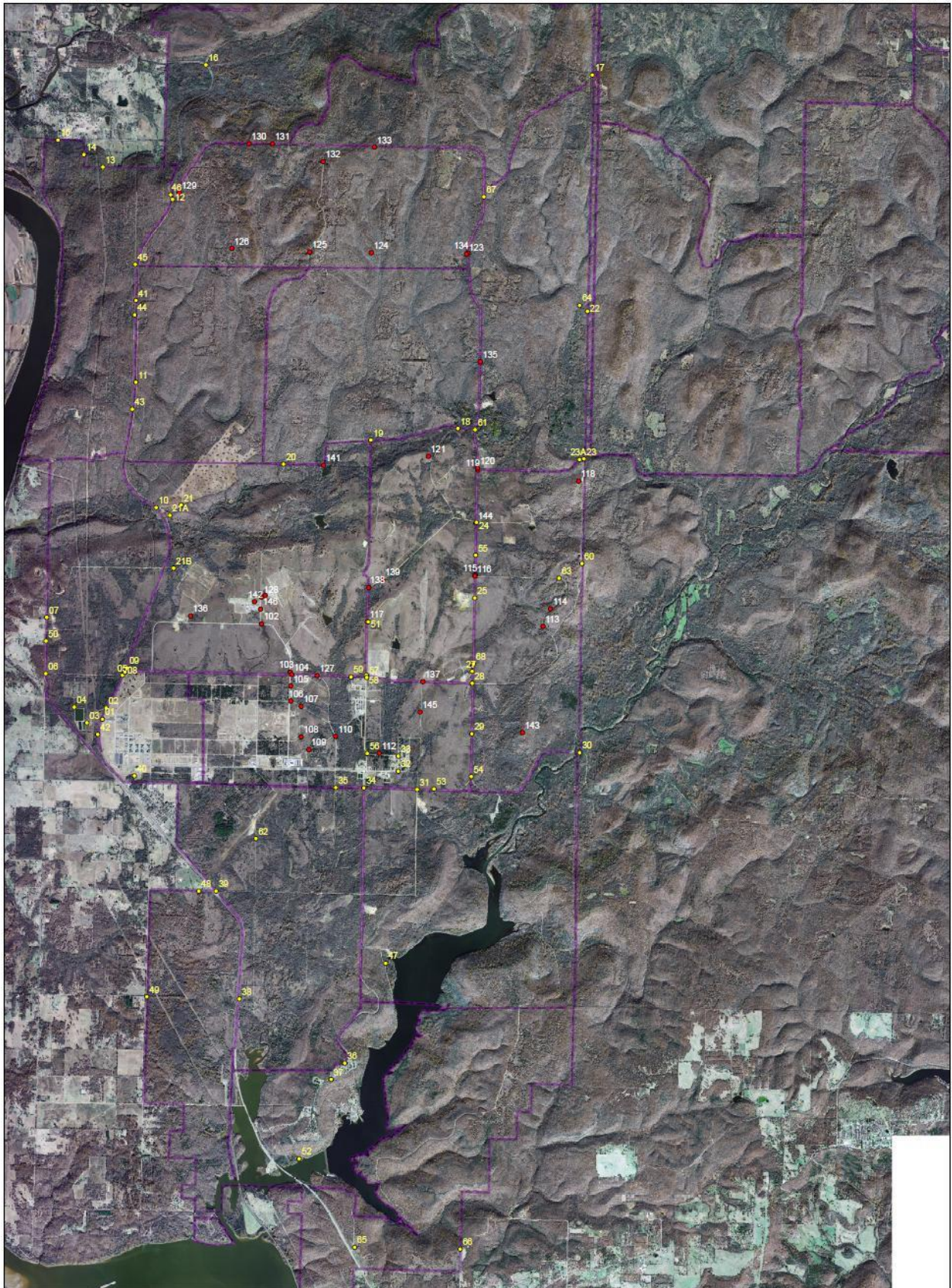
The required format is as listed below (Figure B-1):

Note: Additional reporting requirements may be necessary depending on unit's use of range/training area, and shall be coordinated with Range Control personnel during unit/organization check-in.

SITREP					
PRIVACY ACT STATEMENT					
AUTHORITY:		DA Pam 385-63, NGRFMSS Guidance & Standards, and CG Reg 385-1.			
PRINCIPAL PURPOSE:		To Record names, signatures, and other identifiers for the purpose of validating the trustworthiness of individuals requesting access and use of Camp Gruber Live Fire Ranges, Non-Live Fire Ranges, Training Areas, and Training Venues.			
ROUTINE USES:		Daily accountability of personnel, buildings, Ranges, Training Areas, and Training Venues. Also used to coordinate, deconflict, or plan training being conducted on Camp Gruber.			
DISCLOSURE:		Disclosure of this information is voluntary; however, failure to provide the requested information may impede delay or prevent further processing of this request.			
PART I - (To be completed by OIC. All information is based on Current 24hrs)					
1. Unit:			2. Date: (dd/mm/yyyy)		
3. Name: (Rank, Last, First, Middle Initial)			4. Phone:		
5. Number of Troops:			6. Buildings:		
7. Training Areas:			8. TADSS:		
9. LZs:					
10. Range Information: (Proposed Times)					
Range		HOT		COLD	
11. Aviation:					
Manifest #	Aircraft (Type)	Location (LZ or MGRS)	Activity	Arrival Time	Depart Time
PART II - (To be completed by OIC. All information is based on Next 24hrs)					
12. Training Events:					
NCOIC/OIC Signature:					
PART III - (To be completed by Range Control NCOIC. Capture any changes needed or same day request to update daily brief)					
13. Additional Notes:					

Camp Gruber RC Form 16-002, OCT 2016

APPENDIX C
GATE MAP



APPENDIX D

RISK MANAGEMENT

D-1. Introduction

This appendix outlines unit responsibilities in identifying and addressing risk management into their operations on the training center. Risk management is utilized in all aspects of training in accordance with DA PAM 385-30 and NGR 385-10. Using units/organizations should incorporate risk management in all operations. Some specific operations (as identified in this regulation and the range packet) require units/organizations to provide a copy of their risk assessments prior to the conduct of training/range operations. Some events will require additional documentation along with risk assessments.

D-2. Responsibilities

- a. Camp Gruber Range Management Authority will:
 - (1) Review all risk assessments provided by using units/organizations prior to approving range/facility use.
 - (2) Review unit/organization risk reduction implementation measures.
 - (3) Inform Operations and Plans of risk assessment/reduction measures that apply to HIGH or EXTREMELY HIGH risk events.
- b. Unit commander/range OIC/observer-controller (OC)/cadre will:
 - (1) Identify assess operational hazards IAW DA PAM 385-30 and develop mitigation measures.
 - (2) Provides completed risk assessment to Range Control
 - (3) Supervises implementation of risk reduction (mitigation) measures.
 - (4) Coaches and mentors unit/range/facility leadership in risk reduction identification and implementation of the risk reduction measures.

D-3. Conducting risk assessments

Specific guidance for conducting risk assessments is located in DA PAM 385-30. There is additional specific information found in various FMs for specific weapon/ammunition systems (i.e. Figure B-3, Appendix B, FM 3-23.30/Grenades and Pyrotechnic Signals depicts a risk assessment for live hand grenade operations).

APPENDIX E

RANGE / TRAINING AREA / TADSS / DEMOLITION / SUAV / OPENING AND CLOSING CHECKLISTS

E-1. Introduction

This appendix provides using units with the information required by Range Control prior to opening/closing any range or training area. These checklists must be initiated and signed by the range OIC and be on file with Range Control prior to the commencement of any training. A checklist must be provided for each day of the training activity, except as noted below.

- a. Range Opening/Closing Checklist--required for all ranges when conducting live-fire operations. (Figure E-1)
- b. Range Opening/Closing Checklist--required when conducting operations other than live-fire (training areas or facilities). Note: For continuous (overnight) operations in training areas, only one checklist will be required for the entire event. However, utilization and throughput information will still be collected on a daily basis. (Figure E-1)
- c. TADSS Opening/Closing Checklist—required for all virtual simulated venues. (Figure E-2)
- d. Demolition Range Opening/Closing Checklist--required for all demolition (Light Demo, Breach) range operations. (Figure E-3)
- e. Small Unmanned Aerial Vehicle (SUAV) Opening/Closing Checklist--required for all flight operations of any Unmanned Aviation System (UAS) within the established Restricted Operation Zone (ROZ) on Camp Gruber. (Figure E-4)

RANGE OPENING / CLOSING CHECKLIST					
PRIVACY ACT STATEMENT					
AUTHORITY: PRINCIPAL PURPOSE: ROUTINE USES: DISCLOSURE:	DA Pam 385-63, NG RFMSS Guidance & Standards, and CG Reg 385-1. To Record names, signatures, and other identifiers for the purpose of validating the trustworthiness of individuals requesting access and use of Camp Gruber Live Fire Ranges, Non-Live Fire Ranges, Training Areas, and Training Venues. For Unit to verify with Range Control To Occupy, Open or Close any Ranges, Training Areas and Training Venues. Disclosure of this information is voluntary; however, failure to provide the requested information may impede delay or prevent further processing of this request.				
PART I - (To be completed by OIC)					
1. Unit:		2. Date: (dd/mm/yyyy)			
3. Facility: (Range or Training Area)		4. Phone number:			
5. Primary OIC: (Rank, Last, First, Middle Initial)		6. Primary RSO: (Rank, Last, First, Middle Initial)			
7. Alternate OIC: (Rank, Last, First, Middle Initial)		8. Alternate RSO: (Rank, Last, First, Middle Initial)			
9. Weapons Description: (Type of Weapon)		10. Ammunition: (DODIC)			
11. I understand by signing below that I acknowledge and will comply with all regulations and will only allow firing of Authorized weapons with approved ammunition. I understand that at no time will a NON-Live Fire Range be utilized with Live Fire Training. I further understand that any violation, or allow for the violation of DA Pam 385-63, CG_Reg_385-1 or applicable FM safety standards may result in decerification.					
OIC Signature: _____					
PART II - (To be completed by Range Control Fire Desk for any unit requesting HOT Status. Any requirement not verified results in the unit not authorized to go HOT.)					
12. Range Requirements: ☐ OIC ☐ MEDIC ☐ RANGE FLAG UP ☐ WEAPON VERIFIED (Type) ☐ RSO ☐ DRIVER ☐ BLINKING LIGHT ON (Night Only) ☐ AMMUNITION VERIFIED (DODIC) ☐ VEHICLE ☐ AID BAG ☐ FM/TM for WEAPON BEING USED ☐ LITTER					
13. LF Ranges: ☐ You must maintain continuous communication with Range Control with a radio check made <u>every hour</u> , on the hour, while the range is open.		14. Non LF Range: ☐ You must maintain continuous communication with Range Control with a radio check <u>every 4 hours</u> while the range is open.			
PART III - (To be completed by Range Control Fire Desk to update RFMSS. Record number of rounds fired and/or pyrotechnics used during training event and identify by DODIC)					
15. UTILIZATION: (LF Range)		16. UTILIZATION: (For use of 3 continuous NON-LF training events MAX)			
OCC: COLD: DODICs: HOT: TEMP COLD: Personnel on site: Rounds used: CLEARED: *Incident on Range ☐ *NOTE: Any Accidents, Injuries or Fires need to be annotated on Camp Gruber Range Control Form 16-006 Incident Report and attached to Range Opening / Closing Form.		2nd Day OCC: COLD: *Incident on Range ☐ HOT: TEMP COLD: Personnel on site: Rounds used: CLEARED: *Incident on Range ☐ *NOTE: Any Accidents, Injuries or Fires need to be annotated on Camp Gruber Range Control Form 16-006 Incident Report and attached to Range Opening / Closing Form.		3rd Day OCC: COLD: *Incident on Range ☐ HOT: TEMP COLD: Personnel on site: Rounds used: CLEARED: *Incident on Range ☐ *NOTE: Any Accidents, Injuries or Fires need to be annotated on Camp Gruber Range Control Form 16-006 Incident Report and attached to Range Opening / Closing Form.	
17. RFMSS Updated: (To be initiated by FDO when event is completed and all information has been entered into RFMSS)					
RCNI: _____		FDO: _____ DATE: _____			

Camp Gruber RC Form 16-003, JULY 2018

(Figure E-1)

TADSS Opening/Closing Checklist

Unit Designation: _____ Date: _____

TADSS Designation/s: _____

Name & Grade of OIC: _____

Grade

Last,

First

Middle Init

Name of Operator : _____

IF DIFFERENT FROM OIC)

Grade

Last,

First

Middle Init

☐

MEDIC

**HEAT TRAINER
CFFT**

☐

CLS

EST

☐

NA

IGT, VCOT, VBS3,

**OIC CAN BE THE QUALIFIED OPERATOR FOR THE TADSS BEING USED.
OIC MUST NOTIFY RANGE CONTROL WHEN TRAINING BEGINS AND WHEN TRAINING ENDS.
OIC IS RESPONSIBLE FOR REPORTING TOTAL PAX USAGE TO RANGE CONTROL**

Signature of OIC: _____

RANGE CONTROL _____ Date Stamp

Range Control Use Only

TADSS Opening time _____ / _____

Posted on RFMSS by (initials) _____

Closing

Number of personnel on site: _____ Pax 2nd Day _____ Pax 3rd Day _____

Range Closing time _____ / _____

Posted on RFMSS by (initials) _____

(Figure E-2)

DEMO RANGE Opening/Closing Checklist

OPENING

Unit Designation: _____ Date: _____

Range Designation: _____

Name & Rank of OIC: _____ Last Four: _____

Name & Rank of RSO: _____ Last Four: _____

Required documents (prior to opening):

Demo Plan/Target Folder (type/quantity of charge/blast). Y/N

Risk Management Worksheet (approved by appropriate command). Y/N

Medic Requirements: Medic: Y/N Driver: Y/N Vehicle: Y/N Aid Bag: Y/N Litter: Y/N

Range Flag/Beacon (night only) up: Y/N

All barriers closed and road guards posted with comms with Range OIC? Y/N

Special instructions: (Require update every 4 hours until range is closed)

Estimated cloud cover (cannot exceed 80%) / Date Time Group: _____ /

Cloud ceiling (must be no less than 2000 ft. / Date Time Group: _____ /

Any demolitions conducted at night require approval by Range Officer).

Unit must maintain continuous communications with Range Control. Radio check must be made hourly while range is hot.

Signature of OIC: _____

-----Range Control Use Only-----

Range Opening time: _____ Posted on RFMSS by (initials): _____

CLOSING

Is range flag down/beacon off? Y/N

Number of personnel on site: _____ Any duds: _____

Number of rounds fired, including type and DODIC

Round Qty: _____ Type: _____ DODIC: _____

Round Qty: _____ Type: _____ DODIC: _____

Round Qty: _____ Type: _____ DODIC: _____

Round Qty: _____ Type: _____ DODIC: _____

Range Closing time: _____ Posted on RFMSS by (initials): _____

(Figure E-3)

UNMANNED AIRCRAFT SYSTEM RANGE OPENING / CLOSING CHECKLIST

PRIVACY ACT STATEMENT

AUTHORITY: DA Pam 385-63, NG RFMSS Guidance & Standards, Certificate of Authorization (COA) and CG Reg 385-1.
 PRINCIPAL PURPOSE: To Record names, signatures, and other identifiers for the purpose of validating the trustworthiness of individuals requesting access and use of Camp Gruber Restricted Operating Zones (ROZ), Non-Live Fire Ranges, Training Areas, and Training Venues.
 ROUTINE USES: For Unit to verify with Range Control To Occupy, Open or Close any Restricted Operating Zones, Training Areas and Training Venues.
 DISCLOSURE: Disclosure of this information is voluntary; however, failure to provide the requested information may impede delay or prevent further processing of this request.

PART I - (To be completed by OIC)

1. Unit:	2. Date: (dd/mm/yyyy)	3. Phone number:
4. Restricted Operating Zone Designation(s): (ROZ or Training Area)	5. NOTAM on File: (YY/MM/DD/yyyy-YY/MM/DD/yyyy)	
6. Primary OIC: (Rank, Last, First, Middle Initial)	7. Primary RSO: (Rank, Last, First, Middle Initial)	
8. Alternate OIC: (Rank, Last, First, Middle Initial)	9. Alternate RSO: (Rank, Last, First, Middle Initial)	
10. Unmanned Aircraft System Description: (Type of UAS Make/Model/Series)	11. Launch Site Grid: (MGRS)	12. Recovery Site Grid: (MGRS)

13. I understand by signing below that I acknowledge and will comply with all regulations and will only allow the flying of Authorized Aircraft approved for Launch. I understand that at no time will a NON-Live Fire Range be utilized with Live Fire Training. I further understand that any violation, or allow for the violation of DA Pam 385-63, CG_Reg_385-1, COA or applicable FM safety standards may result in decerification.

OIC Signature:

PART II - (To be completed by Range Control Fire Desk for any unit requesting HOT Status. Any requirement not verified results in the unit not authorized to go HOT.)

14. Range Requirements:

☐ OIC	☐ RSO			
☐ MEDIC	☐ DRIVER	☐ VEHICLE	☐ AID BAG	☐ LITTER
☐ RANGE FLAG UP	☐ BLINKING LIGHT ON (Night Only)			
☐ UAS VERIFIED (Type)	☐ FM/TM for SYSTEM BEING USED			

15. UAV Ranges: You must maintain continuous communication with Range Control with a radio check made every hour, on the hour, while the ROZ is open.

16. STATUS CHANGE:

OCC:	HOT:	TEMP COLD:	COLD:	CLEARED:

THIS SPACE INTENTIONALLY LEFT BLANK

Non-Federal Intergovernmental Reimbursement Agreement

Pursuant to Intergovernmental Cooperation Act, 5 ILCS 220/1 et seq. the Oklahoma Military Department (OMD)/Camp Gruber Training Site Command (CGTC) and the _____ (Licensee) enter into the following agreement.
(Local or State Agency)

1. Licensee will thoroughly clean the training area(s)/facilities after use, properly dispose of all waste, and leave the premises in the same condition as when occupied by Licensee.
2. Permission to use the above training area(s)/facilities is given as an accommodation to Licensee. The training center will charge the licensee identified incremental costs, to include direct costs, indirect costs, general and administrative costs.
3. Licensee shall exercise its privileges hereunder at its own risk. All injuries to Licensee's personnel or damage to Licensee's property incurred while utilizing the training area(s) or while on OMD/CGTC property are the responsibility of the Licensee, and OMD/CGTC will assume no liability therefore. Licensee is required to provide evidence of insurance, except that agencies of the State of Oklahoma are self insured and are not required to provide such evidence.
4. Licensee agrees to pay for the loss of, damage to, or destruction of OMD/CGTC, State, or Federal property resulting from or arising out of any act or omission by Licensee's personnel in connection with its use of the above training area(s).
5. To the extent permitted by law, Licensee shall indemnify, defend, and hold OMD/CGTC, its officers, employees and agents (the "Indemnified Parties") harmless from and against any and all damages, liabilities, fines, penalties, losses, claims, demands, suits, costs, and expenses (including, without limitation, reasonable attorneys' fees) sustained by the Indemnified Parties, and arising out of or resulting from any act(s) or omissions of the Licensee (or any entity or person performing on its behalf) in connection with Licensee's use of the training area(s).

IN WITNESS WHEREOF, the parties hereto have caused this Intergovernmental Agreement to be executed by their proper officers and officials.

LICENSEE

BY: _____ **DATE:** _____
NAME & TITLE PRINTED

(SIGNATURE)

CAMP GRUBER JOINT MANEUVER TRAINING CENTER

BY: _____ **DATE:** _____
NAME & TITLE PRINTED

(SIGNATURE) TRAINING CENTER CMDR/BASE OPNS MNGR

OKLAHOMA MILITARY DEPARTMENT STATE RESOURCE MANAGEMENT

BY: _____ **DATE:** _____
NAME & TITLE PRINTED

(SIGNATURE) STATE RESOURCE MANAGEMENT OFFICE

USPFO FOR THE STATE OF OKLAHOMA

BY: Charles R. Seitz _____ **DATE:** _____
NAME

(SIGNATURE) USPFO for the STATE OF OKLAHOMA

APPENDIX F
COMMANDER'S CERTIFICATION MEMORANDUM

F-1. Introduction

This appendix provides an example of the required certification memorandum. This document is required prior to issue of any range or training area to unit/organizational personnel. ONLY certified OICs and RSOs will be issued ranges or training areas.

Commander's Certification Memorandum
Example Format

(Unit Designation/Letterhead)

Office symbol (MARKS Code)

Date

MEMORANDUM FOR Commander, Camp Gruber Training Command, (Attn: Range Control), PO Box 29, Braggs, OK 74423-0029

SUBJECT: Certification of Officer In Charge (OIC) and Range Safety Officer (RSO)

1. The following personnel assigned or attached to this unit/organizations are certified to perform the duties as OIC or RSO of ranges and training facilities at Camp Gruber.

<u>NAME</u>	<u>GRADE</u>	<u>OIC</u>	<u>RSO</u>
<i>Last, First, MI</i>	<i>Pay Grade</i>	<i>Yes--all ranges</i>	<i>Yes--all ranges</i>
<i>Last, First, MI</i>	<i>Pay Grade</i>	<i>Yes--all ranges</i>	<i>Yes--all ranges</i>
<i>Last, First, MI</i>	<i>Pay Grade</i>	<i>Yes--small arms only</i>	<i>Yes--all ranges</i>
<i>Last, First, MI</i>	<i>Pay Grade</i>	<i>Yes--small arms only</i>	<i>Yes--all ranges</i>

2. These individuals meet the qualification requirements of DA Pam 385-63 and CGR 385-1 pertaining to range and training facility operations.

3. Above personnel understand that they must receive the required area safety briefings prior to issue of any range or training area.

///SIGNED///

Commander's Signature Block
(Grade O5 or above)

EXAMPLE

(Figure F-1)

APPENDIX G

RANGE OIC/RSO/MEDIC REQUIREMENTS

G-1. Introduction

This appendix defines the range OIC, RSO, and medical support requirements by type of range/facility. Additional requirements are listed in Appendix A and the range packet. Civilian agencies can substitute certain work related job specialties and titles in lieu of OIC/RSO grade, and for medic requirements. All substitutions are subject to the approval of Range Control.

Table G-1 Officer-in-charge and range safety officer appointment requirements							
Weapon system	OIC ¹			RSO ¹			Medic ⁸
	OFF	WO	NCO	OFF	WO	NCO	
Practice hand grenades; sub-caliber training devices; laser devices; firing devices; simulators & trip flares; small arms and machine guns.	X	X	E-6	X	X	E-5	X
Chemical agents and smoke. ²	X	X	E-6	X	X	E-5	X
Aerial gunnery & air defense weapons; live grenades, grenade launchers, and grenade machine guns; live mines & demolitions; tank & fighting vehicle cannons.	X	X	E-7	X	X	E-6	X
Field artillery. ³	X	X	E-7	X	X	E-6	X
Mortars	X	X	E-6	X	X	E-6 ⁴	X
Direct fire antitank rockets and missiles	X	X	E-7	X	X	E-6	X
Live-fire exercises using organic weapons, squad through company, battery, troop.	X	X	E-7	X	X	E-6	X
CALFEX/CAX using outside fire support, troop, battery, squad, platoon, company; or battalion and larger. ⁵	X	X	E-7	X	X	E-6	X
MOUT sites, Obstacle Course, Rappel Towers. ⁶	X	X	E-7	X	X	E-6	X
Training areas. ⁷	X ⁷	X ⁷	E-6 ⁷	X ⁷	X ⁷	E-5 ⁷	X ⁸
HMMWV Egress Assistance Trainer (HEAT)	X	X	E-6	-	-	-	CLS
EST and Training Aids, Devices, Simulators, and Simulations (TADSS) other than HEAT	X ⁹	X ⁹	E-6 ⁹	-	-	-	CLS
Notes: ¹ Civilians in the grade of GS-07 and above, or equivalent, may act as OIC; GS-05 and above, or equivalent, may act as RSO. ² For the Marine Corps, OIC and RSO must be E-4 and above and be chemical, biological, radiological, and nuclear (CBRN) MOS 5702/5711 when conducting CBRN or smoke training. For the Army, OIC and RSO must be CBRN qualified when conducting CBRN or smoke training. ³ Use of E-7s as OICs is authorized only when approved by the senior commander (Army)/installation commander (Marine Corps). Duties of the RSO are normally performed by either the battery executive officer or the platoon leader. ⁴ RSO for Marine Corps can be an E-5 for mortar training activities. ⁵ For battalion or larger CALFEX/CAX, OIC will be a field grade officer; exercise RSO will be E-7 or above. ⁶ Must have current Rappel Master Certification on file prior to issue of any rappelling facilities. ⁷ OIC and RSO are required only if units are using pyro or blank ammunition or are conducting high risk training. Unit not using ammunition are required to check in at range control prior to occupying the training area and is required maintain communication from their TOC and Range Control. ⁸ MOS qualified medic or corpsman will be present at all Live fire training. CLS may be used for non-live fire training. ⁹ TADSS operations requires an E6 (regardless of operator qualification) to sign for a TADSS facility or equipment, AND a qualified operator (regardless of grade). For use of portable TADSS on a range or training area, then OIC/RSO requirements for that range/training area shall also apply.							

Waivers **WILL NOT** reduce standards below those outlined in NGR 385-63 or MEDCOM PAM 40-12.

Medical requirements for CALFEX or High Risk training events cannot be waived. All exceptions will be considered on a case by case basis, based on Deliberate Risk Assessment and approved by the Range Control OIC.

(Figure H-1)



Collective Live Fire Checklist

Documents Required Prior To Issuing Range

UNIT:	EVENT/DATE:	GO/NO-GO
1) Personnel Weapons Qualification Roster (within 12 months of event).		☐ GO ☐ NO-GO
Comments:		
2) OC/Cadre Qualification Roster.		☐ GO ☐ NO-GO
Comments:		
3) Detailed Scenario with sketches/overlays that define the scheme of maneuver and integration of supporting fires.		☐ GO ☐ NO-GO
Comments:		
4) Coordination lines or checkpoints to identify maneuver limits.		☐ GO ☐ NO-GO
Comments:		
5) Limits of fire for each element and/or weapon (SDZ).		☐ GO ☐ NO-GO
Comments:		
6) Mortar/Artillery firing data, safety cards, shift information.		☐ GO ☐ NO-GO
Comments:		
7) Specific controls for firing while moving.		☐ GO ☐ NO-GO
Comments:		
8) Provisions for search, marking, and disposal of duds.		☐ GO ☐ NO-GO
Comments:		
9) Communication and control measures to include air observer if employed.		☐ GO ☐ NO-GO
Comments:		
10) Safety Checklist.		☐ GO ☐ NO-GO
Comments:		
11) Target System Support.		☐ GO ☐ NO-GO
Comments:		
12) Waiver Justifications (if required).		☐ GO ☐ NO-GO
Comments:		
13) Timeline.		☐ GO ☐ NO-GO
Comments:		
14) Risk Assessments.		☐ GO ☐ NO-GO
Comments:		
15) OVERALL COMMENTS:		

COLLECTIVE LIVE FIRE CHECKLIST
(Figure I-1)

APPENDIX J
NON-STANDARD LIVE FIRE CHECKLIST

(Figure J-1)

NON-STANDARD Live Fire Checklist		
Documents Required Prior To Issuing Range		
UNIT:	EVENT/DATE:	GO / NO-GO
1) Detailed Scenario sketches/overlays that define the Course of Fire and SDZs	☐ GO ☐ NO-GO	
Comments:		
2) Limits of fire for each element and/or Weapon, and DODIC Type.	☐ GO ☐ NO-GO	
Comments:		
3) LOI Detailing Type and Course of Fire	☐ GO ☐ NO-GO	
Comments:		
4) Specific controls for firing while moving.	☐ GO ☐ NO-GO	
Comments:		
5) Communication and control measures.	☐ GO ☐ NO-GO	
Comments:		
6) Target System Support.	☐ GO ☐ NO-GO	
Comments:		
7) Timeline.	☐ GO ☐ NO-GO	
Comments:		
8) Risk Assessments.	☐ GO ☐ NO-GO	
Comments:		
9) Waiver Justifications / Exceptions to Policy (if required).	☐ GO ☐ NO-GO	
Comments:		
10) OVERALL COMMENTS:		
RCNCOIC SIGNATURE:		
RCO SIGNATURE:		

APPENDIX K

AMMUNITION AND EXPLOSIVES SAFETY SOP

K-1. References

- a. AR 385-63
- b. AR 385-64.
- c. DA Pam 385-63
- d. DA Pam 385-64.
- e. FM 3-34.214
- f. TM 9-1300-206

K-2. Handling of ammunition on ranges

Ammunition will be transported and handled only under the direct supervision of qualified personnel who are thoroughly familiar with the safety regulations listed in the applicable references, including FM and/or TM for the weapon system ammunition utilized.

- a. No smoking is allowed within 50 feet of ammunition that is stored, being handled, or on the firing line. Troop concentrations will not be within 200 feet of ammunition storage or handling points.
- b. OICs will ensure that NO ammunition, explosives, or components thereof remain in the possession of any individual upon leaving the range.
- c. The OIC of any training exercise involving the use of blank ammunition will conduct a safety briefing for all personnel prior to issue of ammunition.
- d. Blank ammunition will only be issued to personnel with blank adapters mounted on their weapons.
- e. Ammunition will not be stored or transported in the cantonment area. Ammunition and explosives will enter/exit Camp Gruber through Gates 8/9 (Sicily Road/OK Highway 10). Coordination must be made prior to arrival for gate access and access to Ammunition Holding Area (AHA) or approved alternative storage site.

K-3. Field storage of ammunition

- a. Permission for overnight/field storage of ammunition, explosives, or components thereof, on ranges must be obtained from the Range Management Authority /NCOIC.
- b. Guards must be posted at temporary field ammunition storage sites at all times, and maintain primary (FM) and secondary communication with Range Control.
- c. All field storage of ammunition will be performed in accordance with DA Pam 385-64 and TM 9-1300-206.

K-4. Ammunition Holding Area (AHA) procedures

- a. The Ammunition Holding Area (AHA) is for temporary storage of ammunition, explosives, and pyrotechnics for units utilizing the ranges and training areas of Camp Gruber. This facility consists of twelve (12) storage magazines within a perimeter fence. All magazines are approved for storage of material with DOT Hazard Class 1.1 through 1.4, with the following exceptions:
 - (1) Material of Class 1.1 or 1.2 may not be stored in Containers 1 and 2 or Containers 9-12.
 - (2) Containers 3 through 8 may not be used for storage of Class 1.2 material with a fragmentation distance greater than 1200 feet.
 - (3) Total Net Explosive Weight (NEW) of all munitions stored within the AHA may not exceed 10,000 pounds.
- b. Inhabited Building Distance (IBD) for the AHA is 1250 ft.
- c. Units are responsible for ensuring that any mixed storage of material with differing Hazard Class is in accordance with the applicable regulations regarding compatibility and segregation of materials. Storage of blank ammunition with live ammunition should be avoided when possible.
- d. Units must provide Range Control with a copy of their DA Form 581 showing a listing of all ammunition by DODIC and quantity prior to using the site.
- e. Units are responsible for ensuring display of the appropriate Firefighting Guidance Symbol IAW AR 190-11 mounted to the left of the AHA entry (numeral "1" for Class 1.1, numeral "2" for Class 1.2, etc.). Symbol will represent the class with the greatest danger stored within the AHA (Class 1.1 has the greatest danger, 1.4 has the least). Coordination with Range Control and/or other unit(s) may be necessary to determine the appropriate symbol when AHA is occupied by more than one unit.
- f. Units will assume all security requirements IAW AR 190-11 and all accountability requirements IAW DA Pam 710-2 when utilizing the AHA.
- g. Only vehicles approved for DOT Hazmat transportation will enter the AHA.

h. At least one (1) representative of the using unit with authorized access to the AHA will remain on post at all times while unit munitions are stored in the AHA. Range Control must be provided emergency contact information for this representative.

K-5. Demolition Ranges

- a. Light Demo Range
 - (1) A maximum of 250 lbs. of non-fragmenting explosives can be surface detonated at a time.
 - (2) A maximum of 320 lbs. of non-fragmenting explosives can be subsurface detonated at a time.
 - (3) A maximum of 2,500 lbs. of non-fragmenting explosives can be stored on the range.
 - (4) Exclusion area is 2,603 feet.
- b. Breach Range
 - (1) A maximum of one (1) pound of non-fragmenting explosives can be surface detonated at a time.
 - (2) A maximum of 25 lbs. of non-fragmenting explosives can be stored on the range.
 - (3) Exclusion area is 200 feet.
- c. The Light Demo Range and the Breach Range cannot be operated simultaneously.

K-6 Risk Management

- a. A Deliberate Risk Assessment Worksheet (DD Form 2977) will be filled out for all ammunition and explosive activities to include storage and transportation as outlined in DA PAM 385-64.
- b. All charges will use a dual-primed system (dual-initiated, dual-fired dual-primed) method to protect against misfires.

Figure K-1
AHA Layout



APPENDIX L

AIRCRAFT NOISE COMPLAINT QUESTIONNAIRE

This questionnaire is to be used whenever a person contacts your office concerning aircraft noise problems. The form contains a series of steps involving questions to be asked of the inquirer, along with directions to be followed for various types of answers. Complete the following before beginning with Step 1.

- a. Date/time complaint received: _____
- b. Complaint received by: _____
- c. Method of complaint (please check):
 - (1) Telephone _____
 - (2) Personal visit _____
 - (3) Letter _____

STEP 1

Question: Are you calling to obtain information or to make a formal complaint?

- a. If information: Provide information, terminate interview, and file this form.
- b. If complaint: Go to STEP 2.

STEP 2

Read the following statement to the inquirer:

"In order to help avoid future noise disturbances, we have developed a series of questions designed to pinpoint the exact cause of your complaint. I would like to ask you these questions."

Question: Are you willing to answer some questions about your complaint?

- a. If yes: Go to STEP 3.
- b. If no: Terminate interview and file this form.

STEP 3

Question: What is your name, address, and telephone number?

Question: Where are you located in relation to our facility?

North _____ Northeast _____ East _____ Southeast _____

South _____ Southwest _____ West _____ Northwest _____

Distance from facility _____ Near city _____

Question: When did the annoying noise occur? Date _____ Time _____

Question: What type of aircraft was making the noise?

Helicopter _____ Airplane _____ Type (if known) _____ Quantity _____

APPENDIX L
AIRCRAFT NOISE COMPLAINT QUESTIONNAIRE (Continued)

STEP 4

Question: Where were you when the aircraft flew over?

Indoors_____ Outdoors_____ Driving_____

Question: How did the noise affect you?

Startled me_____ Woke me_____ Annoyed me_____ Frightened the pet(s)_____

Disturbed livestock_____ Rattled the house_____ Woke a child_____

Interfered with conversation/other activity_____ Interfered with TV/radio_____

Question: Did you see the aircraft or hear it pass by? Saw_____ Heard only (go to STEP 6)_____

STEP 5

Visual description of aircraft:

Type and number of aircraft (if known): _____

Check one of the following:

- _____ Helicopter with one rotor
- _____ Helicopter with two rotors
- _____ Helicopter with unknown number of rotors
- _____ Jet with one engine
- _____ Jet with two engines
- _____ Jet with four engines
- _____ Jet with unknown number of engines
- _____ Plane with one propeller
- _____ Plane with two propellers
- _____ Plane with four propellers
- _____ Plane with unknown number of propellers

Question: What color was the aircraft? _____

Question: Did it have a red cross or any other special markings? _____

Question: In what direction was the aircraft flying? _____

Question: About what altitude would you estimate the aircraft was flying (AGL)? _____

Any other information: _____

APPENDIX L
AIRCRAFT NOISE COMPLAINT QUESTIONNAIRE (Continued)

STEP 6

Question: How many aircraft do you think were in the flight? _____

Question: What do you think the aircraft was/were doing (check below)?

_____ Landing
_____ Taking off
_____ Passing by
_____ Circling

Question: What direction do you think the aircraft was/were flying? _____

Question: What altitude do you think the aircraft was/were flying? _____

END

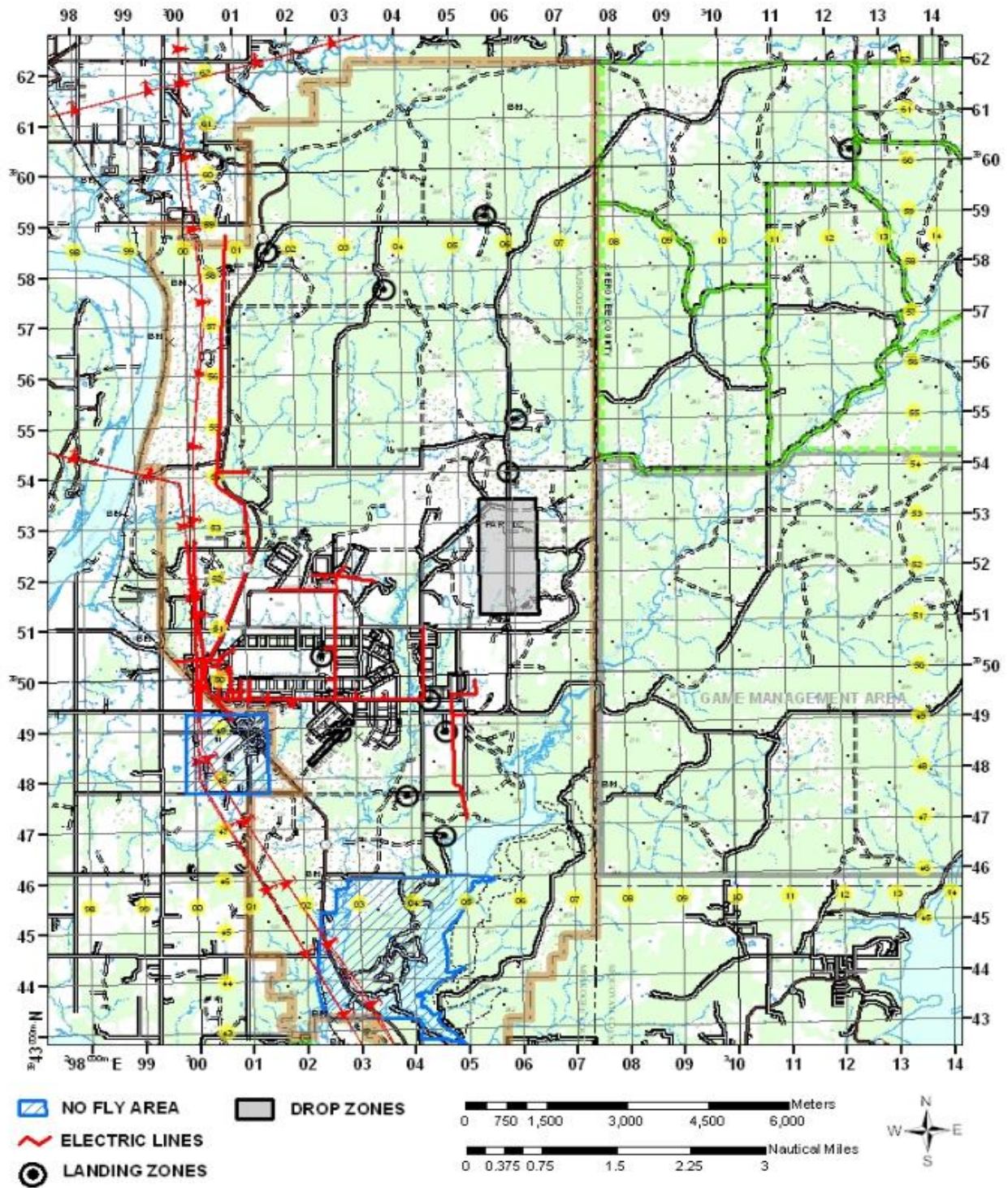
Finished: Thank you for your time.

Now, **TERMINATE** the interview politely as possible. Assure the person that you will do what you can to investigate and resolve the situation and be in contact with them. Always thank the complainant for calling when you end the interview.

DISTRIBUTION:

Copy to: 1 - CGTC Range Control
 1 - OKSAO
 1 - OKFAC
 1 - OKENV
 1 - OKSAFE file

FLIGHT HAZARDS / LANDING ZONES



(Figure L-1)

APPENDIX M

NON-LETHAL MUNITIONS

M-1. Definition

Department of Defense Directive (DODD) 3000.3 defines non-lethal weapons (NLW) as "weapons that are explicitly designed and primarily employed so as to incapacitate personnel or materiel while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment." Furthermore, "unlike conventional lethal weapons that destroy their targets principally through blast, penetration, and fragmentation, NLW employ means other than gross physical destruction to prevent the target from functioning. NLW are intended to have relatively reversible effects on personnel and materiel."

M-2. General

- a. The term "non-lethal" does not mean zero mortality or nonpermanent damage. Fatal injuries can occur if munitions are employed at a distance that is less than the determined minimum safe engagement range.
- b. The Inter-Service Non-Lethal Individual Weapons Instructors Course is the only course in the Department of Defense that is certified to produce instructors who will train individuals in the proper employment of NLWs.
- c. Head shots with NLW are not authorized.
- d. Many non-lethal munitions have both a maximum effective range and minimum target engagement distance. Individuals short of the minimum target engagement distance may suffer severe injuries or death. The effects of most non-lethal munitions are greatly decreased at longer ranges.
- e. Hazardous effects from certain NLW munitions can be experienced behind the firing line.
- f. Non-Lethal munitions that are authorized for usage on Camp Gruber are DODICs: 12GA - M1012 (AA51) and M1013 (AA52); 40MM - M1006 (BA06) and M1029 (BA13).
 - (1) The M1012 (AA51) projectile is a fin-stabilized projectile made of rubber designed for point targets; minimum engagement is 10m with a maximum effective range of 20m.
 - (a) Minimum safe distance for personnel, equipment and facilities for the M1012 (AA51) is 50m behind and 300m to the left and right of the firing line.
 - (2) The M1013 (AA52) is a ball projectile and consists of 18 PVC rubber compound balls designed for crowds/groups; minimum engagement is 10m with a maximum effective range of 20m.
 - (a) Minimum safe distance for personnel, equipment and facilities for the M1013 (AA52) is 20m behind and 150m to the left and right of the firing line.
 - (3) The M1006 (BA06) is a sponge grenade cartridge comprised of a 40mm bullet-shaped foam rubber round, and the minimum engagement for this NLW is 10m, with a maximum effective range of 20m. DO NOT skip fire this round.
 - (a) Minimum safe distance for personnel, equipment and facilities for the M1006 (BA06) is a 44m radius behind the firing line.
 - (4) The M1029 (BA13) is a crowd-dispersal grenade consisting of 48 rubber balls and the minimum engagement range for this NLW is 10m and the maximum effective range is 30m.
 - (a) Minimum safe distance for personnel, equipment and facilities for the M1029 (BA13) is 15m behind and 110m to the left and right of the firing line.
 - (5) Firing of NLW into personnel, wildlife or surfaces that may potentially rebound munitions is strictly prohibited.

Appendix N

SIMMUNITIONS / SIMULATORS / PYROTECHNIC SIGNALS / SMOKE GRENADES

N-1 SIMMUNITIONS

- a. All personnel engaged in close combat mission capability kit (CCMCK) force-on-force training will wear PPE in accordance with the procedures, restrictions, and other guidance contained in technical/operator manuals, references, and/or pamphlets (TM 9-6920-3700-10). No personnel will be allowed within 75m of the outermost boundary of the training area when force-on-force training is being conducted without meeting the minimum PPE safety requirements.
- b. All participants will be instructed that no head shots will be taken.
- c. The minimum engagement distance is 5m.
- d. All participants will be inspected by the RSO, NCOIC, or OIC prior to the initiation of training to ensure that PPE is worn and that employed individual weapons (M16/M4/M249/M9/M11) have been properly converted to fire low-velocity marking ammunition.
- e. Single hearing protection is required to be worn within 5m of 9mm and 5.56mm weapons using CCMCK marking ammunition during firing.

N-2 PYROTECHNIC SIGNALS

- a. Pyrotechnics range from flares to signals to simulators. Pyrotechnic signals supplement or replace normal communication means, mark locations, chart enemy courses, and provide illumination for search and rescue missions. The four types of pyrotechnic signals are:

- Communication signals (Star Clusters, Star Parachutes, Smoke Parachutes, and Smoke Grenades)
- Trip flares.
- Simulated signals (Artillery Ground Burst Simulator, Hand Grenade Simulator, and Booby Trap

Simulators)

- Illumination ground signal kits (Pen Flares)

(1) COMMUNICATION SIGNALS

(a) The two classifications of pyrotechnic communication signals are handheld signals and ground smoke signals. Both types of signals come in varied color patterns. Soldiers can use these patterns to coordinate troop movements and, in the case of an emergency, designate pick-up points.

(2). TRIP FLARES

- (a). Use surface trip flares to—

- Provide early warning of infiltration of enemy troops or signaling.
- Illuminate an immediate area.
- Ignite fires.
- Force the enemy to withdraw.

(3). SIMULATED SIGNALS

(a). Some uses for pyrotechnic simulators are to provide early warning signals and to illuminate the immediate areas; however, the primary design is to imitate the sounds and effects of combat detonations during field training exercises.

(4). ILLUMINATION GROUND SIGNAL KITS

(a). The pen gun flare supports the small-unit leader in fire control, maneuver, and initiating operations such as ambushes. These signals are also a component of air crewmen's survival vest and used for distress signaling or to identify ground locations for aircraft.

N-3 DODICS

BLANKS	
A075	CTG 5.56MM BLANK W/M27 LINKS (SAWS)
A080	CTG 5.56MM BLANK M200 F/RIFLE M16
A111	CTG 7.62MM BLANK M82 LINKED GRADE MG
A112	CTG 7.62MM BLANK M82 F/RIFLE M14 AND MG M60
A598	CTG CAL.50 BLANK M1A1 W/M9 LINKS
CCMK	
AB09	CTG, 5.56MM, M1042, BLUE, PRACTICE, CLIPPED
AB10	CTG, 5.56MM, M1042, RED, PRACTICE, CLIPPED
AB11	CTG, 5.56MM, M1042, YELLOW, PRACTICE, CLIPPED
AB12	CTG, 9MM, M1041, YELLOW, PRACTICE
AB13	CTG, 9MM, M1041, BLUE, PRACTICE
AB14	CTG, 9MM, M1041, RED, PRACTICE
PYROTECHNIC SIGNALS	
B506	CTG 40MM RED SMOKE GROUND MARKER M713
B508	CTG 40MM GREEN SMOKE GROUND MARKER M715
B509	CTG 40MM YELLOW SMOKE GROUND MARKER M716
B535	CTG 40MM WHITE STAR PARACHUTE M583 FOR LAUNCHER M7
G930	GRENADE HAND SMOKE HC AN MB W/FUZE M201A1
G940	GRENADE HAND M18 GREEN SMOKE W/FUZE M201A1
G945	GRENADE HAND M18 YELLOW SMOKE W/FUZE M201A1
G950	GRENADE HAND M18 RED SMOKE W/FUZE M201A1
G955	GRENADE HAND M18 VIOLET SMOKE W/FUZE M201A1
G978	GRENADE LAUNCHER SMOKE SCREENING TRAINING M82
G982	GRENADE, HAND SMOKE, TA, PRACTICE, M83
K864	SMOKE POT, GROUND SGF-2 M6
K865	SMOKE POT, GROUND HC M1
K874	SMOKE POT, GROUND HC MK3-0
L119	SIGNAL KIT FOLIAGE PENETRATION RED
L283	MK 124-0 SIGNAL SMOKE AND ILLUM
L305	SIGNAL ILLUM GROUND GREEN STAR PARACHUTE M195
L306	SIGNAL ILLUM CLUSTER M158 T133E2 RED STAR HAND HEL
L307	SIGNAL ILLUM GROUND CLUSTER M159 T137E2 WHITE STAR
L311	SIGNAL ILLUM GROUND PARACHUTE M126 T72 RED STAR HA
L312	SIGNAL ILLUM GROUND PARACHUTE M127 T73 WHITE STAR
L314	SIGNAL ILLUM GROUND CLUSTER M125 SERIES GREEN STAR
L366	SIMULATOR PROJ AIR BURST M74 SERIES
L495	FLARE SURFACE TRIP M49 SERIES
L594	SIMULATOR PROJECTILE GROUND BURST M115A2
L598	SIMULATOR BOOBY TRAP FLASH M117 W/ACCESSORIES
L599	SIMULATOR BOOBY TRAP ILLUMINATING M118 W/ACCESSORI
L600	SIMULATOR BOOBY TRAP WHISTLING M119 W/ACCESSORIES
L601	SIMULATOR HAND GRENADE M116 SERIES
CS/CN	
G905	GRENADE, HAND RIOT CN-DM M6
G922	GRENADE, HAND RIOT CS XM47E3/M47
G924	GRENADE, HAND RIOT CS-1 M25A2
G927	GRENADE, HAND RIOT CN-1 ABC-M25A1
G960	GRENADE, HAND RIOT CN M7, A1
G963	GRENADE, HAND RIOT CS M7A2, A3
K765	RIOT CONTROL AGENT, CS CAPSULE (GAS CHAMBER)

Appendix O

References

Section I

Required Publications

- CGR 210-1**
Camp Gruber Joint Maneuver Training Center-Light Regulation
- CGR 385-10**
Camp Gruber Joint Maneuver Training Center-Light Safety Regulation
- CGR 200-1**
Environmental Protection and Enhancement
- CGR 200-3**
Environmental Quality
- NGR 385-63**
Army National Guard Range Safety Program, Policy, and Standards
- NGR 385-64**
Army National Guard Ammunition and Explosives Safety Standards
- AR 385-63**
Range Safety
- DA Pam 385-63**
Range Safety
- DA PAM 385-64**
Ammunition and Explosives Safety Standards
- AR 385-10**
Army Safety Program
- DA Pam 385-10**
Army Safety Program
- DA PAM 385-30**
Composite Risk Management

Section II

Related Publications

- AR 75-1**
Malfunctions Involving Ammunition and Explosives (RCS CSGLD--1961(MI))
- AR 95-2**
Airspace, Airfields/Heliports, Flight Activities, Air Traffic Control, and Navigational Aids
- AR 200-1**
Environmental Protection and Enhancement
- AR 200-2**
Environmental Effects of Army Actions
- AR 200-3**
National Resources -- Land, Forest, and Wildlife Management
- AR 350-19**
The Army Sustainable Range Program
- AR 350-38**

Training Device Policies and Management

DA Pam 385-30

Mishap Risk Management

DA Pam 385-40

Army Accident Investigation and Reporting

DA Pam 385-90

Army Aviation Accident Prevention Program

FM 21-10

Field Hygiene and Sanitation

FM 21-305

Manual for the Wheeled Vehicle Driver

NGR (AR) 200-3

State and Federal Environmental Responsibilities

MEDCOM Pam 40-12

Medical/Dental Site Support Plan to Annual Training

MIL-HDBK-828A

Military Handbook, Laser Range Safety

TC 25-8

Training Ranges

ATP 5-19

Risk Management