



# Win Where You Are Planted: Terrain Management for the FA Battery

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The underutilization of terrain assigned to a Field Artillery firing battery by a higher headquarters is one of the early stumbling blocks observed by the observer, coach/trainer (OC/T) teams at the National Training Center (NTC). The trend of poor terrain management brings slower “in position ready to fire” (IPRTF) times, confusion in night movement and occupation, loss of communication with higher headquarters and the poor survivability of a battery within their assigned position area for artillery (PAA). This article discusses the doctrinal basics of artillery specific terrain management and the actions taken in selecting and occupying a PAA.

For starters, what does “terrain management” mean at the FA battery level? The FA battalion or higher headquarters assigns the battery a PAA in coordination with higher and adjacent headquarters. The size of the PAA will vary based on mission, enemy, terrain, troops, time and civil considerations (METT-TC) and is located to address specific targets or target areas of interest (TAIs) during points of a given operation. In other words, “A position area for artillery is an area assigned to an artillery unit to deliver surface to surface fires. Commanders assign PAAs for terrain management and for locations where individual artillery systems can maneuver to increase their survivability.” Terrain management at the battery level is the battery commander’s consideration of certain characteristics of an assigned PAA to ensure the assigned mission is met within a set amount of time while maintaining firing capability and the survivability of their battery.

There are three main considerations that must be assessed by a commander when selecting positions within a PAA. The top consideration is *the support of the assigned mission*. “The position must facilitate fires through the maximum area of the supported maneuver force” (DAHQ, 2015, p.3-3). Key to this consideration is the support of the azimuth of fire, ensuring the widest range fan for the howitzers as possible and minimizing intervening obstacles. *Communications* is the next consideration for a commander when selecting locations for battery assets. Ensuring effective communications with the higher headquarters and maximizing internal battery communications are essential to responsive and effective fires in support of maneuver. The final consideration stated in Army Techniques Publication (ATP) 3-09.50 is *defensibility* within the PAA using existing terrain features and effective cover and concealment, emphasizing concealment (DAHQ, 2016, p.3-5). Nesting within the work done by the battalion staff, a commander’s appreciation of their local terrain through the lens of OAKOC (observation and fields of fire, avenues of approach, key terrain, obstacles and cover and concealment) assists in the placement of battery assets and the battery’s “track plan” (a concept addressed later). In addition, the highest assessed threat will help determine the dispersion techniques used by the howitzer sections within the PAA.<sup>1</sup> A regular trend seen at NTC is batteries underutilizing the space available and keeping howitzers, fire direction centers (FDCs) and support vehicles bunched together in small portions of their assigned PAAs, presenting as great targets for both direct and indirect fire systems. This seems to be a holdover of a home station training mindset, where terrain can be restrictive.

Within a PAA, a commander should determine multiple positions for battery assets utilizing the considerations addressed above. There are three types of positions available: a primary position, an alternate position and a supplementary position.

The **primary position** is one where the firing battery accomplishes its assigned mission. This position includes general locations for the FDC, howitzer sections, support vehicles, entrance point(s) and exit point(s), at a minimum. The battery commander issues general guidance to the gunnery sergeant for the track plan, scheme of defense and location of ground guide pickup point.

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<sup>1</sup> For further reading on dispersion techniques, see ATP 3-09.50, para. 3-28 through 3-32.

An **alternate position** is one where the unit moves to if the primary position becomes untenable. The alternate position must meet the same requirements as the primary position and be located to allow for rapid and orderly occupation.

A **supplementary position** is one selected to accomplish a specific mission. For example, a supplementary position for an offset registration should be far enough away that counterfire will not affect the primary position.

An alternate position(s) should be identified during a commander's initial reconnaissance of a PAA. Preparation for the battery's rapid movement to alternates should be undertaken during position improvement after the battery is IPRTF. Unfortunately, alternate positions are rarely planned for by commanders at NTC, but when employed correctly, they significantly increase survivability while retaining command and control.

Figure 3-1, ATP 3-09.70 Paladin Operations

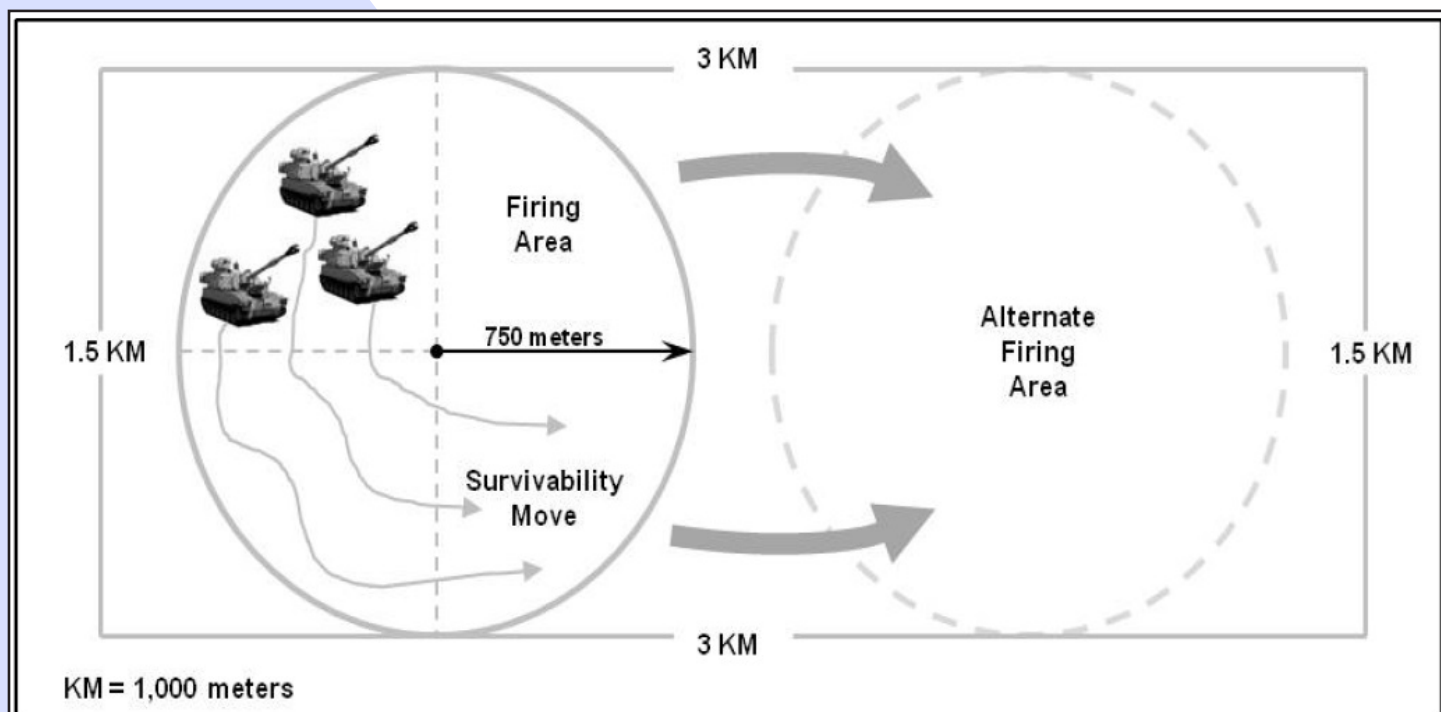


Figure 3-1. Example platoon position with firing areas

The “track plan,” as mentioned earlier, is an important planning step for the commander and gunnery sergeant ahead of and during occupation. It is the planned route within an assigned battery or platoon area that ensures efficient and quick movement within said area while also reducing the visual evidence of multiple vehicles movement within that area. “The most common signs of military activity in an otherwise well camouflaged area are tracks, disrupted soil, and debris associated with movement” (DAHQ, 2016, p.5-2). Some considerations for day occupation and a track plan:

- Use existing roads.
- Select separate entrance and exit routes.
- Follow natural terrain features (i.e. gullies or tree lines) that take advantage of natural overhead cover and concealment.
- Dictate exact routes for each vehicle if concealment is critical.
- Identify the vehicle pickup points.

Additionally, it is critical that the advanced party walks the track plan to confirm the path is clear of obstacles and is viable for the vehicle type.

Once a battery is located within a PAA, there are two methods of controlling the movement of the howitzers: centralized and decentralized. Using the centralized method, the FDC controlling the battery directly dictates the movement of the howitzers. With established movement guidance from the battery commander, the FDC directs sections to move locations using the grid, direction and distance or quadrant method.<sup>2</sup> The centralized method allows for maximum control and is advised for limited terrain, inexperienced sections or howitzer system failures. The decentralized method of control utilizes the modern systems (the Paladin digital fire control system (PDFCS) for the M109A7, digital fire control system (DFCS) for the M777A2 and fire control computer (FCC) for the M119A3) of the howitzers, and movement is controlled by the senior section chief within a designated firing area. For M109A6/7s, the chief can utilize the built in Joint Battle Command-Platform (JBC-P) in the PDFCS for easier navigation within the PAA. The disadvantage of decentralized control is the difficulty of tracking within the FDC and its effects on fire mission processing.

Many rotational units enter their PAA and put time and effort into planning for and employing their howitzers but neglect the placement of the battery's non-firing assets. The FDCs should be located to the rear or flank, as far as feasible from the firing line, utilizing the terrain and camouflage for concealment while maximizing communications to higher headquarters and internally to the battery. We have seen success with batteries utilizing the micro terrain, such as depressions and wadies, around "The Box" to hide the FDC vehicle while maintaining an effective line of sight with their OE-254s or other antennas. Battery trains should be located to the rear of the battery position, maximizing cover and concealment of the terrain, with quick access to the firing line for support if needed. Though they are mentioned last here, the non-firing assets are critical to plan and provide guidance for, as they are often left out in the open and generally are located very close together.



*A howitzer from C Battery, 3-16 FAR utilizes a wadi south of the Whale's gap to lower the profile of the vehicle during rotation 25-02.*



*A section from D Battery, 1-5 FAR uses a draw in the central corridor as a hide site during rotation 25-04.*

<sup>2</sup> For further information on the quadrant method see ATP 3-09.50, para 2-13; additionally, for M109A6/7 platoon positioning see ATP 3-09.70, para 3-12.

At the end of the day, a battery's success at NTC, and in Large-Scale Combat Operations overall, can be greatly helped or hurt by their ability to manage the terrain they are assigned. Home station sets and reps, a robust and refined battery tactical standard operating procedures (TACSOP) and clearly defined and disseminated guidance from the commander before and during each movement will ensure a battery can win where it is planted.

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*The view of a PLS and trailer from D Battery, 1-5 FAR parked in a wadi during rotation 25-04.*

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