

TRAINING THE NEXT GENERATION OF LEADERS ON FIRE SUPPORT:

FIVE THINGS EVERY COMMANDER SHOULD KNOW ABOUT FIRES

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The last 13 years of persistent asymmetric conflict and a general lack of training on decisive action across the Army have hampered the ability of maneuver commanders and fire support officers (FSOs) to integrate lethal and non-lethal fires into large-scale combined arms operations. Additionally, the ready availability of aerial fires platforms to support even small unit operations in the Central Command (CENTCOM) area of responsibility (AOR) over the past 14 years has conditioned deployed Soldiers, and their commanders, to utilize aviation assets as the default source for lethal fires. Field Artillery leaders at every echelon must recognize these realities and seize the initiative to work with their supported maneuver commanders to restore basic fires planning and synchronization into their collective training to ensure responsive fires in support of operations.

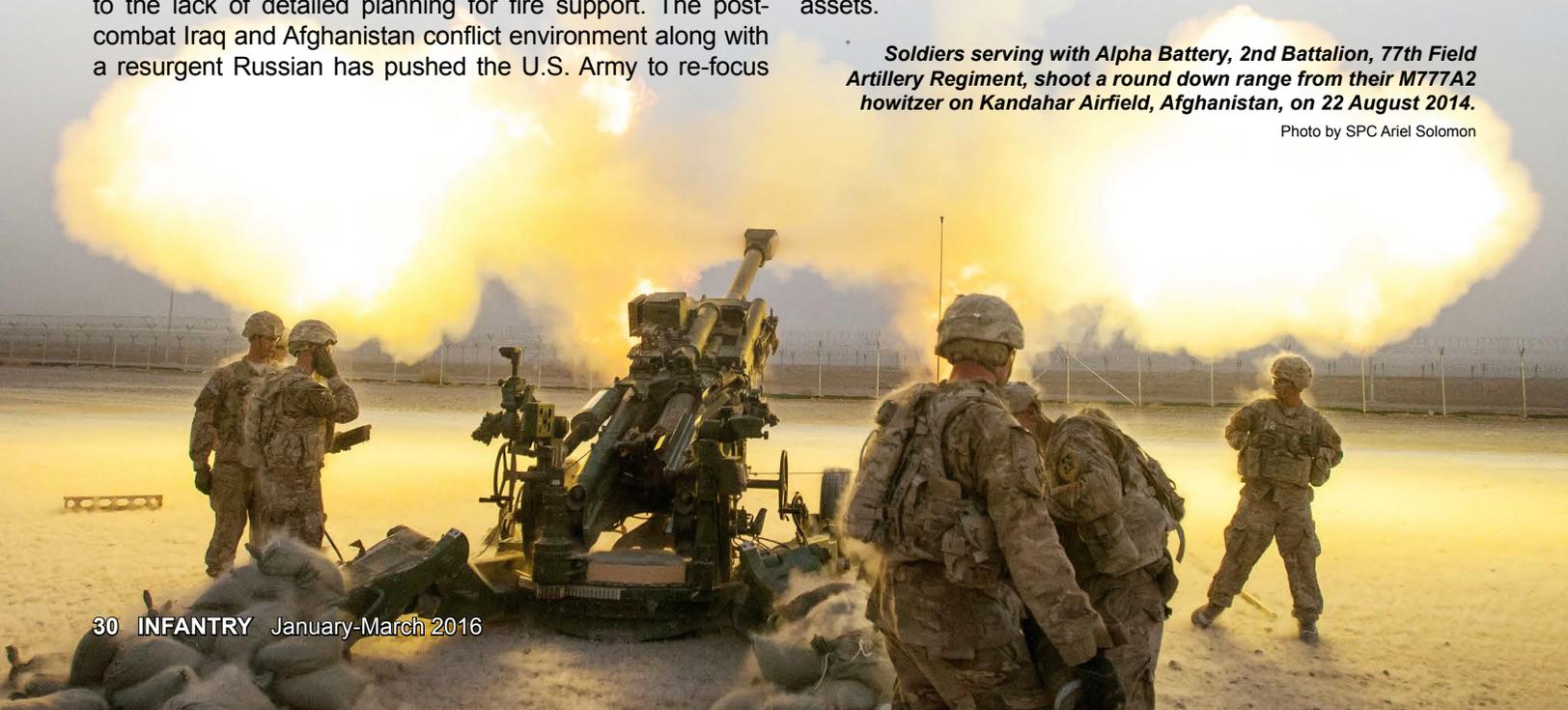
In recent years, maneuver commanders have had increased access to non-organic fires assets; and in many cases, they have been conditioned to utilize them as their first choice. Unfortunately, this is not always best; and although there are instances where the immediate engagement of an on-station air weapons team (AWT) makes the most sense, more often than not, situations are presented that could have benefited from the use of artillery. Additionally, heavy reliance upon non-organic fires assets has also contributed to the lack of detailed planning for fire support. The post-combat Iraq and Afghanistan conflict environment along with a resurgent Russian has pushed the U.S. Army to re-focus

and reinvigorate decisive action training. With rejuvenated training and education for fire supporters, in conjunction with additional combined fires and maneuver exercises, a window of opportunity now exists for the restoration of confidence in the Field Artillery and the effective synchronization of organic fires platforms into combined arms operations.

It is imperative that fire supporters continue to conduct fire support certifications, fire support coordination exercises, and joint fires observer (JFO) re-certification (precision fires suite) semi-annually, as outlined in Training Circular 3-09.8, *Field Artillery Gunnery*, in order to reduce skill atrophy.¹ Trained fire supporters, in both planning and execution, will be capable of providing relevant advice to their supported maneuver commanders while simultaneously minimizing the operational risk to their Soldiers. "The commander's ability to orchestrate and employ all available fires-related resources as a system and to integrate and synchronize fires with his concept of operations depends on effective fire support planning and coordination."² The objective of fire support planning is to optimize the decisive application of combat power.³ Maneuver commanders are entrusted to lead Soldiers and must apply all aspects of combat power to win in combat. Although multiple methods exist to manage fires, the following five takeaways provide a guide to effectively employ all available fire support assets.

Soldiers serving with Alpha Battery, 2nd Battalion, 77th Field Artillery Regiment, shoot a round down range from their M777A2 howitzer on Kandahar Airfield, Afghanistan, on 22 August 2014.

Photo by SPC Ariel Solomon



1. What Assets Are Allocated?

Maneuver commanders must know what assets are at their disposal and what the capabilities and limitations for each weapon system and platform are. Minimum safe distances in training and risk estimate distances in combat bring realism to training and devastating effects on the enemy in combat.⁴ The FSO is a critical resource to free up the commander to command. The amount of ammunition for each weapon system and the associated battle calculus must be done to ensure effects are maximized throughout the duration of the operation.⁵ For instance, have adequate munitions been allocated to provide suppression throughout the entire movement? Can the method of control (rate of fire) be adjusted in order to ensure continuous suppression of an objective?

2. Higher Guidance for Fires

In our experience, most maneuver commanders don't provide guidance for fires, and depending on the experience level of the FSO, this can cause issues during execution. The commander's guidance for fires provides the staff, fires personnel, and subordinate units with the general guidelines and restrictions for the employment of fires and their desired effects. The guidance emphasizes in broad terms when, where, and how the commander intends to synchronize the effects of fires with elements of combat power to accomplish the mission.⁶ Commanders must describe the desired effect of fires or any other asset. The FSO can develop the "how" to ensure it is synchronized with the scheme of maneuver once the desired end state is established. The FSO can also advise commanders on whether the desired effects they want to achieve with fires are feasible given the capabilities of available fire support platforms.

3. Asset Period of Availability

Using battlefield calculus, the FSO can determine how many rounds are available to cover the movement to the objective based upon movement rate. Secondly, the FSO must also know how much station time fixed wing, ISR (intelligence, surveillance, and reconnaissance), or aviation platforms have for movement and engagements. In order to perform battlefield calculus, the true capabilities of munitions, rates of fire, and estimated movement rates must be clearly understood and explained to supported commanders. For example, when providing illumination for an element, it is imperative to know the difference between the burn times for 105mm illumination versus 155mm illumination. FM 6-30, *Tactics, Techniques, and Procedures for Observed Fire*, lists the burn time for 105mm illumination at 60 seconds and 155mm at 120 seconds; therefore, twice the amount of 105mm ammunition is needed to illuminate the same target area for the same amount of time.⁷ True battlefield calculus leads to multiple initial volleys followed by continuous suppression as the unit moves to the objective with adequate ammunition remaining to conduct a counterattack. Commanders and

Unclassified



Commander's Guidance for Fires



1. Priority of fires (POF) will go to 2-14 IN. O/O POF will shift to 4-31 IN as they secure OBJ Commando.
2. All religious compounds, cemeteries, schools and government buildings will be protected by a minimum of a 200m NFA.
3. Clearance of fires will be routed through 2/10 MTN's FECC.
4. There will be a minimum gun capability of one firing BTRY at any given time.
5. Controlled Supply Rate (CSR) will constrain us to:

TGT Description	Ammunition	Method of Fire (MOF)
Enemy Dismounts In The Open		
TM sized	HE/VT or TI	BTRY 1 RND
SQD sized	HE/VT or TI	BTRY 2 RNDs
PLT sized	HE/VT or TI	BTRY 3 RNDs
CO sized	HE/VT or TI	BTRY 4 RNDs
Fortification/Buildings	HE/Delay	BTRY 2 RNDs
Precision Missions	Excalibur	1 GUN, 1 RND
VICs/Technicals	HE/PD	BTRY 3 RNDs
Armor	DPICM	BTRY 2 RNDs
Points of Origin (POO)	HE/PD, WP/PD	BTRY 2 RNDs
Immediate Suppression	HE/PD	2 GUNS, 2 RNDs

Figure 1 — Example Commander's Guidance for Fires

FSOs must coordinate with each enabler to ascertain how much station time or coverage they have and ensure that is synchronized with their maneuver plan.

4. What Priority Targets Are Assigned Assets?

As a general rule, artillery and mortars should always be laid on priority targets. An established priority target will always increase the responsiveness of indirect fires. As part of the fire support atrophy and an overreliance on fixed wing and rotary wing fires, there has been a decrease in deliberate fire support planning for maneuver operations. During mounted and dismounted movements, the FSO must constantly establish priority targets to ensure that the delivery of optimized effects can be exercised quickly. As an element maneuvers through an established phasing construct, it is paramount that priority targets remain provisional for adequate support to continue. It is very frustrating for field artillerymen when a maneuver element has to delay execution in order to wait for its fire support. This wait time is reduced and responsive fires are achieved through deliberate fire planning and the establishment of priority targets for each weapon system. Commonly used products (like SOPs and execution checklists) that detail and track operations can help synchronize this process and provide fires in stride.

5. How Are Assets Deconflicted?

The two ways to primarily deconflict fires or any asset are through space and time. The overall objective of fires is to mass effects of all weapons systems at the correct place and time. In order to mass fires and effects, these assets must be deconflicted in order to utilize all available assets and provide a means in which to engage the target while maintaining minimal risk to the asset and friendly troops. Deconfliction of fires deals with the art of fire support, and there are numerous ways to maximize the assets that are available to commanders. In utilizing artillery or mortars, fires are typically deconflicted by space; however, the use of time

Individual (Day 1)	Collective (Day 2)	Fire Support (Day 3)	Executive (Day 4)
1) BCT/BN CDR Intro 2) JRTC VTC (Lessons Learned) 3) Gunnery's Skills Test 4) lay a Howitzer 5) Commando Phoenix 15 (Digital FS Exercise) 6) Big 3	1) Fires in the Offense 2) Fires Rehearsal 3) FA Tech Rehearsal	1) Fires in the Defense 2) Fires Rehearsal 3) FA Tech Rehearsal	1) Clearance of Fires and Airspace Deconfliction 2) Echelonment of Fires 3) Radar Utilization 4) Managing the 5 Requirements 5) M119A3/M777 Familiarization

Figure 2 — Example FSCX Pre-Training Schedule

as a deconfliction mechanism (using schedules of fire or a time-on-target mission and changing the method of control) is a viable course of action. Deconfliction by space is primarily done by echelonment of fires tied to maneuver movement. Essentially, this is the way in which the commanding element maintains constant fires on an objective while utilizing the optimum system of delivery. Proper echelonment of indirect fires allows control of all available indirect assets while simultaneously employing aviation and naval assets. The purpose of echeloning fires is to maintain constant fire on the enemy while utilizing the optimum delivery system.⁸

Joint Publication (JP) 3-09.3, *Close Air Support*, describes four ways to deconflict air: lateral separation, altitude separation, altitude and lateral separation, and time separation, which requires the most detailed coordination.⁹ Lateral separation and altitude are the most commonly used methods when employing aviation and other assets. Lateral gives a cardinal direction, grid reference, or geographic feature to maintain the ability to employ multiple weapon systems simultaneously. Altitude separation gives an above or below altitude to integrate multiple air assets and indirect fires, allowing all elements to operate in the area cohesively. Field artillery units and mortars utilize tabular firing tables to get the maximum altitude for each round of their weapon systems in order to facilitate ease in altitude deconfliction. A combination of altitude and lateral separation is the most restrictive for air crews and is usually utilized when aircraft approach or cross the gun target line (GTL). Time separation is utilized when other restrictions may prevent utilization of air assets due to trajectory or other unavoidable elements in the operating environment. Time separation is best utilized while conducting planned deliberate operations but can be implemented into any operation. Utilizing

these restrictive coordination measures affords commanders the ability to utilize assets efficiently in order to achieve mission success.

In combat, maneuver commanders rely on organic assets (mortars/artillery) before requesting other non-organic assets. Maintaining the mindset of “train as we fight” enables the next generation of leaders to create unique training opportunities designed to exercise the integration of fire and maneuver. There are many types of training exercises inside the brigade combat team (BCT) used to train fires and maneuver integration to include platoon and company live fires, mortar shoots, and fire support coordination exercises (FSCXs). In preparation for the 2nd Brigade Combat Team, 10th Mountain Division’s February 2016 Joint Readiness Training Center (JRTC) rotation, the FSCX seemed to be the most effective venue to train maneuver commanders, joint terminal attack controllers (JTACs), and company FSOs on fire support integration.

The FSCX was broken into three phases for training which included pre-training (Commando Fires Academy), virtual battlefield simulation (VBS), and execution. Key to successful FSCX execution is having trained and certified fire supporters (13F) and howitzer crews in accordance with Training Circular (TC) 3-09.8, *Field Artillery Gunnery*. Certifying crews will take time, so leaders must build time in training plans to account for Tables I-VI (for howitzer and mortar crews) and brigade fire support team (FIST) certification for fire supporters prior to executing the FSCX.

Pre-training greatly aided the 2nd BCT’s fire support leadership in preparing company-level maneuver commanders and fire supporters for the upcoming tasks within the FSCX. The Commando Fires Academy accomplished this training through a four-day model, which educated company and platoon leadership on



Photo by PFC Christopher Gerken

Soldiers assigned to 1st Platoon, Charlie Battery, 2nd Battalion, 15th Field Artillery Regiment, shoot a high-angle mission from their firing point at Kandahar Airfield during Operation Freedom Sentinel in 2016.

the integration of fire support assets. It started with a video teleconference (VTC) from JRTC focused on the discussion of trends and lessons learned from previous Combat Training Center (CTC) rotations. The first day ended with a digital fire support exercise to verify and troubleshoot mission command systems as well as develop the sensor-to-shooter link. The second and third days of the academy covered both offensive and defensive operations, respectively. After receiving a class on offensive and defensive fires planning, FSOs were given an operation order (OPORD) and told to develop a fire support plan. They then conducted a fires brief to a senior artillery officer. During these days, howitzers were set up while leaders executed big three certifications (safety test, Army Skills Proficiency Test, gunner's test, leader's hands-on certification) and non-artillery Soldiers received familiarization training on the weapon systems. On the fourth day, maneuver commanders discussed a myriad of topics ranging from clearance of fires, radar integration, air-to-ground integration, minimum safe distances (MSDs) vs. risk estimate distances (REDS), and utilization of an FSO.¹⁰

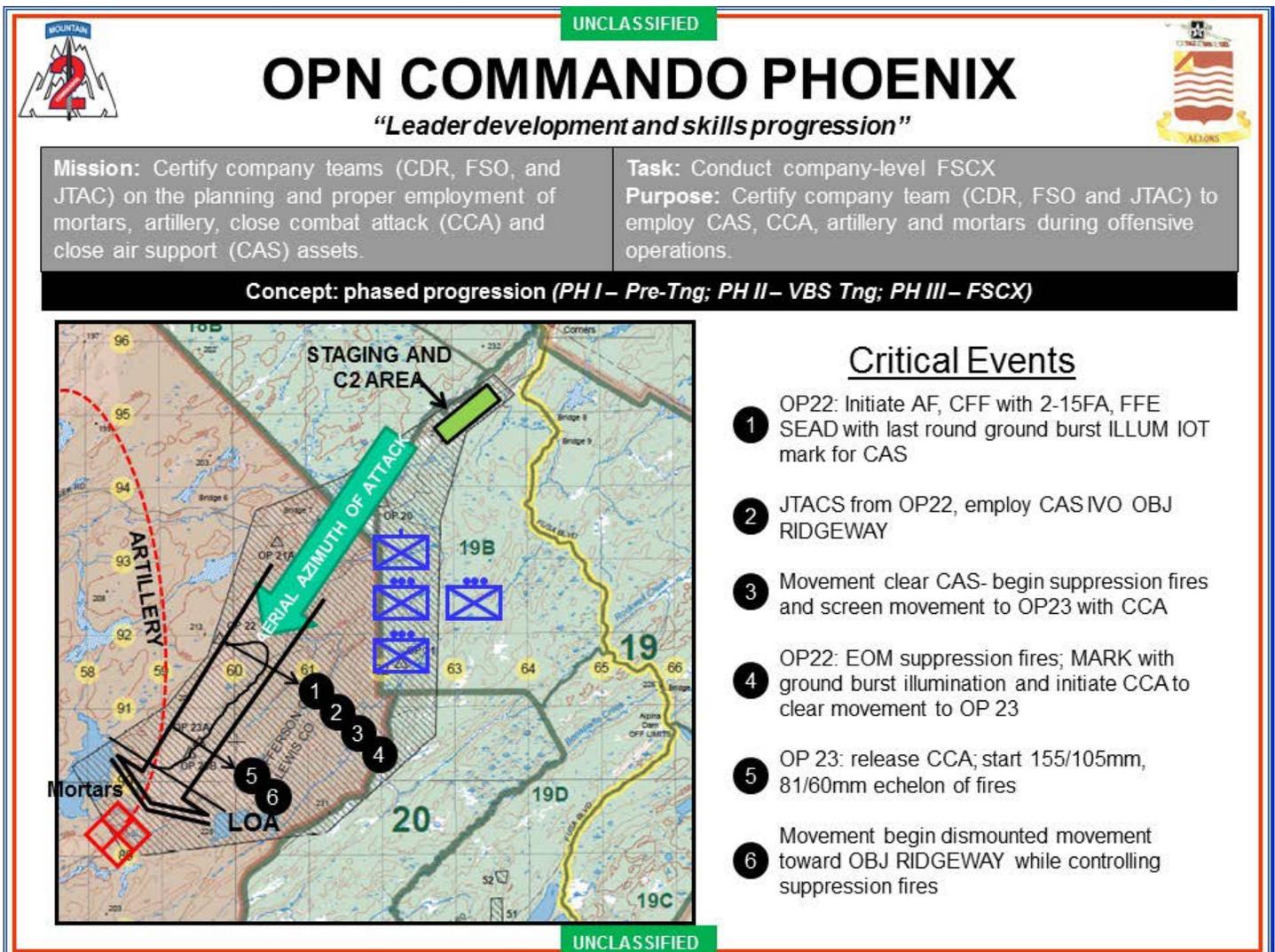
Overall, the Commando Fires Academy was a great training event that increased awareness of how to properly employ and integrate fires. The Allons of the 2nd Battalion,

15th Field Artillery Regiment will continue to utilize this model as part of a quarterly newcomer's orientation for all new officers and NCOs in order to reinforce those competencies learned in the Field Artillery Officer Basic Course (FAOBC), Senior Leaders Course (SLC), and Advanced Leaders Course (ALC).

Company commanders, FSOs, and JTACs utilized the VBS to conduct virtual rehearsals. VBS is a fully interactive, three-dimensional, computer-based synthetic environment suitable for training and experimentation.¹¹ The exercise commenced with an OPORD that allowed the company commanders to issue guidance for fires and develop a scheme of maneuver and fires plan. After briefing the BCT FSO, they had the opportunity to fight their plan on the same terrain as the live-fire portion with the same available assets during the simulation. This served as a perfect rehearsal and paid huge dividends during the execution of our FSCX.

The construct of this particular FSCX lane differed from the typical walk and shoot, which often becomes scripted to a fault and executed without variance from iteration to iteration. This specific scenario allowed commanders to strategically develop and execute their plans based on asset management and

Figure 3 — 2nd Brigade Combat Team, 10th Mountain Division's FSCX



ammunition allocation; furthermore, it showed how all available mortar (60mm and 81mm), howitzer (105mm and 155mm), rotary, and fixed wing assets would be utilized. For instance, an iteration could begin with the immediate suppression of the objective or with Air Defense Artillery (ADA) systems at the line of departure (LD) based upon rate of movement or until the first engagement. It was the commander's responsibility to decide when, where, and to what degree assets would be employed to ensure that as elements approached the objective, a reserve of adequate assets remained. Some company teams conducted doctrinal echelonment of fires while others utilized different techniques based on movement times and their level of proficiency. More importantly, the FSCX afforded the leadership the opportunity for a one-on-one assessment of the company FSO and his ability to plan and execute a company-level fires plan. The common point of friction was not in the FSO's ability to plan but rather in the technical execution of his individual fires skills. Many FSOs struggled with how to control and utilize modified table of organization and equipment (MTOE) assets (i.e. Lightweight Laser Designator Rangefinder [LLDR], binoculars, and communications equipment) and still be able to provide accurate fires to the maneuver commander.

Ensuring that these lessons were captured from the exercise, a comprehensive after actions review (AAR) occurred after each iteration of the FSCX. These AARs were led by the brigade FSO, brigade assistant FSO, and the brigade targeting warrant officer; rather than focus on the collective, it was decided that each team would receive instant feedback with the collective comments forming the formal post-exercise executive summary. In the individual team AAR, the evaluator focused on the techniques the

team used to conduct the lane and placed emphasis on how that technique met the commander's intent for fires.

The FSCX allows senior leaders to observe and evaluate the varying degrees of experience and competence of the two primary training audiences; fire supporters and maneuver company commanders are the crucial foundational blocks upon which successful integrated fire and maneuver is built. The FSCX demonstrates the abilities of junior leaders to answer and use the five things every maneuver commander should know about fires: asset allocation, guidance for fires, asset availability, priority targets, and deconfliction. Incorporating these five elements into the overall scheme of fire and maneuver will allow junior leaders to efficiently utilize the assets available to them, increasing flexibility, adaptability, and lethality. The need for this type of training is increasing due to the emphasis on using brigade organic assets and the shift in operational environments from the counterinsurgency model to decisive action.

Notes

- ¹ TC 3-09.8, *Field Artillery Gunnery*.
- ² Army Doctrine Reference Publication (ADRP) 3-90, *Offense and Defense*, 3-4, Table 3-11.
- ³ ADRP 3-09, *Fires*, 3-4.
- ⁴ FM 3-21.8, *The Infantry Rifle Platoon and Squad*.
- ⁵ TC 3-09.8, 3-81.
- ⁶ JP 3-09, *Joint Fire Support*, II-8.
- ⁷ FM 6-30, *Tactics, Techniques, and Procedures for Observed Fire*, 6-8, Table 6-3.
- ⁸ FM 3-21.8.
- ⁹ JP 3-09.3, *Close Air Support*.
- ¹⁰ FM 3-21.8.
- ¹¹ Bohemia Interactive Simulations Website, <http://www.army-technology.com/contractors/training/bohemia-interactive/>.



Photo by 1LT Randy Mills

Soldiers assigned to 2nd Platoon, Charlie Battery, 2nd Battalion, 15th Field Artillery Regiment, prepare their M777A2 howitzer for fire missions in support of 1st Squadron, 89th Cavalry Regiment at Tactical Base Dwyer during Operation Freedom Sentinel in 2015.

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