

**FIRING/NONFIRING DATA**

For use of this form, see MCoE Regulation 350-19; the proponent is DPTMS, Range Division.

1. DATE OF REQUEST

16 Sep 2015 **Log #9-7-15**

2. TO

Chief, Range Division,  
Directorate of Plans, Training, Mobilization, and Security  
Fort Benning, GA 31905

3. RANGE: Buchanan

4. TITLE: Zero, ALT C, Qual, Barricade, AMT/CQM, Shoothouse

5. PROBLEM NO: N/A

6. THRU (Unit/Activity)

Chief, Range Operations  
Fort Benning, GA. 31905

7. FROM (Unit/Activity)

Survey, Range Operations  
Fort Benning, GA. 31905

**SECTION I, TYPE OF TRAINING**

a. Live Fire

b. Non-live Fire

c. CP/Controller Coordinates **0131 7991**

**SECTION II, DEMOLITIONS/GRENADES/MINES/PYROTECHNICS**

a. Coordinates

b. Type

c. Model/DODAC

d. Size of Charges

**SECTION III, WEAPONS/AMMUNITION REQUESTED**

a. Coordinates of Weapons Position

b. Type Weapon/Model Number

c. Type Ammunition

d. Left Limit  
 deg  mil

e. Right Limit  
 deg  mil

See Weapons & Ammo List

**SECTION IV, LIVE FIRE EXERCISES (Attach the following)**

**SECTION V, NON-LIVE FIRE TRAINING**

a.  Scenario of training to be conducted

a. Training area(s) to be occupied

b.  Sketch of area

b.  Scenario of training to be conducted

c.  Risk Assessment

c.  Sketch of area(s) to be occupied

d.  Attach FB Form 350-19-2-E-R if mortar or artillery is being fired

d.  Risk Assessment

e. Name/Rank of Requesting Officer

**John T. Flores**

e. Name/Rank of Major Unit S3/Commander

**Brad S. Tesch, GS12, Chief, Range Operations**

Signature



Signature



**SECTION VI, FOR RANGE DIVISION USE**

a. DATE **17 Sep 15**

b. TO

Chief, Range Operations  
Fort Benning, GA. 31905

c. FROM

Range Division,  
Directorate of Plans, Training,  
Mobilization, and Security  
Fort Benning, GA 31905

d. Roadblocks to be closed: See Road Block Enclosure

e. Road(s) to be closed/road barrier locations:

f. Remarks: Laser warning signs will be in place prior to use. Must have approved waiver to shoot steel targets.

g. This approval expires:

h. DATE **Indef**

i. Approving Official

**Brad S. Tesch**

Chief, Range Division  
Directorate of Plans, Training, Mobilization, and Security

Signature





DEPARTMENT OF THE ARMY  
HEADQUARTERS, UNITED STATES MANEUVER CENTER of EXCELLENCE  
1 KARKER STREET  
FORT BENNING, GEORGIA 31905-4500

IMSE-BEN-PLT-R

5 February, 2015

MEMORANDUM FOR Director, Plans, Training, Mobilization and Security, Fort Benning, Georgia 31905

SUBJECT: Buchanan Range, 25m/10m Zero, Alt-C Qualification, AMT/CQM, BMS, Alt Firing Positions (Standing, Kneeling, and Squatting), Stationary Barricade Firing, Reflexive Fire, Shoot house and Stations 1-7.

1. REFERENCES:

- a. Army Regulation 385-63, 30 January 2012, Range Safety.
- b. DA Pamphlet 385-63, 16 April 2014, Range Safety.
- c. MCoE 350-19, March 2013, Range and Terrain Regulation.
- d. MCoE Policy Memorandum 385-63-9, 8 May 2014, Use of Simulations in Marksmanship and Maneuver Training.

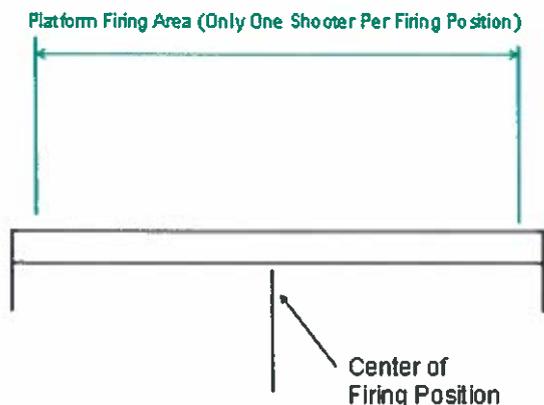
2. **Purpose:** The purpose of this memorandum is to outline the training concept and scenario for Firing on Buchanan Range using live ammunition. The training will familiarize Soldier's on firing techniques relative to combat conditions in the contemporary operating environment, firing realistic training scenarios from existing firing points and targets arrays with live munitions. The Marksmanship/Zero Range has 50 Lanes to execute the prescribed training. During the execution of training at Buchanan Range, Soldiers will be able to train on the following tasks with this training packet.

- 25m/10m Zero (Day and Night)
- Alt-C Qualification (Day and Night)
- AMT/CQM
- Battle March and Shoot
- Alt Firing Positions (Standing, Kneeling, and Squatting, Day and Night)
- Stationary Barricade Firing (Day and Night)
- Non-Barricade Reflexive Fire
- Simulation Munitions

3. **25m/10m Zero:** Fire from existing firing points at the 25m/10m meter targets with M16/M4/MK16 rifle for the 25m Zero, and the M249/M240/MK48/MK46/MK17, 10m Zero . Four foot target frames will be used through-out this scenario. Firing orders will move to their firing points at the low ready keeping their weapon pointed down range. Soldiers will receive ammunition from the Ammunition Supply Point, (ASP). Soldiers will place their weapon on the Platforms. Soldiers waiting to fire will place their weapon to the rear of the platform either on the right side or left side. Soldiers will not Lock and Load their weapons until told to do so by the Tower NCOIC. All Soldiers will move on-line down to their targets.

IMSE-BEN-PLT-R

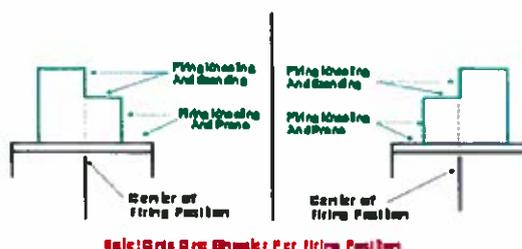
SUBJECT: Buchanan Range, 25m/10m Zero, Alt-C Qualification, AMT/CQM, BMS, Alt Firing Positions (Standing, Kneeling, and Squatting), Stationary Barricade Firing, Reflexive Fire, Shoot house, and Stations 1-7.



**Figure #1 Positions of the Zero/Alt-C Firing on Buchanan Range**

4. **Fire Standing, Kneeling and Prone:** Will be executed IAW FM 3-22-9 chapter 7. Soldiers will fire from fixed firing points at existing 25 meter targets in their firing lane. Soldiers will determine the firing position that offers the best chance of killing the target. Soldiers will conduct load fire reduce stoppage, magazine changes, and target engagement during this iteration. **See figure #1 above for authorized firing positions from the platforms.**

5. **Fire over and around Barricade:** Will be executed IAW FM 3-22-9 chapter 7. This firing technique trains the Soldiers on the firing positions used in an urban environment. Soldiers will fire from fixed firing points at existing 25 meter targets in their firing lane. Soldiers will determine the firing position behind a barricade wall that offers the best chance of killing the target without exposing the Soldier to killing fire. Soldiers will conduct load fire reduce stoppage, magazine changes, and target engagement during this iteration. **Authorized Barricade placement positions. (See Figure #2 Below)**



**Figure #2 Authorized Barricade Placement Positions**

6. **Stress Fire:** Soldiers will fire from fixed platform firing positions at the ready line in the prone supported, unsupported and kneeling firing positions. Soldiers will move from an unspecified distance to the actual range being fired on. Soldiers will carry a simulated casualty as a squad over a mile course ending at the range. Soldiers will immediately proceed to the ammunition point and be issued rounds. Soldiers will proceed to the firing line and fire the standard qualification scenario. **There will only be one firer per firing point on this range. Soldiers are not permitted to have ammunition when they are not occupying the range. (See Figure #1 and #2)**

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7. **ARM 3 (Day), ARM 3N (Night)** : Soldiers will train and fire under controlled conditions at all times. Soldiers will familiarize with the Close Combat Optic (CCO), Infrared Laser Device (PAQ 2, 4, 15), and NVG's (ANPVS14), to engage targets during the day and night. During the day portion of the training, a tower official gives all firing commands. During the night portion, a firing point official gives firing commands with the tower official acting as overall safety. Soldiers will fire from fixed platform firing points in the prone supported, prone unsupported and kneeling firing positions. The Soldiers are instructed when to load their weapons, and when to engage targets. At the conclusion of the exercise, Firers cannot exit the Firing line until they have been cleared by a Range Safety. Weapons will be cleared by rodding/visual inspection on and off the firing line. DS/Safety/Cadre will have the option to use the one-piece brass rod or clearing barrels (if available) to clear all weapons off the firing line. All downrange feedback will be given from the tower. (See Figure #1 and #2)

8. **Alt-C Qualification**: The Alt-C Qualification will be conducted in accordance with lane firing on assigned points. All firers will only fire at their specific target. (see figure #1 on Zero/Alt-C platform firing area)

9. **Basic, Advanced, Stationary Barricades, Reflexive fire.**

1. Phase 1: Range Set-up. Unit will not need to call Range Operations for Check Fire Status prior to range set-up. Lanes will be set up in the following manner:

a. Prone Firing Position (Firing Line). All orders will be given by the Drill Sergeant/Safety/Cadre on that lane. The firer will advance to the firing line, load one 10-round magazine, assume the prone firing position, and engages first stationary colored target at 25-meters while correcting any malfunctions (there will be **NO** inducing of malfunctions on this range). Once the last round has been fired the firer will place weapon on "safe", conduct a magazine change. The Drill Sergeant/Safety/Cadre will ensure that the firer conducts all safety checks.

b. Barricade Kneeling Firing Position (Fire line). The firer should have one 10-round magazine loaded. The firer kneels at barricade on firing line. The firer then assumes the kneeling firing position and engages the second stationary colored target at 20-meters while correcting any malfunctions. Once the last round has been fired the firer will place weapon on "safe", conduct a magazine change and prepare to move to the next firing position. The Drill Sergeant/Safety/Cadre will ensure that the firer conducts all safety checks.

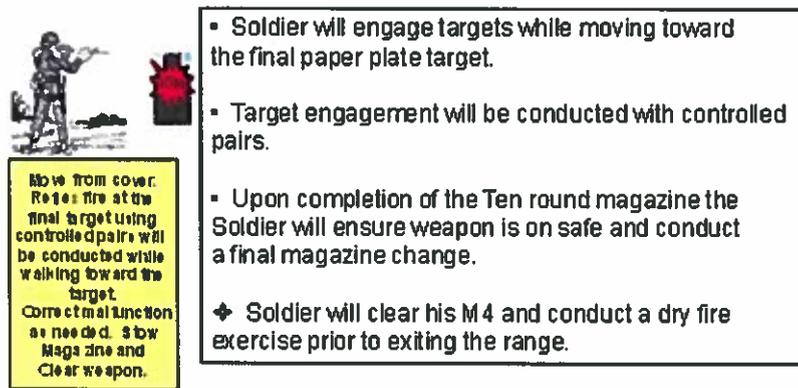
c. Barricade Standing Firing Position(Fire line). The firer should have one 10-round magazine loaded. The firer assumes the standing supported firing position behind the barricade, and engages the third stationary colored target at 15-meters while correcting any malfunctions. Once the last round has been fired the firer will place weapon on "safe" and prepare to conduct the final portion of the range. The Drill Sergeant/Safety/Cadre will ensure that the firer conducts all safety checks prior to moving.

2. Phase 4. **Ready, Up, Reflexive**, (Fire line). The firer should have the last 10-round magazine loaded. The firer centers himself on the target in his/her lane and assumes a standing reflexive firing position directly in front of the barricade. The firer will be given the command of walk. **There will be no 180 degree turns during the reflexive fire exercise.** The firer will take a knee when correcting a malfunction and when all ammunition is expended.

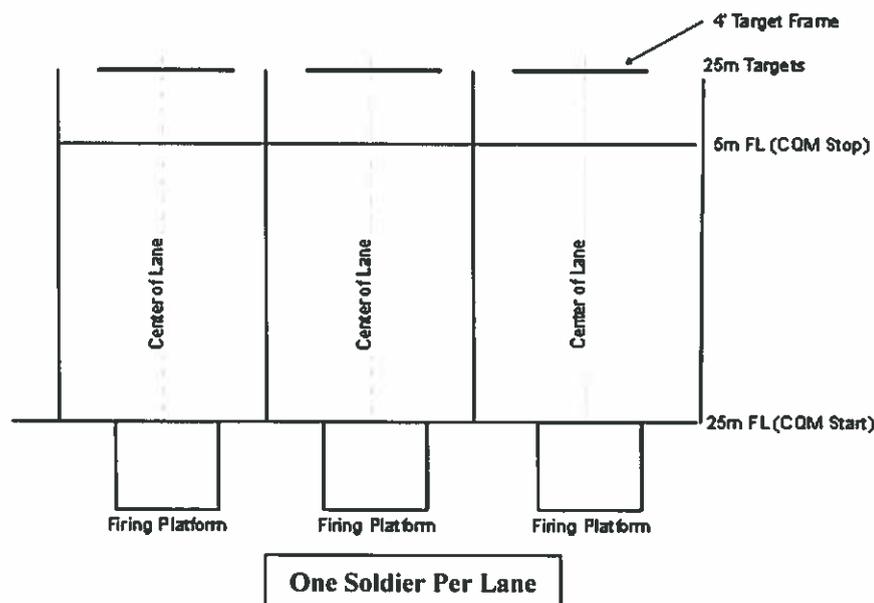
## IMSE-BEN-PLT-R

SUBJECT: Buchanan Range, 25m/10m Zero, Alt-C Qualification, AMT/CQM, BMS, Alt Firing Positions (Standing, Kneeling, and Squatting), Stationary Barricade Firing, Reflexive Fire, Shoot house, and Stations 1-7.

Range Safety will score each successful hit plus assess the firer's stance and individual skill as T, P, or U on the score card. (See Figure #3 and #4 below for Set up)



**Figure 3. Firing Line, Reflexive Fire**



**Figure 4. Reflexive/CQM Firing Setup**

10. Clear weapon (Rod or Clearing Barrel). Each Range Safety ensures that weapons are properly cleared and all magazines are properly stowed. Once each lane is clear, then the firing order will return to the ready line and exit the range.

a. Phase 4: Range Clean-up. Unit will call Range Operations for a "Check Fire Status" prior to range clean up.

b. Safety Brief – All personnel will receive the range safety brief prior to the demonstration. All personnel will receive a laser safety brief on the hazards of lasers.

c. Demonstration – A live fire demonstration will be conducted by experienced cadre prior to the dry fire rehearsal.

## IMSE-BEN-PLT-R

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### 11. Live Fire Exercise Safety:

a. Handling of ammo – All ammunition will be loaded into magazines at the ammo point. Soldiers cannot receive ammo unless they have successfully completed the BRM Task Assessment.

b. Range Safeties will supervise proper stowage of magazines. Extra loaded magazines will be placed inside the Soldiers ammo pouches and will not be loaded until all Soldiers are online and the firing line is cleared for firing.

c. Weapon safety when loaded – All orders will be given by the lane safety while magazines are loaded into the weapon. Range Safeties will ensure safe weapon orientation throughout the entire live fire exercise.

### 12. Shoot House:

1. The purpose of this training is to demonstrate and execute room clearing procedures using live ammunition. Instructors will perform 100% weapons and ammo checks to ensure no live ammo is mixed with blank ammo. Training will consist of multiple room clearing procedures, single room and single team to multiple rooms. This shoot-house is used for Dry/Blank and Live Fire Training. Each team will successfully complete, to standard, dry, blank and live fire iterations of the "Single Team, Single Room" Scenario (see attached concept sketch). Once each team of a squad has completed this scenario, the squad will then conduct dry, blank and live fire iterations of the "Single Team, Multiple Room" Scenario. Range safety personnel will control the environment from safe positions on the ground and the cat-walks. Participants will use all equipment (ACH and Body Armor) necessary for training IAW Facility and post Regulations. Soldiers will load after inside shoot house and clear before exiting the shoot house. Range safety personnel will control the loading and locking of all weapons and will ensure all weapons are properly cleared after the training event. All blank adapters will be removed prior to LFX.

2. Concept for Single Team/Single Room (Four Soldiers): The four Soldiers will draw their appropriate ammunition from the ammo point and will not lock/load their weapons. The safety that's on the ground will brief the team on the event. The team will proceed in a single file through the entry point with weapons pointed down to the ground and not loaded until they have reached the entrance of the shoot house. The team will then be told to lock and load their weapons and pointed down to the ground. The team will proceed through the entrance. The 1<sup>st</sup> and 2<sup>nd</sup> Soldier will then proceed to the right and enter the room and start engaging their targets. The 1<sup>st</sup> Soldier will go left and the 2<sup>nd</sup> Soldier will go right but, will not engage the civilian target. The 3<sup>rd</sup> and 4<sup>th</sup> Soldier will establish security for the 1<sup>st</sup> and 2<sup>nd</sup> Soldier until they have completed their mission (Option #1). The second option will be identical except that the 3<sup>rd</sup> and 4<sup>th</sup> Soldier will not provide security but, will proceed to the left room and engage targets. The 3<sup>rd</sup> Soldier goes left and the 4<sup>th</sup> Soldier will go right. Upon completion of the mission the team will ensure that all weapons are locked and cleared of all ammunition prior to exiting the shoot house. The following procedures mentioned above apply to all teams firing the event.

3. Concept for Single Team/Multiple Rooms (Four Soldiers): The four Soldiers will draw their appropriate ammunition from the ammo point and will not lock and load their weapons. The safety that's on the ground will brief the team on the event. The team will proceed in a single file through the entry point with weapons pointed down to the ground and not loaded

## **IMSE-BEN-PLT-R**

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until they have reached the entrance of the shoot house. The team will then be told to lock and load their weapons and pointed down to the ground. The team will proceed through the entrance. The 1<sup>st</sup> and 2<sup>nd</sup> Soldier will then proceed to right and enter the room and start engaging their targets. The 1<sup>st</sup> Soldier will go left and the 2<sup>nd</sup> Soldier will go right but, will not engage the civilian target. The 3<sup>rd</sup> and 4<sup>th</sup> Soldier will establish security for the 1<sup>st</sup> and 2<sup>nd</sup> Soldier until they have completed their mission. Upon completion of their event the 1<sup>st</sup> and 2<sup>nd</sup> Soldier will place all weapons on safe and proceed through the second room to their left and slowly entering the hallway where the other two Soldiers are providing security. The 1<sup>st</sup> and 2<sup>nd</sup> Soldier will then provide security for the 3<sup>rd</sup> and 4<sup>th</sup> Soldier. The 1<sup>st</sup> and 2<sup>nd</sup> Soldier will ensure that they are facing down the hallway and not towards the rooms when proving security. The 3<sup>rd</sup> and 4<sup>th</sup> Soldier will proceed to the left room and start engaging targets. The 3<sup>rd</sup> Soldier goes left and the 4<sup>th</sup> goes right. Both Soldiers will then proceed through the second room and will encounter a civilian (No engagement). Both Soldiers will then proceed to the third room and will start engaging their targets. The 3<sup>rd</sup> Soldier will engage the target on the right and the 4<sup>th</sup> Soldier will engage the target straight forward. Upon completion of the mission the team will ensure that all weapons are locked and cleared of all ammunitions prior to exiting the shoot house. The following procedures mentioned above apply to all teams firing the event.

a. If multiple teams and multiple rooms are to be conducted, Unit must place additional safeties on the cat walk to watch the event and keep the teams safe.

b. Prior to any LFX, signs will be posted in clearly visible areas around the shoot-house to alert all personnel that live rounds are being used and not to enter the shoot-house without the proper safety equipment. Additionally, gate guards will be placed at the entrance of the range complex to ensure monitored access to the range. All participants will have the appropriate safety equipment on (eye/ear pro, body armor and ballistic helmets). A safety sweep of the perimeter and interior of the shoot house will be conducted NLT 30 min prior to execution to ensure that no unauthorized personnel are within the training boundaries.

### **13. Shoot House Safety:**

1. The OIC and RSO will brief all Soldiers on the following.

a. All Soldiers are safety officers. Anyone observing an unsafe act will immediately call cease-fire.

b. All weapons will be discharged within the confines of the shoot house.

c. Weapons will remain on safe when a Soldier is not actively engaging a target.

d. Any errant shots outside of the target area, above the marked yellow line or near a fellow Soldier will result in an immediate cease fire and that individual will be retrained. If that individual fires and errant shot again he will be considered a safety hazard and will be removed from training.

e. The RSO/OIC will ensure the Shoot House and surrounding area is clear of other occupants before training and supervises a guard detail to restrict entry into this area.

f. The RSO/OIC at a minimum will have obtained the rank of SSG/SFC in accordance with MCoE Regulation 350-19, Table 2-5.

IMSE-BEN-PLT-R

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g. Use of Simunitions will be IAW with MCoE Policy Memorandum 385-63-9, Use of Simulations in Marksmanship and Maneuver Training. **(NO Live ammunition will be used during Simunitions training.)**

14. **Range Safety:**

a. Unit will establish an Ammunition Point. Unit will keep ammunition guarded at all times. Two working fire extinguishers will be at the ammo point at all times. All live ammunition will be kept separate from all other ammunition at all times to prevent mixing with live and blank guarded by the Ammo NCOIC.

b. All personnel will participate in a safety briefing/orientation on the use of the shoot house.

c. Prior to all iterations of the LFX, a weapon and ammo inspection will be conducted to ensure that no unauthorized munitions or weapons are being used. All LFXs will use M16/M4/M9/MP5/Shotguns in the shoot house only.

d. All using units using the shoot house will be briefed to aim at their targets center mass (Bullet Traps).

e. The crawl, walk, run method of training will be enforced. Soldiers will conduct dry or blank fires prior to conducting the LFX. The OIC will certify Soldiers/Teams prior to conducting the shoot-house LFX.

f. The Shoot house will have controllers on the cat-walks and on the ground providing guidance, supervision, and safety.

g. Using units will be briefed on the emergency alarm located in the shoot-house prior to training.

h. OIC/RSO will maintain positive control of all Soldiers at all times.

i. No automatic fire will be conducted in the Shoot House; only weapon system that will be trained. (See Weapons/ammo enclosure)

j. Using units Soldiers will have a minimum of eight hours sleep prior to the range.

k. A Combat Life Saver (CLS) will be on the firing range will be located where he can best assist or treat a casualty along with FLA's on site.

l. The Range Safety Officer (RSO) will maintain contact with all posted guards on the perimeter or the training area.

m. Using units will be briefed on the immediate action in case of a misfire.

n. In the event of a cease-fire on the shoot house, the command will be echoed throughout the entire shoot house. All weapons will be cleared and put on safe. All safeties will physically inspect all weapons.

## IMSE-BEN-PLT-R

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- o. Uniform for the range will be per unit SOP (ie. Helmet, IBA, Safety glasses/hearing protection).
- p. Brass and Ammo checks will be conducted at the completion of each training event and prior to leaving the range.
- q. Using units will police all brass and trash prior to closing the range.
- r. **Medical:** In the event of an accident, injury or illness, the OIC/RSO will immediately call a cease fire then call 911 using the standard 9 Line MEDEVAC to determine what type of evacuation is the most appropriate for the injury (loss of life, limb or eyesight). MEDEVAC will be IAW MCoE Regulation 350-19 and MCoE 40-2. Landing zone for MEDEVAC aircraft will be established prior to use and will be marked appropriately. Alpha Base (Range Operations) will be notified in this event. The cease fire will remain in effect until cleared through Alpha Base(Range Operations).
- s. **Incident:** When an incident occurs on the range, regardless of injury or not, the OIC/RSO will immediately call a cease fire and report it to Alpha Base (Range Operations) and the using unit's higher headquarters. OIC/RSO will take action as directed by Alpha Base (Range Operations). The cease fire will remain in effect until the problem is resolved and cleared through Alpha Base (Range Operations). If the incident results in an injury, the OIC/RSO will use the procedures outlined in the medical paragraph. The following information will be furnished by the OIC/RSO to Alpha Base (Range Operations):
  - a. Designation of unit.
  - b. Range and location
  - c. Type of weapon involved.
  - d. Type of ammunition involved.
  - e. Brief summary of what happened.
  - f. Personnel injuries and extent.
  - g. Full Name, SS#, Rank and unit of injured personnel.
  - h. Extent of property damage.
  - i. Intentions regarding an AR 15-6 investigation.
- t. **Weapons/Ammunition Malfunction Reports:** When a malfunction is experienced, the OIC/RSO will suspend all firing and immediately notify Alpha Base (Range Operations). The weapons and all components and ammunition involved will remain in place. The cease fire will remain in effect until cleared through Alpha Base (Range Operations). An investigation is required and will be conducted by the ammunition and weapons inspection personnel and DOL.
- u. **Ammo Point:** The ammo point NCO will control the issue and retrieval of all ammunition. All ammunition will be marked and identified within the ammo point and signed by the ammo NCO.
- v. **LASER's:** Class III A lasers are not eye safe on dual low mode within 25 meters. PEM – 1A is not a tactical laser and must be used within 25 meters. Laser Warning Signs will be in place prior to opening the range. **Range safety briefing will include hazards using Lasers and NVD's.**

IMSE-BEN-PLT-R

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w. Range Clean-up. Unit will call Range Operations (Alpha Base) for a "Check Fire Status" prior to range clean up.

x. Safety Brief: All Soldiers will receive the range safety brief to include emergency cease fire procedures prior to the opening of the range.

y. Upon completion of the shooting iteration Soldiers will move down range and verify their targets with the supervision of their Drill Sergeant/Safety/Cadre. Weapons will be cleared and checked by the lane safety prior to movement. Weapons will be left on the sandbags on the platforms on the firing line. Weapons will not be loaded until everyone is back at the firing line.

z. Using units will maintain continuous contact with Range Operations (Alpha base) at all times. If communications are lost the unit will go into a self induced check fire until communications are restored.

**1. There will be no more than One Firer per Firing Point on this range.**

**2 There will be no deviations to this packet.**

**3. Four foot target frames will be used through-out this scenario.**

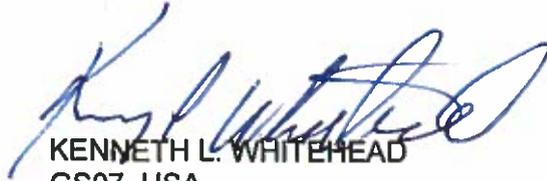
**4. Using units must have the updated Environmental Form (144r).**

**5. When using simunitions on the Range unit will be IAW with MCoE Policy Memorandum 385-63-9, Use of Simulations in Marksmanship and Maneuver Training.**

15. Using units must have completed the Deliberate Risk Assessment Worksheet (DRAW) that is checked by the BDE Safety Manager, BDE Master Gunner and signed by Post Safety. Unit will return the DRAW to Range Operations once completed prior to use of this range.

16. Exiting the range – All firers will properly clear their weapons at the conclusion of the live fire exercise. Firers cannot exit the range until they have been cleared by a Range Safety. Weapons will be cleared by rodding/visual inspection on and off the firing line. DS/Safety/Cadre will have the option to use the one-piece brass rod or clearing barrels (if available) to clear all weapons off the range.

17. Point of contact for this memorandum is the undersigned @ 706-544-6267.

  
KENNETH L. WHITEHEAD  
GS07, USA  
Range Operations Survey



**DEPARTMENT OF THE ARMY**  
**HEADQUARTERS UNITED STATES ARMY MANEUVER CENTER OF EXCELLENCE**  
**1 KARKER STREET**  
**FORT BENNING, GEORGIA 31905-5000**

Policy Memorandum 385-63-9

IMBE-PLT-R

8 MAY 2014

**MEMORANDUM FOR SEE DISTRIBUTION**

**Subject: Use of Simunitions in Marksmanship and Maneuver Training**

**1. REFERENCES:**

- a. Army Regulation 385-10, The Army Safety Program, 27 Aug 13.
- b. Department of the Army Pamphlet 385-63, Range Safety, 30 Jan 12.
- c. Army TM 9-6920-3700-10, Operators Manual for Close Combat Mission Capability Kit (CCMCK), 29 Nov 13, w/change 1.
- d. Ammunition Information Notice (AIN) 081-12, MINIMUM SAFE ENGAGEMENT DISTANCE FOR CLOSE COMBAT MISSION CAPABILITY KITS (CCMCK)—CTG 5.56MM M1042, 5.56MM M1071, AND 9MM M1041, 08 Jun 12.
- e. Ammunition Information Notice (AIN) 077-11, Non-Standard Marking Ammunition (Ultimate Training Ammunition (UTM) and Simunitions), 09 Feb 11.
- f. MCoE Regulation 350-19, Installation Range and Terrain Regulation, Mar 13.

**2. PURPOSE:** To prescribe the safety guidance and procedures to allow the use of simunitions in basic and advanced marksmanship and maneuver training on ranges, training facilities, and within training compartments on Fort Benning, Georgia for the following weapon systems: 9mm pistols, 5.56mm rifles, and 5.56mm M249 Squad Automatic Weapon (SAW).

**3. BACKGROUND:** The CCMCK Weapon Conversion System allows force-on-force close combat training by temporarily converting service weapons (M16A2/M16A3/M16A4 Rifles, M4/M4A1 Carbines, M249 SAW, and M9 and M11 Pistols) to fire low-velocity marking ammunition. The CCMCK ammunition includes 5.56mm bulk marking ammunition for the M16A2/M16A3/M16A4 Rifle and M4/M4A1 Carbine, 5.56mm linked marking ammunition for the M249 SAW, and 9mm marking ammunition for the M9 and M11 Pistols. Marking ammunition, manufactured in red, blue, and yellow is loaded into the magazine of the converted weapon in the same manner as service ammunition. Once loaded, the weapon cycles and functions the same as service ammunition and marks the target with minimal hazard to personnel wearing appropriate safety equipment. The system allows normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution.

a. Theory of Operation: For the M16A2/M16A3/M16A4 Rifle and M4/M4A1 Carbine, the service bolt assembly is replaced with CCMCK training bolt assembly to allow the firing of CCMCK marking ammunition. For the M249 SAW, the service bolt assembly and ejector blade

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Subject: Use of Simunitions in Marksmanship and Maneuver Training

assembly are replaced with CCMCK training bolt assembly and ejector blade assembly to allow the firing of CCMCK marking ammunition. The M249 kit also contains a training feed tray adapter. In the M9 and M11 Pistols, the service barrel is replaced with a training barrel assembly. The M11 also contains a feed ramp. The 5.56mm CCMCK marking cartridge consists of a two-piece cartridge case (front section, back section), and an aluminum projectile. The cartridge case contains a rim fire primer with a plastic ball in the back section of the cartridge and an additional primer in the front section. Upon functioning, the rear primer propels the plastic ball forward where it initiates the primer in the front section of the cartridge case. The rear primer also propels the back section rearward, which cycles the operating group of the weapon. The functioning of the primer in the front section propels the projectile. The projectile consists of an aluminum projectile body, a metal applicator ball, and a plastic cover that contains the marking compound. Upon impact, the metal applicator ball pushes the marking compound out through the plastic cover marking the target. The 9mm CCMCK marking cartridge consists of a two-piece cartridge case (front section, back section), a primer, a small quantity of propellant, and a plastic projectile. Upon functioning, the primer ignites the propellant, which propels the plastic projectile from the weapon. The projectile is designed to "mushroom" upon impact, force the marking compound out of the projectile, and mark the target. Cycling of the weapon occurs because the back section of the cartridge case telescopes to slide rearward allowing the weapon to function in a straight blow-back action.

b. **Equipment Characteristics, Capabilities, and Features:** The CCMCK temporarily converts service weapons (M16A2/M16A3/M16A4 Rifles, M4/M4A1 Carbines, M249 Squad Automatic Weapon (SAW, and M9 and M11 Pistols) to fire low velocity marking ammunition. The CCMCK marking ammunition is manufactured in three colors (red, blue, and yellow) and three different ammunition types. They include: 5.56mm Bulk for M16A2/M16A3/M16A4 Rifles or M4/M4A1 Carbines; 5.56mm Linked for M249 SAW; 9mm for M9 and M11 Pistols. The marking compound material is either wax or detergent based, nontoxic, and inert. The CCMCK Weapon Conversion System consists of four training kits, each containing one weapon conversion kit and one CCMCK face mask. The system allows normal weapon employment cues such as aiming, firing, force-on-force training, and interactive live-fire scenario task and mission execution. CCMCK weapon conversion kits will not allow service ammunition to be fired when a service weapon is converted. The safety feature is achieved with all 5.56mm weapons by moving the CCMCK firing pin by 3mm off center, in effect turning the method of firing into a rim-fire style of operation. This ensures that the CCMCK firing pin is sufficiently moved to prevent initiation of the standard 5.56mm ammunition primer. The safety feature used in the CCMCK 9mm conversion of the M9 and M11 Pistols is that the barrel is less than 9mm to ensure that a standard service round will not chamber. ALL CCMCK bolts and barrels are identified by blue markings. The CCMCK marking ammunition is loaded into the standard magazine for the host weapon, fed into the converted weapon and operated IAW the normal operating procedures for that weapon. Converting the weapon to use CCMCK ammunition does not cause any undue effects or degradation of the live weapon components or the weapon itself.

4. **POLICY:** The following procedures will be followed to ensure the safety of Soldiers in training when using Simunitions in Marksmanship and Maneuver Training at Fort Benning, Georgia.

a. **Scheduling Requirements:** Scheduling of training compartments, facilities, or ranges for the use of simunitions will be processed as you would normally do for a live fire event through

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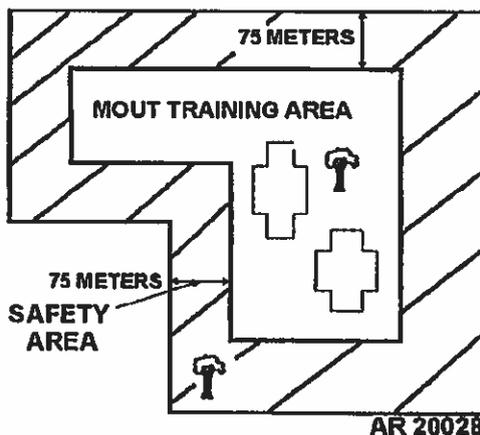
Range Facilities Management Support System (RFMSS). When using simunitions, no co-uses will be authorized or approved in the same compartment, facility, or range due to safety designation zones (SDZs) associated with the simunitions. We will also require a gun-line that depicts a time frame during the day/night that you will be executing this firing event.

b. The unit commander will ensure a Risk Management Worksheet has been approved by the Installation Safety Office for this training event. The commander will also ensure that coordination with Range Operations has been conducted and a certified SDZ for this training event has been completed and is on hand for the days' training that depicts the training area, safe zone, and any roadblock or guard positions that may be required to safely execute this training exercise.

c. The Officer in Charge (OIC) shall brief all personnel on the boundaries of the exercise area in accordance with the approved Range Operations Survey SDZ and will ensure all personnel within those boundaries meet minimum safety requirements for CCMCK Weapon Conversion System as spelled out in the next paragraph. The OIC shall verify that all weapons used for force-on-force training are clear and unloaded, that the appropriate CCMCK Weapon Conversion System is properly installed, and that only CCMCK ammunition is allowed in the safety and training area. The OIC will ensure the unit calls in for a "HOT" opening code prior to exercise commencement and upon completion of training, calls in for a "HOT" closing code while executing simunition training on the installation.

d. Exercise Area: No personnel will be allowed within a radius of 75 meters (246 ft) of the scheduled CCMCK training area when force-on-force training is being conducted without meeting the minimum safety requirements for CCMCK use and applicable uniform rules. Serious injury could occur if a participant is struck by a CCMCK projectile in the eyes or on exposed skin.

#### CCMCK SAFETY AND TRAINING AREAS



#### WARNING

NO weapons are to be fired outside of the Training Area.

While inside the Safety and Training Areas, all required CCMCK safety equipment must be worn at all times until training has ceased.

#### NOTE

The 75 meter radius outside the Training Area is designated as the Safety Area.

e. The Range Safety Officer (RSO) shall enforce the rules of engagement established and reviewed prior to the start of the training exercise. The RSOs will inspect and ensure chamber and bore of weapons are clear, cleaned, and lubricated prior to CCMCK use as well as during

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the exercise. The RSOs will inspect the CTG 5.56MM (M1042 AND M1071) to ensure the plastic tips are secure and cannot be removed by hand. The RSOs will ensure all personnel within 75 meters (246 FT) of the CCMCK training area when force-on-force training is being conducted are required to wear all CCMCK safety equipment at all times until training has ceased. Minimum engagement distance when using CCMCK ammunition in converted weapons is 1.52 meters (5 ft) as personnel injury may occur if shots are taken at less than 1.52 meters (5 ft). See below for specific rules on CCMCK usage for various events.

**SAFETY NOTE: CARTRIDGES FIRED WITH LOOSE OR MISSING PLASTIC TIPS HAVE HIGHER VELOCITIES AND THE PROJECTILE CAN BE EXPECTED TO PENETRATE THE ACU FABRIC AND SKIN. THE PROTECTIVE FACE MASKS DID STOP THE HIGHER VELOCITY PROJECTILES.**

**(1) Force-on-Force Training Rules:**

(a) Users will wear approved safety equipment for protection of the eyes, head, neck, and groin. The simunition FX 9000 face mask or eyes tactical protective face masks must be worn in connection with the Army Combat Helmet (ACH). Failure to wear approved safety equipment can result in permanent partial disability due to projectiles impacting the unprotected head, eyes, face, neck, or groin.

(b) Head shots are prohibited. Users must aim for the target's body center of mass.

(c) Users will not conduct force-on-force training with any CCMCK weapon or cartridges without all skin covered by a minimum of one layer of clothing (including combat gloves). Users training without complete safety equipment will incur bruising, welts, and possible broken skin.

(d) Users will wear single hearing protection when training with CCMCK weapon or cartridge.

(2) Force-on-Target Training: Users will wear approved safety equipment for protection of the eyes and single hearing protection when training force-on-target with any CCMCK weapon or cartridge.

f. The CCMCK system allows force-on-force close combat training using ammunition that marks the target and presents minimal hazard to personnel wearing appropriate safety equipment. Safety equipment must be worn at all times while inside the CCMCK safety and training areas to prevent personnel injury from projectile impact. Safety equipment includes the CCMCK face mask. Other required safety equipment is included in the Soldier and organizational clothing and individual equipment (OCIE) CTA 50-900 items and will include gloves, standard issued sun, wind, and dust goggles (NSN 8465-01-328-8268), and groin protection. Single hearing protection is also required. Alternate approved face masks with integrated goggles safe for use with CCMCK are listed in enclosure 1.



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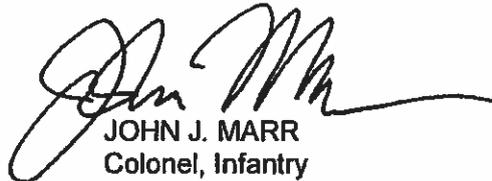
5. The commander is ultimately responsible for the safety of all training. The OICs/RSOs will be certified by the commander when using Simunitions in Marksmanship and Maneuver Training. Commanders will establish standard operating procedures (SOPs) and specific composite risk assessments to address the inherent hazards associated with shooting simunitions.

6. APPLICABILITY. This policy memorandum provides guidance that applies to all ranges, facilities, and training compartments on Fort Benning when using simunitions within the Fort Benning Range/Training Complex. Training units desiring to use CCMCK training kits and associated ammunition will: (1) submit RFMSS requests through normal channels IAW MCoE Regulation 350-19, (2) ensure they obtain an approved SDZ for this training event/munitions from the Range Operations Survey Section, and (3) submit a commander's risk management worksheet to Installation Safety Office for approval.

7. PROPONENT: Mr. Douglas M. Greenway, Installation Range Management Officer, 706-545-4619/3542 or e-mail [douglas.m.greenway.civ@mail.mil](mailto:douglas.m.greenway.civ@mail.mil).

FOR THE COMMANDER:

Encl  
Approved Face Mask List

  
JOHN J. MARR  
Colonel, Infantry  
Chief of Staff

DISTRIBUTION:  
ADMIN L, MCoE BN CDR, MCoE CSM/SGM, MCoE DCO Lists

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NSN	Description
4240-01-612-0702	Helmet Mounted Training Facial Protection Systems: Eye tactical CM121, black, CM121-43 (1G6Y3)
4240-01-612-0696	Helmet Mounted Training Facial Protection Systems: tactical CM121, tan, CM121-44 (1G6Y3)
4240-01-612-0690	Helmet Mounted Training Facial Protection Systems: tactical CM121, green, CM121-43 (1G6Y3)
8415-20-007-2260	Helmet Safety Simunitions FX9003, black, 8971960 (0YAE9)
8415-20-007-2548	Helmet Safety: Simunitions FX9003, tan, 8971962 (0YAE9)
8415-20-007-2548	Mask, Cold Weather (Standard CCMCK Face Mask), 69-0304 (KE396)
8415-20-007-2548	

Firing Positions	Weapons	Ammunition	Left Limit Deg's, Grid Az	Right Limit Deg's, Grid Az
10m: FP1 0118 7989 to FP50 0122 8004, 25m: FP1 0119 7989 to FP50 0123 8003	M249, MK46, M240, MK48, MK17, M16, M4, MK16	5.56mm Ball/Tracer, 7.62mm Link/Ball/Tracer	284	286
Marksanship, Familiarization, CQM, AMT: Start FP1 0119 7989 to FP50 0123 8003, Stop: FP1 0117 7990 to FP50 0121 8004	M249, MK46, M240, MK48, MK17, M16, M4, MK16, Shotgun, 12 gauge, M9, MF5	9mm/ball, 12 gauge, 00 Buck/Slug, 5.56mm Ball/Tracer, 7.62mm Link/Ball/Tracer	284	286
Shoot House: 0122 7980	M16, M4, MK16, Shotguns, 9mm, MF5	5.56mm Ball/Tracer, 00 Buck, Slug, Hatton, 9mm, Ball, UTM	NA	NA
Station:1,2, 4-7.	M249, MK46, M240, MK48, MK17, M16, M4, MK16	5.56mm Blank, 7.62mm Blank, CCMCK, Flash Bang.	NA	NA
<b>The Following Pyrotechnics Will be Used on The Engagements Above</b>				
<p>FX, CCMCK, Simunitions: When used in Stations 1, 2, 4-7, the 360 degree SDZ will be cleared of all Non-Participating personnel for each station used. Lasers: Various lasers will be used. Laser warning signs will be in placed during use. Flash bangs: When using flash bangs, unit must use PPE IAW Fort Berning Policy. Unit will conduct a cleanup of flash bangs bodies after use. Station 4 is the only station authorized to use flash bangs.</p>				

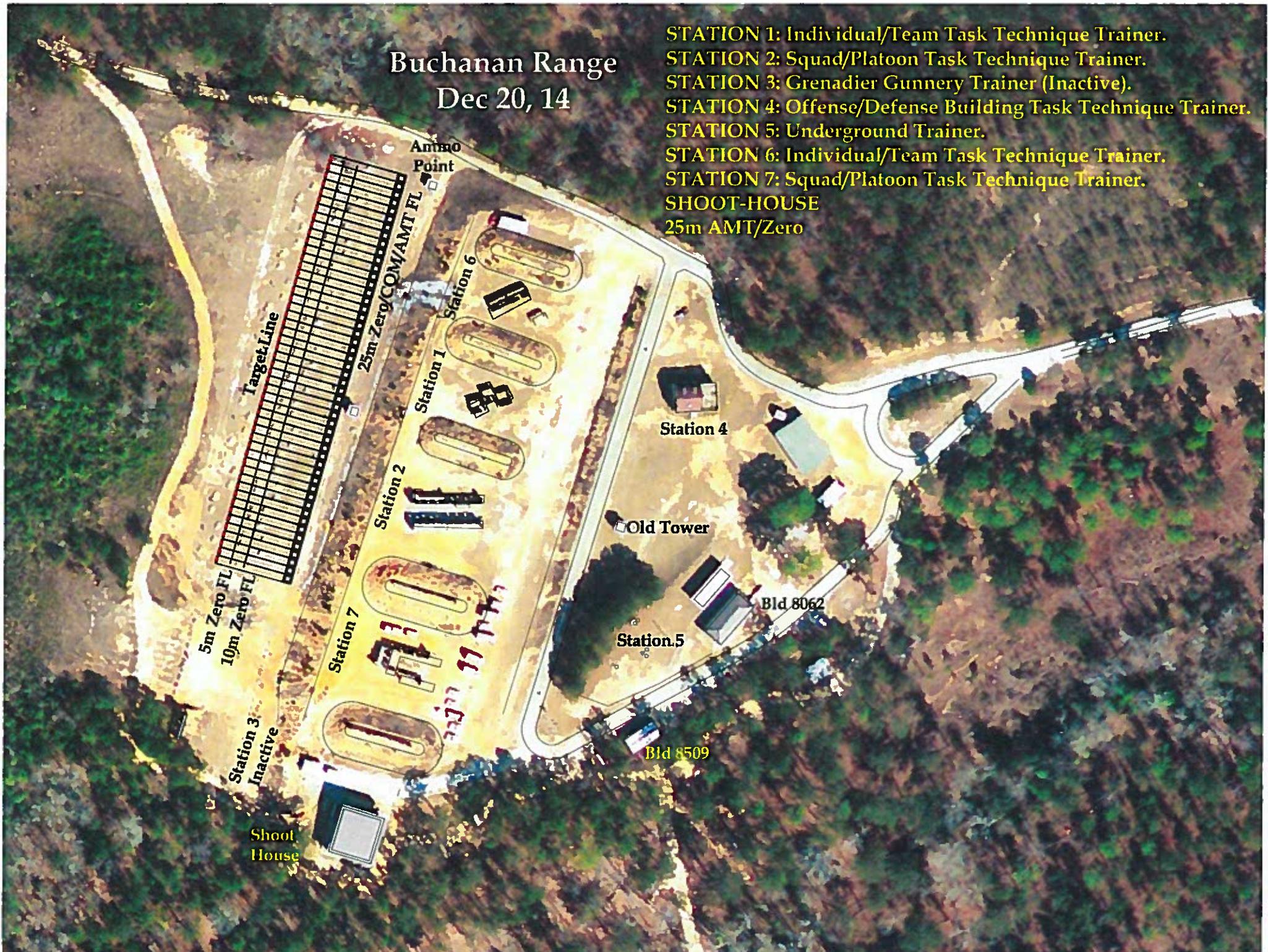
**Buchanan, Range Division Standard, Zero, ALT C, Qual, Barricade, AMT, CQM, Shoothouse, Log 09-07-15 Roadblock List**

BLOCK	GRID	LOCATION	TYPE
A-1	FA 911 792	Across firebreak 200m down Fiske Range at right end of KD berm. Permanently closed.	Cable
A-2	FA 910 783	Off Sightseeing Rd on unnamed trail opposite of entrance to LRC.	Gate
A-4	FA 925 766	Off Sunshine Rd 1,200 m W. of entrance to Grandstaff range.	Gate
A-5	FA 936 762	Across entrance road to Grandstaff Range. 10m N. of Sunshine Rd.	Gate
A-6	FA 939 763	Off Sunshine Rd 100m W. of Oswichee Creek. Permanently closed.	Cable/ Berm
A-8	FA 968 740	Across unnamed trail 30m N. of Sunshine Rd and 800m N.W. of entrance to Griswold Range.	Gate
A-10	GA 018 730	Across entrance road to Flint Range. 50m N. of Sunshine Rd.	Gate
A-11	GA 019 731	Across Lumpkin Trail 30m N. of its intersection with Sunshine Rd.	Gate
A-11A	GA 032 729	Rd guard pos # 2 for Gamsey Rng Obj 'E' (intersection Jamestown/Sunshine Rd's	Rd Grd # 2
A-12	GA 033 742	Across Gamsey Rd 50m W. of its intersection with Jamestown Rd.	Gate
A-12A	GA 029 744	Across Gamsey Rd 400m W. of A-12 Roadblock.	Gate
A-12B	GA 028 741	Across trail 150m SW of A-12A Roadblock. 50m W. of Range Bldg.	Gate
A-12C	GA 036 746	Road guard position # 3 for Gamsey Rng Objective 'E' (Jamestown at Lightning Rd)	Road Guard #3
A-13	FA 936 762	Across Sunshine Rd 10m E. of the entrance to Grandstaff Range (Road guard location).	Gate
A-14	FA 974 733	Across Sunshine Rd 10m W. of the entrance to Griswold Range. (Road guard location)	Gate
A-15	GA 021 799	Across entrance road to Buchanan Range.	Gate
A-15A	GA 021 798	Gate Across Good Luck Rd	Gate
A-15B	GA 022 796	Road guard position # 1 for Gamsey Rng Objective 'E' (Jamestown road SW corner of Engineer building)	Road Guard # 1
A-18	FA 993 828	Across Buckeye Rd 225m S. of its intersection with 1st Div Rd. and 50m E. of entrance to Duke Range	Gate
A-19	FA 973 825	Across entrance road to Patton Range 400m S. of its intersection with 1st Div Rd.	Gate
A-20	FA 974 827	Across entrance road to Dianda Range. 300m S. its intersection with 1st Div Rd.	Gate
A-22	GA 015 817	Across unnamed trail 50m N. of Brinson Range and 10m off Jamestown Rd.	Gate
A23	FA 983 756	Across Lumpkin Trail 200m E. of Griswold Range	Gate
A-23A	GA 005 748	On Lumpkin trail 50m NW of Objective 'E' on Gamsey Range.	Gate
A-23B	GA 005 747	Adjacent to A-23A gate on trail near intersection of Lumpkin trail	Install Gate
A-24	GA 015 811	10m inside entrance gate of Brinson Rng south of entrance road.	Gate
A-25	GA 016 789	Across fire break 10m W. of its intersection with Good Luck Rd.	Gate
A-26	GA 013 798	On L/S of Buchanan Range 50 meters W. of chow area across entrance to fire break.	Cable
A-27	GA 018 805	Across unnamed trl 175m N of intersection of Hourglass and Jamestown roads	Gate

BLOCK	GRID	LOCATION	TYPE
A-28	GA 012 774	20 meters off Yankee road on south side of Galloway range.	Gate
A-28A	GA 011 776	30 meters south of Range Tower	Gate
A-30	GA 026 758	Across fire break leading to Gamsey Range. 140m SW of Brann Flat Range.	Gate
A-30A	GA 027 758	Across trail leading to Gamsey Range 50m E. of A-30 Roadblock	Gate
A-31	GA 020 745	Across fire break leading to Brann	Cable
A-32	FA 989 724	Across entrance road to Kunzig Range.	Gate
A-33	FA 974 734	Across entrance to Griswold Range.	Gate
A-33A	FA 979 739	150 meters west of Target Systems bldg on trail leading to move to contact site	Gate
A-33B	FA 982 739	20m N of Target Sys bldg on trail running on west side of bldg.	Install Gate
A-34	FA 947 760	Across entrance to Minter Hill 700m E. of Oswichee Creek.	Gate
A-38	FA 952 816	Across fire break 300m down range of firing line on Red Cloud Range on L. side of range.	Cable
A-39	FA 956 822	Across unnamed trail 100m S. of bldgs on Buckner Range on L. side of range	Cable
A-40	FA 967 823	Across fire break 50m down range on the left side of Pierce Range.	Gate
A-41	FA 972 820	Across fire break located on the right side of the firing line on Patton Range.	Cable
A-42	FA 978 820	Across fire break located on the left side of the firing line on Patton Range.	Cable
A-43	FA 983 823	Across fire break located on the right side of Booker Range Firing Line	Cable
A-44	FA 986 823	Across fire break 100m E. of the 25m flat range on Booker Range	Gate
A-45	FA 990 827	Across fire break located on the right side of the firing line on Duke Range.	Gate
A-45A	FA 991 829	Across Booker Breach site entrance road 200m past Duke Rng entrance gate	Gate
A-46	FA 984 832	Across unnamed trail 100m W. of the intersection of 1st Div Rd and Ivy Rd.	Gate
A-47	FA 990 833	Across unnamed trail 500m W. of the intersection with 1st Div & Buckeye Rd's	Gate
A-48	FA 995 827	Across fire break located on the right side of the firing line on Porter Range.	Cable
A-49	FA 998 827	Across fire break located on the left side of the firing line on Porter Range.	Cable
A-50	GA 000 830	Across unnamed trail 200m W. of entrance to Maertens Range.	Gate
A-51	GA 031 791	Barrier on Furman Rd	Barrier 1
A-52	GA 034 776	Barrier on Yankee Rd	Barrier 2
A-53	GA 035 776	Gate to Cole Range	Barrier 3
A-54	GA 046 749	Barrier off Lightning Rd on unnamed trail	Barrier 5
A-55	GA 057 759	Barrier off Lightning Rd on unnamed trail	Barrier 4

# Buchanan Range Dec 20, 14

- STATION 1: Individual/Team Task Technique Trainer.
- STATION 2: Squad/Platoon Task Technique Trainer.
- STATION 3: Grenadier Gunnery Trainer (Inactive).
- STATION 4: Offense/Defense Building Task Technique Trainer.
- STATION 5: Underground Trainer.
- STATION 6: Individual/Team Task Technique Trainer.
- STATION 7: Squad/Platoon Task Technique Trainer.
- SHOOT-HOUSE
- 25m AMT/Zero



5m Zero FL  
10m Zero FL

Target Line

25m Zero/COM/AMT FL

Ammo Point

Station 3  
Inactive

Shoot House

Station 7

Station 2

Station 1

Station 6

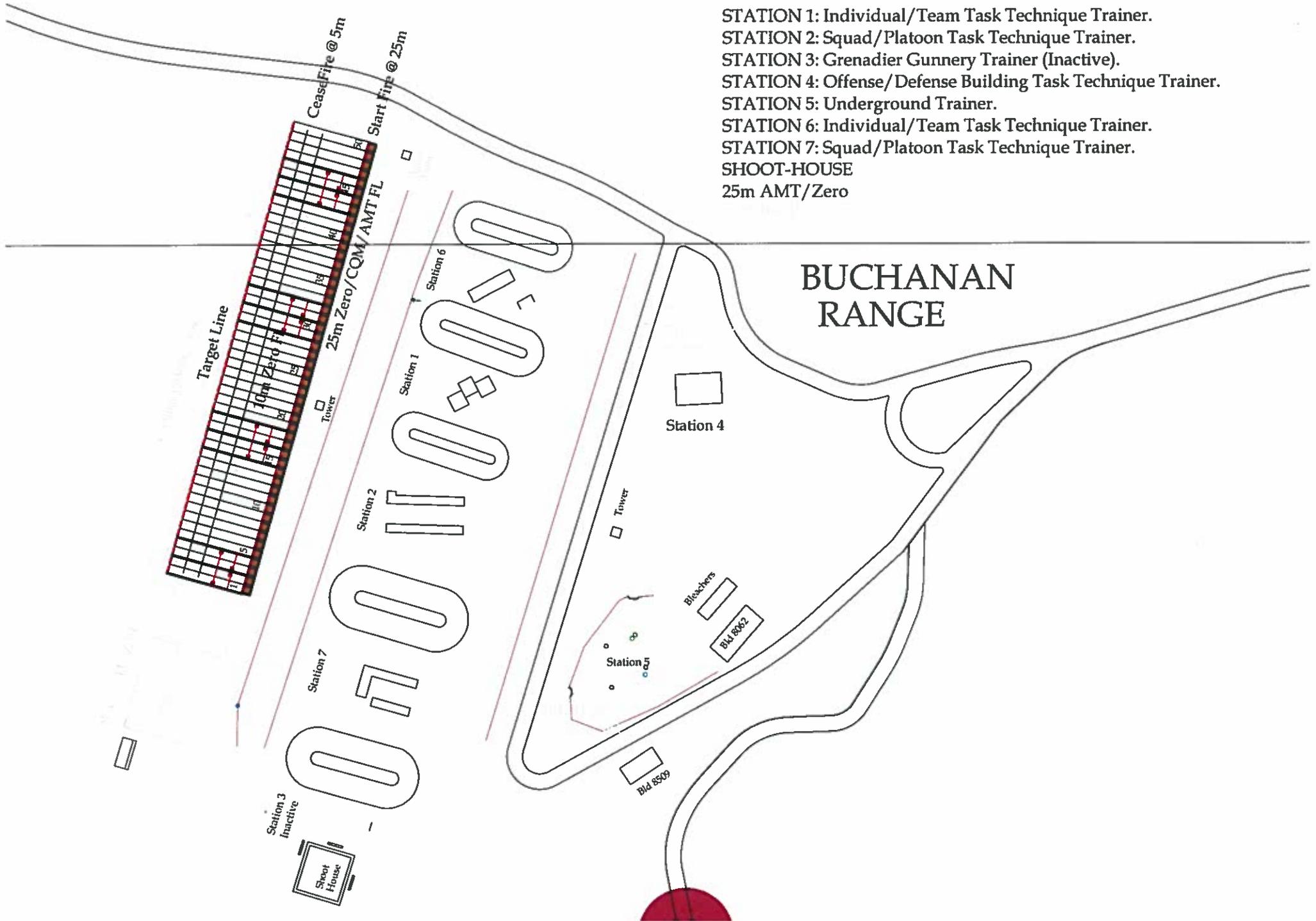
Station 5

Old Tower

Bld 8509

Bld 8062

Station 4



- STATION 1: Individual/Team Task Technique Trainer.
- STATION 2: Squad/Platoon Task Technique Trainer.
- STATION 3: Grenadier Gunnery Trainer (Inactive).
- STATION 4: Offense/Defense Building Task Technique Trainer.
- STATION 5: Underground Trainer.
- STATION 6: Individual/Team Task Technique Trainer.
- STATION 7: Squad/Platoon Task Technique Trainer.
- SHOOT-HOUSE
- 25m AMT/Zero

# BUCHANAN RANGE

Station 3  
Inactive

Shoot House

Station 2

Station 7

Station 1

Station 6

Bld 8509

Tower

Station 4

Blast-chers

Bld 8562

Station 5

Target Line

10m Zero

25m Zero/CQM/AMT FL

Cease Fire @ 5m

Start Fire @ 25m

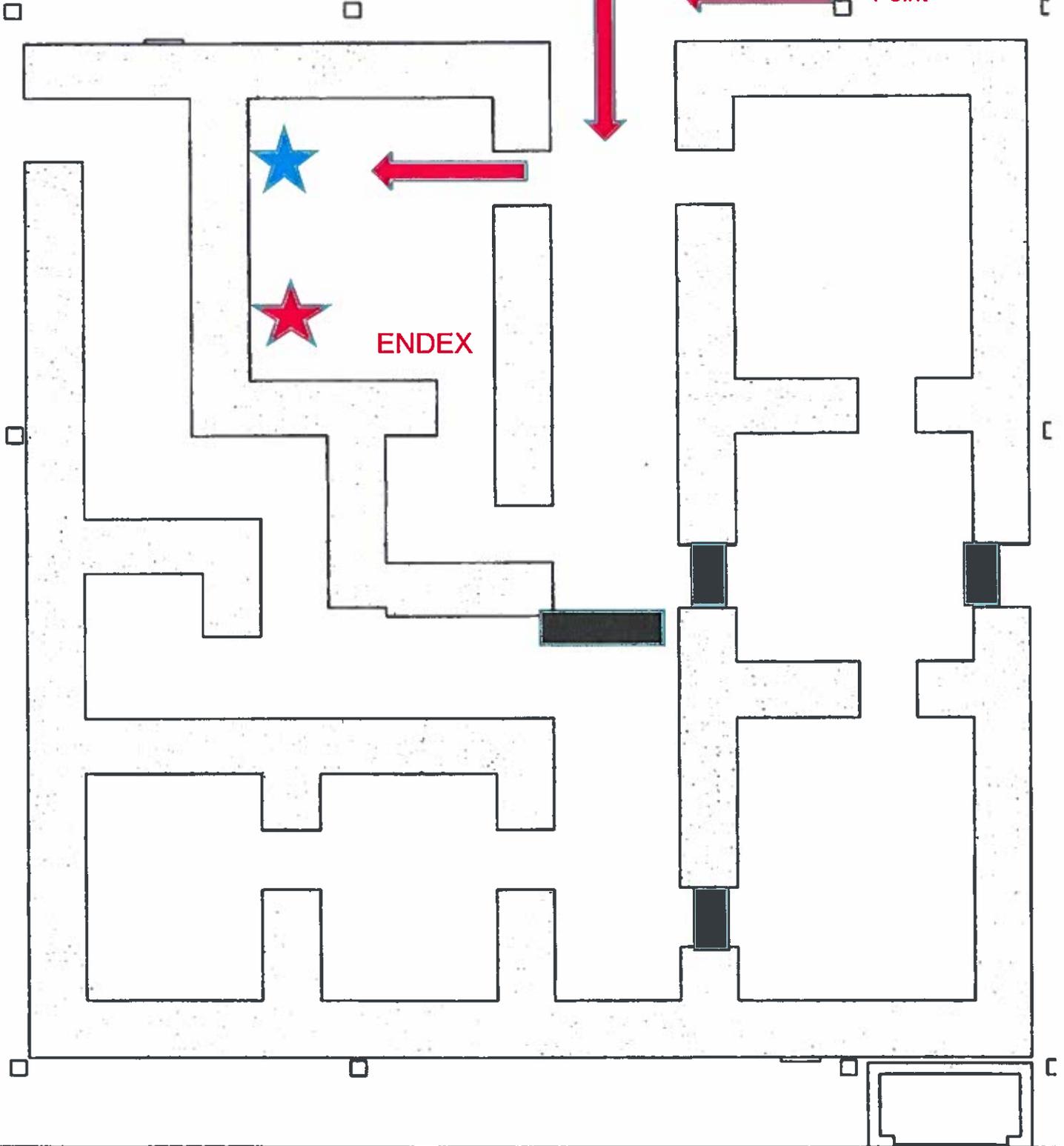
# Buchanan Range Shoot House

Option #1

Single Team, Single Room

Front

Entry and Exit Point



Friendly Target



Barricades

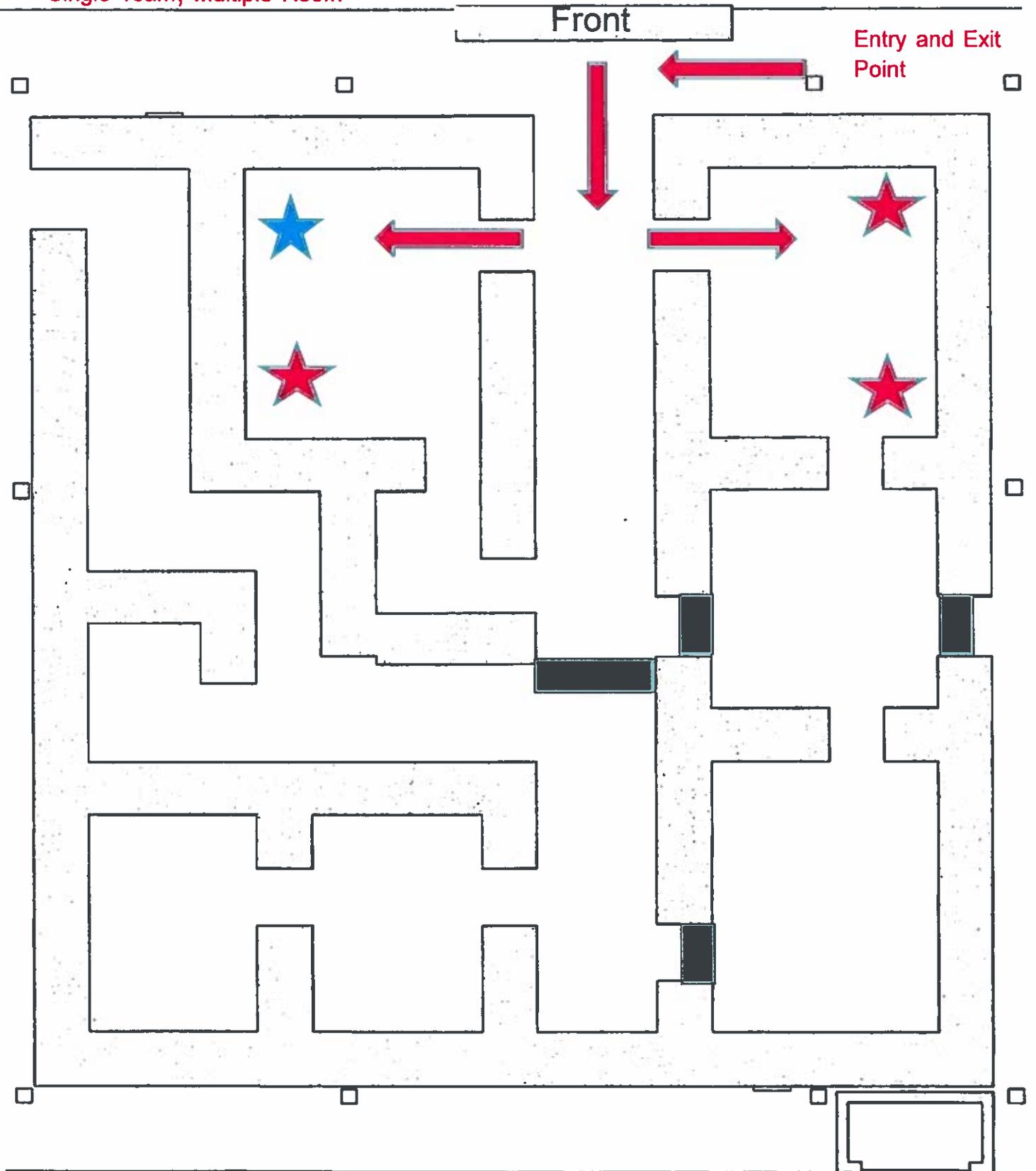


Enemy Target

# Buchanan Range Shoot House

Option #2

Single Team, Multiple Room



Friendly Target



Barricades

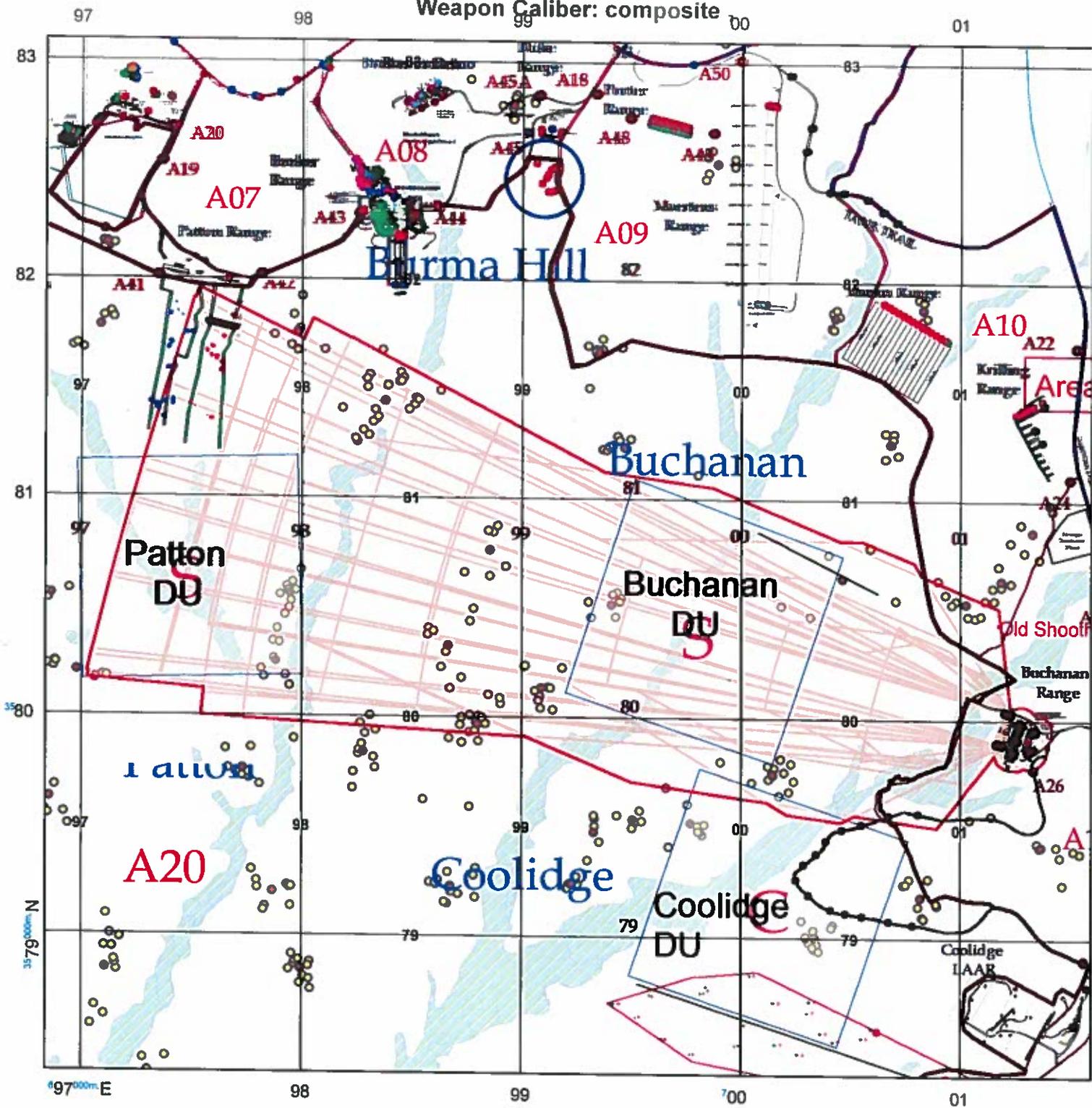


Enemy Target





**FOUO Unclassified**  
**Weapon Type: SMALL ARMS**  
**Weapon Caliber: composite**



Range Manager Signature Authority:	Date:		
Approving Authority: John T. Flores	Date:		
SDZ Created By:	Date: 11/02/2015	Unit: Range Division Phone: 544-6342	Email:
SDZ Name:			