

Enabling a force field artillery

The necessity of protection

By Capt. Nicholas Calangi

The 17th Field Artillery Brigade is an organization with unique force projection capabilities. Its High Mobility Artillery Rocket Systems (HIMARS) have an effective range of 300 kilometers and can target enemy forces with pinpoint accuracy and devastating effects.

The ability to shape deep into the enemy's area of operation (AO) makes it a lucrative target for hostile adversaries and requires the 17th Field Artillery Brigade commander to implement both active and passive defensive measures to deny the enemy targets of opportunity. To determine what defensive measures must be enacted, the inherent vulnerabilities of 17th Field Artillery Brigade will be explored and analyzed through the lens of the protection warfighting function (WFF).¹ For the purposes of this analysis, the rear area vulnerability and HIMARS signature

will be used to study how 17th Field Artillery Brigade operates as America's First Corps Force Field Artillery (FFA).² While far from comprehensive, this analysis will highlight methods used to bridge capability gaps and help advance the protection WFF at the field artillery (FA) brigade level.

The 17th Field Artillery Brigade deployed to the Korean peninsula in support of I Corps' Warfighter (WF) 18-02 in November 2017. While deployed forward, it quickly became evident of the importance of having a vigorous protection cell to collect, analyze and disseminate information concerning a wide range of threats to include chemical, biological, nuclear and radiological effects, cyber-attacks, ground and air attacks, enemy artillery fire and missile launches. After analyzing the multitude of threats presented against the FFA headquarters, the protection chief must in-

tegrate seamlessly with I Corps in order to synchronize defensive measures with adjacent units and to use active interdicting effects to disrupt enemy offensive operations. During WF 18-02, the protection cell crafted metrics for performance that allowed for easily digested assessments to drive decision making.

Metrics

Assessing the vulnerabilities of a brigade-size element is crucial in determining how resources will be allocated for protection. A critical vulnerability FA units have is a function of their employment. FA units operate within the AO's rear, effecting targets several kilometers away. While operating in the rear affords an FA unit relief from the immediate pressures of direct enemy engagement, it can expose the unit to bypassed enemy units. When assessing a HIMARS unit, its vulnerability is fur-

¹ U.S. Department of the Army. Protection. (Army Doctrine Reference Publication 3-37. 2012), 1-10.

² "The force field artillery headquarters...is normally the senior field artillery headquarters organic, assigned, attached, or placed under the operational control of that command. The supported maneuver commander specifies the commensurate responsibilities of the force field artillery headquarters and the duration of those responsibilities." U.S. Department of the Army. Fires (Army Doctrine Reference Publication 3-09, 2012) 2-23.

The 17th Field Artillery High Mobility Artillery Rocket System and radars vulnerability assessment. (Courtesy illustration)

Unit	Time on Location	# Fire Missions Processed	Risk Assessment	Notes/Recommendation
17 th TOC	96 hours		LOW	
17 th TAC	12 hours		LOW	
A/5-3 FA	72 hours	125	HIGH	Received IDF 7/hour
B/5-3 FA	24 hours	25	MEDIUM	
A/1-94 FA	72 hours	0	LOW	Recommend move; No shaping fires executed.
B/1-94 FA	12 hours	15	LOW	
A/17 th Radar	96 hours		LOW	
B/17 th Radar	96 hours		LOW	
No Move Required		Deliberate Survivability Move		Hasty Survivability Move
<ul style="list-style-type: none"> No direct fire or IDF received No offensive CBRN used M26A2 can effectively shape I Corps' fight (Pending critical CLV shortages) 		<ul style="list-style-type: none"> IDF received in volleys of 6/hour Offensive CBRN effects used Loss of M26A2 range effects within 12 hours 		<ul style="list-style-type: none"> Direct fire from PLT (+) IDF received greater 6/hour EW effects noted M26A2 no longer shapes I Corps' fight

ther enhanced because it can operate at a greater range — thus the AO's rear area can be much larger. As friendly combat forces maneuver into the enemy's AO, they must bypass smaller units in order to maintain the initiative toward the final objective. It is expected the enemy will operate with a degree of impunity as they cannot be comprehensively engaged. Protecting 17th Field Artillery Brigade is challenged by enemy Special Purpose Forces and bypassed enemy forces executing disruption operations in I Corps' rear area. This vulnerability makes prioritizing I Corps' available maneuver assets critical. A HIMARS battery must rely on dedicated nonorganic security packages to secure position areas for artillery (PAA). Doing so will enable the HIMARS battery to continue to shape the deep fight unmolested. For ease of command and control as AOs shift, a case can be made that the allocated security package be under tactical control to 17th Field Artillery during the operational phases requiring security. It must be noted these security packages must be both robust and mobile to stay with a battery of HIMARS as they execute survivability moves to new PAA.

While a HIMARS unit is distinct in the mode of which they deliver artillery strikes, it possesses many of the characteristic vulnerabilities that are found in traditional artillery brigades. The assessment of the inherent vulnerabilities is not a mental exercise and should always end with recommendations on how to protect the force. The risk of employing the force in one fashion should list out exactly what risk the brigade commander is assuming by choosing a particular force posture. For example, an artillery unit's signature on the battlefield can influence the force posture and defensive measures adopted. If the signature is managed haphazardly, it becomes an indicator that allows enemy forces to mass direct or indirect fire on the unit. A HIMARS' "signature" on the battlefield is defined by the number of fire missions processed while operating within PAA. The risk to Soldiers and equipment is directly proportional to this ratio and can be mitigated when the HIMARS execute survivability moves. An example of a HIMARS and radars vulnerability assessment (opposite page). Battery commanders are empowered to execute deliberate survivability moves or a hasty survivability moves



Soldiers in 17th Field Artillery Brigade participate in a live-fire exercise. (Courtesy photo/17th FAB)

based on the commander's guidance. The 17th Field Artillery commander establishes the survivability move criteria during the military decision-making process (MDMP) and modifies the conditions as the mission matures.

The complexity of protecting the force is further compounded when 17th Field Artillery is designated as the FFA for I Corps. An FFA headquarters synchronizes the activities of each field artillery brigade under it, but must do it with a small staff in relation to the task. Furthermore, a typical FA brigade does not have the staff that would be seen in brigade combat teams (BCTs). For example an infantry BCT would have military police officers to assist in police marshalling activities, explosive ordnance disposal (EOD) advisors, and an engineer officer to plan survivability operations. An FA brigade is not assigned those staff complements so the inputs must be generated at I Corps to help the FFA protection cell determine the scheme of protection. This requires the FFA staff to integrate seamlessly with I Corps to garner information required to protect the force. It is at this touch point with I Corps that affords the FFA protection cell the ability to help facilitate the coordination of protection assets for the counter-fire headquarters and division artillery units. The integration is just one component to ensuring a robust protection cell. In order to develop synchronized efforts, the structure of the brigade protection cell must be clearly defined. There are 14 different tasks that fall under the responsibility of the protection WFF.³ Each of these supporting tasks derive inputs from the other WFF and specialty staff. Units that fall under the FFA umbrella must be prepared to bridge capability gaps that are present at each re-

spective brigade due to the lack of organic assets and available staffing. Simply put, the designated FFA "protection chief" must synchronize both organic and nonorganic assets so that the assessed critical asset list remains protected. Seventeenth Field Artillery Brigade chose to designate its chemical officer to be the protection chief, but the role can also fall on the air and missile defense officer.

Commanders apply combat power according to the inputs generated from the analysis of the six WFF for unified land operations. The application of each WFF input to the collective organization allows shared understanding to occur with the commander and his staff from the start of MDMP until the end of the operation. Each commander is able to tailor the information garnered from the WFFs through their leadership for their unit organization. Within an FFA headquarters, the protection cell gathers input from the other WFFs and offers recommendations on how to best preserve the force. A stout FFA protection cell will minimize combat losses to I Corps' longest reaching asset — a cost I Corps cannot afford in a decisive engagement.

References

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- U.S. Department of the Army. *Protection. Army Doctrine Reference Publication 3-37*. Washington, D.C.: U.S. Department of the Army, August 2012.

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³ Supporting tasks include: (1) conduct operational area security, (2) employ safety techniques, (3) implement operational security, (4) provide intelligence support to protection, (5) implement physical security procedures, (6) apply anti-terrorism measures, (7) conduct law and order, (8) conduct survivability operations, (9) provide force health protection, (10) conduct chemical, biological, radiological, and nuclear (CBRN) operations, (11) provide EOD and protection support, (12) coordinate air and missile defense, (13) conduct personnel recovery, and (14) conduct internment and resettlement.