Chapter 7

Defensive Actions

The Korean People's Army Ground Forces (KPAGF) only go on the defense when necessary and desire to return to the offense as soon as possible. This chapter explains the purpose behind the KPAGF fighting a defensive battle. It also explains how the KPAGF plan, prepare, and execute their defensive actions. The KPAGF can fight a mobile defense, but prefer to fight an area defense, so as not to cede any ground to the enemy. The tactical defensive actions for units are described, with detailed explanation of how the KPAGF use complex operational environments—urban and subterranean—within their defensive doctrine.

PURPOSE OF THE DEFENSE

7-1. The purpose of any given KPAGF defensive action depends on the situation, resources, and the larger mission. During the initial stages of a renewed conflict on the Korean Peninsula, the KPAGF will view defensive actions as only temporary to achieve certain tactical or operational objectives. The emphasis in the early stages of any conflict would be to return to the offense as soon as practical. The KPAGF recognize four general purposes of tactical defensive missions:

- Repulse a superior offensive force.
- Inflict grave casualties on an offensive force.
- Defend key terrain.
- Gain time.

7-2. Task organization of a unit for defense is determined by function within four main mission areas: disruption, main defense, support, and reserve. Special mission requirements may also exist that necessitate specialized capabilities.

REPULSE A SUPERIOR OFFENSIVE FORCE

7-3. The KPAGF use a defense to repulse a superior offensive force when their forces are facing an overwhelming enemy force. The KPAGF understand that their enemies prefer a 3:1 to 6:1 troop ratio at the decisive point to make an attack. Going on the defense allows the KPAGF to possibly defeat a numerically superior foe three to six times its own size. Once the enemy has suffered sufficient attrition, the KPAGF may return to the offense to achieve their desired objective(s).

INFLICT GRAVE CASUALTIES ON AN OFFENSIVE FORCE

7-4. The KPAGF may use a defense to inflict grave casualties on an offensive force when the KPAGF commander decides the defense is the best method to inflict maximum casualties on the enemy. By maximizing the terrain and the unit's firepower, the KPAGF commander will design the defense to inflict the largest number of casualties possible on the attacking force.

DEFEND KEY TERRAIN

7-5. A defense to defend key terrain prevents the KPAGF's enemy from seizing or using critical geographic features or facilities. Actions to defend key terrain do not necessarily require physical control, but the KPAGF unit does not want the key terrain to become controlled by its enemy.

GAIN TIME

7-6. A defense to gain time prevents the KPAGF's enemy from successfully concluding actions, movements, and scheme of maneuver before a certain point in time or prior to a given event taking place. Actions to gain time create opportunities for the KPAGF to transition to the attack or maintain the initiative.

PLANNING THE DEFENSE

7-7. Key elements of planning KPAGF defensive missions are to—

- Identify the defensive objective.
- Determine available time to plan and prepare defenses.
- Organize units by functional mission task requirements.
- Conduct electronic intelligence warfare (EIW) activities.
- Implement defenses.

PLANNED DEFENSE

7-8. A KPAGF planned defense is a defensive mission or action employed when there is sufficient time and knowledge of the situation to prepare and rehearse units for specific tasks. Key actions in an effective planned defense include but are not limited to—

- Implement a plan for reconnaissance, intelligence, surveillance, and target acquisition (RISTA).
- Determine the when, where, and how of enemy plans, actions, and intentions.
- Identify enemy vulnerabilities and how to exploit those weaknesses.
- Locate critical nodes of the enemy's combat systems and how/when to most effectively interdict them.
- Understand and reinforce the defensive characteristics of the area of operations (AO).
- Determine the defensive method that will best deny the enemy its tactical objectives.
- Task-organize units by function to defend.
- Create or take advantage of a tactical window of opportunity.
- Plan for offensive actions given success of defensive actions.

SITUATIONAL DEFENSE

7-9. A situational defense is a defensive mission or action when circumstances require rapid and timely defensive actions and drills to protect the force and retain the initiative. Key considerations in determining when a posture of situational defense mitigates risk and is appropriate can include but are not limited to—

- An enemy unexpectedly attacks a key Korean People's Army (KPA) unit, system, or capability.
- An enemy obtains air superiority and integrated air defense in a particular tactical situation.
- An enemy counterattack requires temporary KPAGF defensive measures.

FUNCTIONAL ORGANIZATION OF FORCES—DIVISIONS, BRIGADES, AND REGIMENTS

7-10. A KPAGF divisional, brigade, or regimental commander specifies the initial functions of a units within the command and task organizes resources to achieve those integrated functions of a mission. Given the resources available to this level of organization, multiple functional mission tasks can be assigned to a division or regiment. The KPAGF commander can adjust task organization of units during an operation to address emergent tactical conditions. Each functional unit has an identified KPAGF commander.

FUNCTIONAL ORGANIZATION OF ELEMENTS—BATTALIONS, COMPANIES, AND SUBORDINATE UNITS

7-11. Battalions, and companies are assigned mission tasks based on a function to achieve, but differ in how task organization occurs as compared to a division, brigade, or regiment. The KPAGF task-organizes battalions and companies as detachments to accomplish a single tactical task. Assignment of a functional task

to a detachment, such as fix or isolate, is integral to a larger mission. A detachment is assigned multiple functional mission tasks only in exceptional situations.

PREPARING THE DEFENSE

7-12. In the preparation phase, the KPAGF organizes an AO, zone of reconnaissance responsibility (ZORR), and units to optimize successful defensive actions and create or seize opportunities for offensive actions. The KPAGF believe in a prepared defense in depth, with heavy emphasis upon terrain, engineering, and artillery. Defensive dispositions and tactics apply a systems warfare approach to degrade the enemy's system of systems, deny integrated performance of the enemy combat system, and create vulnerabilities that KPAGF defensive units can exploit.

DENY ENEMY INFORMATION

7-13. Defensive preparations focus on deception or destruction of enemy units and sensors in order to limit enemy situational awareness and understanding of the KPAGF defensive plan. The KPAGF execute missions to destroy standoff RISTA means, conduct counterreconnaissance in an AO and ZORR, and employ camouflage, concealment, cover, and deception (C3D) methods to improve unit protection.

CONDUCT COUNTERMOBILITY AND SURVIVABILITY PREPARATIONS

7-14. Preparation of the defense is a continuum of actions to improve the defense. Engineer activities are a coordinated combination of survivability, countermobility, and mobility priorities and actions to create tactical opportunities. The obstacle plan complements the engineer effort and supports the fires and maneuver plan to produce the desired defensive effects. In conjunction with other mission tasks, engineers support the EIW plan through activities such as constructing decoy defensive positions and preparing false routes. The KPAGF create and reinforce complex terrain in all defensive actions to provide cover from direct and indirect fires, concealment, camouflage, and protection. See appendix F for more information on engineer operations.

ALLOCATE LOGISTICS

7-15. The KPAGF stock sufficient logistics support forward in caches with maneuver units and allocate appropriate logistics throughout the depth of an AO and in coordination with rearward support areas. Classes of supply, medical capabilities, and personnel support along and on lines of communications are arranged by priority to support the main and supporting defensive efforts, and in consideration of logistical requirements for transition to the offense. See appendix H for more information on logistics operations.

PREPARE FOR CONTINGENCIES

7-16. The KPAGF prepare for defensive and offensive contingencies when conducting a defensive operation. High-priority contingencies are developed for actions in the security zone and defense zones. Early warning of critical indicators in the ZORR complement probable decision points.

REHEARSE KEY MISSION TASKS

7-17. The KPAGF establishes priorities of effort and support, and rehearses critical actions of the defense based on the available time and resources. Typical actions rehearsed in preparation for a defense include but are not limited to—

- RISTA updates.
- Counterreconnaissance.
- EIW.
- Integrated fires support.
- Battle handover from disruption forces to main defense forces.
- Main defense.
- Counterattack options.

- Commitment of reserves.
- Logistics resupply and general sustainment.

EXECUTING THE DEFENSE

7-18. Successful execution depends on units conducting their specified functions that are integral to the overall defense. A successful defense execution results in the culmination of the enemy's offensive actions without achieving its objectives, and ideally creates conditions for the KPAGF transition to offensive actions. Success criteria for a KPAGF defense typically include but are not limited to—

- KPAGF combat formations remain capable of performing their functional roles in the defense.
- Enemy units do not achieve their mission objectives.
- KPAGF sustain ability to transition designated units to offensive mission tasks.

Note. KPA units may operate with a doctrinal expectation that significant casualties are expected and acceptable in order to achieve an assigned mission task. This acknowledgement of significant casualties may prevent effective conduct of follow-on mission tasks until a designated unit is reorganized or reconstituted.

MAINTAIN CONTACT

7-19. The KPAGF want to maintain contact with the enemy. Reconnaissance and counterreconnaissance actions include rapid reorganization or reconstitution of assets to ensure no gaps in situational awareness and understanding of the enemy, AO, and ZORR. Effective RISTA guides prudent use of KPAGF combat power to achieve the defensive mission.

EXECUTE MISSION TASKS AND DRILLS

7-20. The KPAGF conduct mission tasks and drills with flexible actions practiced to certain standards. As situational conditions evolve during a mission, clear and concise modifications to methodical and practiced combined arms actions allow the KPAGF to rapidly and readily adapt and react to new tactical conditions. The KPAGF leader directs tactical adjustments to a mission task or drill to address a functional requirement in the new conditions and states the intent of the modified actions.

SEIZE TACTICAL OPPORTUNITIES

7-21. While KPA doctrine discusses decentralized execution of a mission task and use of tactical initiative, superiors expect success if a subordinate commander uses initiative different than the prescribed plan. If subordinate unit commanders decide to take advantage of emergent opportunities and modify the unit's tactical actions to differ from the prescribed role in the orders, the unit best be successful. Successful deviations from the plan will be rewarded, but there will be severe punishment of the commander if the change in plans leads to failure.

TYPES OF DEFENSIVE ACTION—DIVISIONS AND REGIMENTS

7-22. The types of defensive action in KPAGF doctrine are both tactical methods and guides. The two basic types at divisional or regimental operations are the mobile defense and the area defense. A KPAGF commander may use both forms of defense simultaneously throughout an AO. A defensive battle or series of engagements may include subordinate units executing various combinations of mobile and area defenses, as well as offensive actions, within an overall defensive mission framework.

MOBILE DEFENSE

7-23. While not preferred, a KPAGF tactical mobile defense is designed to achieve tactical decision by skillfully using fires and mobility to destroy key parts of the enemy's combat system and deny enemy forces their objective while preserving the friendly units. A mobile defense may be appropriate when the KPAGF

can focus their available combat power and are not completely overmatched by an enemy. EIW is a key enabler, in coordination with RISTA, to shape and conduct a mobile defense. This type of defense causes the enemy to continually lose effectiveness until its actions culminate before achieving an intended objective. Even within a mobile defense, the KPAGF commander may use area defense on some enemy attack axes to shape the battle in a security zone, the first defense zone, and even possibly the second and third defense zones.

Method

7-24. The KPAGF mobile defense inflicts losses on the enemy, trades space for time, and protects friendly units. This defense allows the KPAGF, with effective RISTA, to select the location and time for engagements. The bulk of the KPAGF unit's combat power is normally in the second echelon, while the first echelon fights a series of delaying actions. Typically employed when an AO has significant geographic depth of its zones, the KPAGF progressively attack key nodes of the enemy combat system and create vulnerabilities to defeat or destroy the enemy. The mobile defense conducts recurring indirect and direct fires from a succession of defensive engagements, and adds additional combat power mass with timely fires and counterattacks. Figures 7-1 through 7-5 on pages 7-6 through 7-10 progressively demonstrate a KPAGF mobile defense.

Defensive Arrays

7-25. The basis of KPAGF mobile defense is to conduct fires and maneuver from battle position to battle position through a succession of defensive arrays. A defensive array is a group of battle positions in which one or more subordinate units have orders to defend for a specified time within a higher commander's order and intent. Defensive arrays reinforce terrain and shape corridors and axes into kill zones. In the geography between defensive arrays, units conduct disruption actions and deceive the enemy as to where the successive defense is located.

Defensive Maneuver

7-26. KPAGF defensive maneuver consists of selective timing of precision fires on enemy units, defensive array of direct and indirect fires and obstacles, and coordinated movement and maneuver bounds by two types of forces. The main force divides its combat power into two forces: a contact force and a shielding force. The contact force is the force occupying the defensive array, and is in current or imminent contact with the enemy. The shielding force is the force occupying a subsequent defensive array, thus permitting the contact force to disengage and reposition to a defensive array to the rear of the shielding force. A disruption force or main defense force can perform defensive maneuver.

7-27. The contact force ideally coerces the enemy to deploy its maneuver units and begin its direct and indirect fires in preparation for the attack. Then, before the contact force becomes decisively engaged, it conducts battle handover to the shielding force and maneuvers to its next preplanned defenses. While the original contact force is moving, the shielding force maintains the enemy under continuous observation and fires, and defends its own defensive positions. When the original contact force assumes positions in its subsequent defensive array, it becomes the shielding force for the new contact force—formerly the shielding force—now in combat with the enemy. KPAGF forces continue to defend and delay the enemy. The succession of defensive arrays is designed to defeat or destroy the attacking enemy force. Arrays are close enough to each other to allow the defending units to maintain coordinated, continuous engagement of the enemy while moving from one array to another. KPAGF forces may be ordered to defend even if actions result in a decisive engagement.

7-28. A key consideration in locating defensive arrays is that the distance between defensive arrays precludes the enemy from engaging two arrays simultaneously without displacing its indirect fire weapons. This requires the enemy, having attacked one array, to reposition the majority of its firing positions and coordinate a new approach and attack on the subsequent KPAGF array.

7-29. The example of mobile defense in figures 7-1 through 7-5 on pages 7-6 through 7-10 shows actions of a contact force and shielding force. Fires and maneuver are continuous, and focus on fixing or isolating designated enemy forces, delaying other enemy forces, and defeating or destroying key systems of enemy combat power to ultimately defeat the enemy attack.

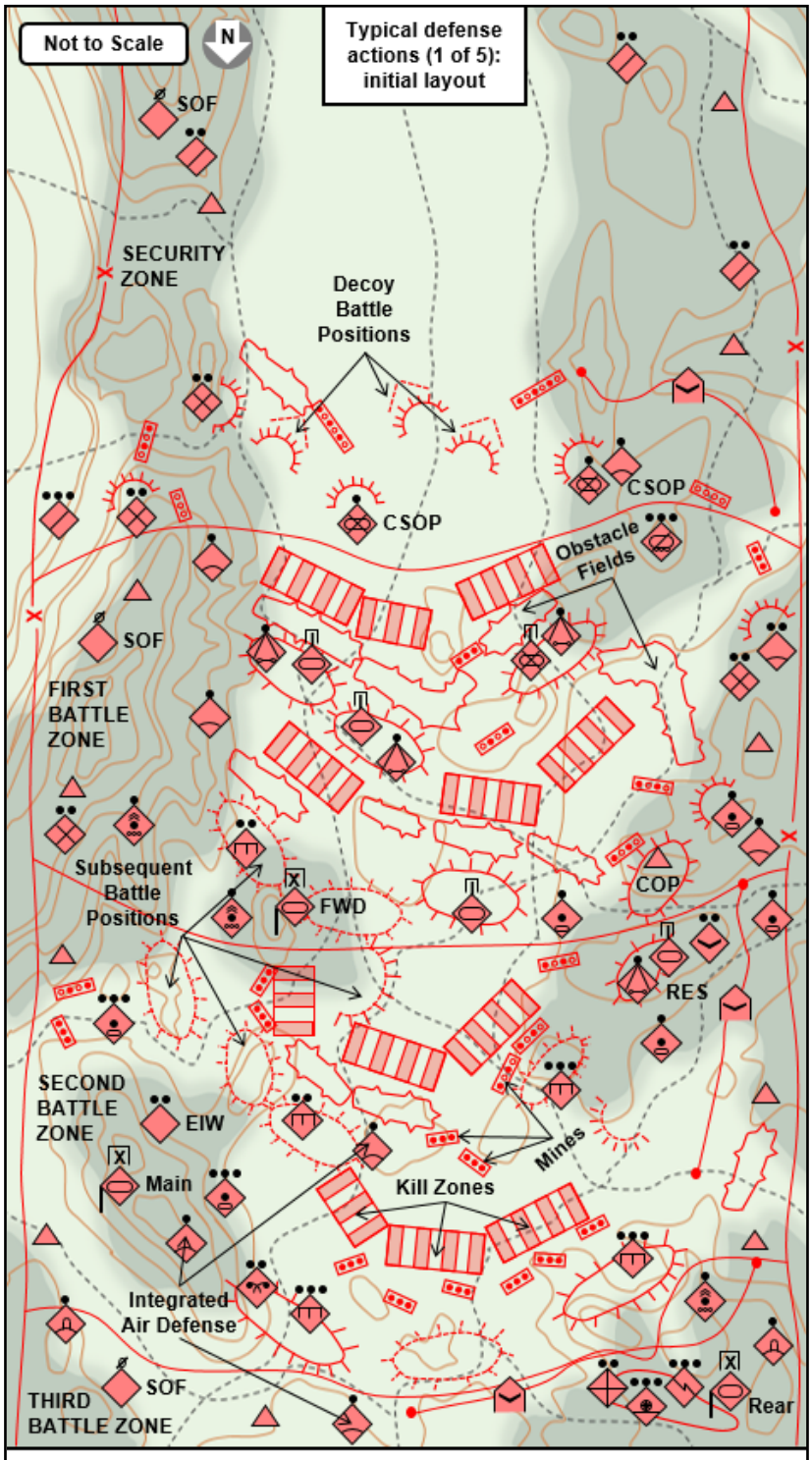
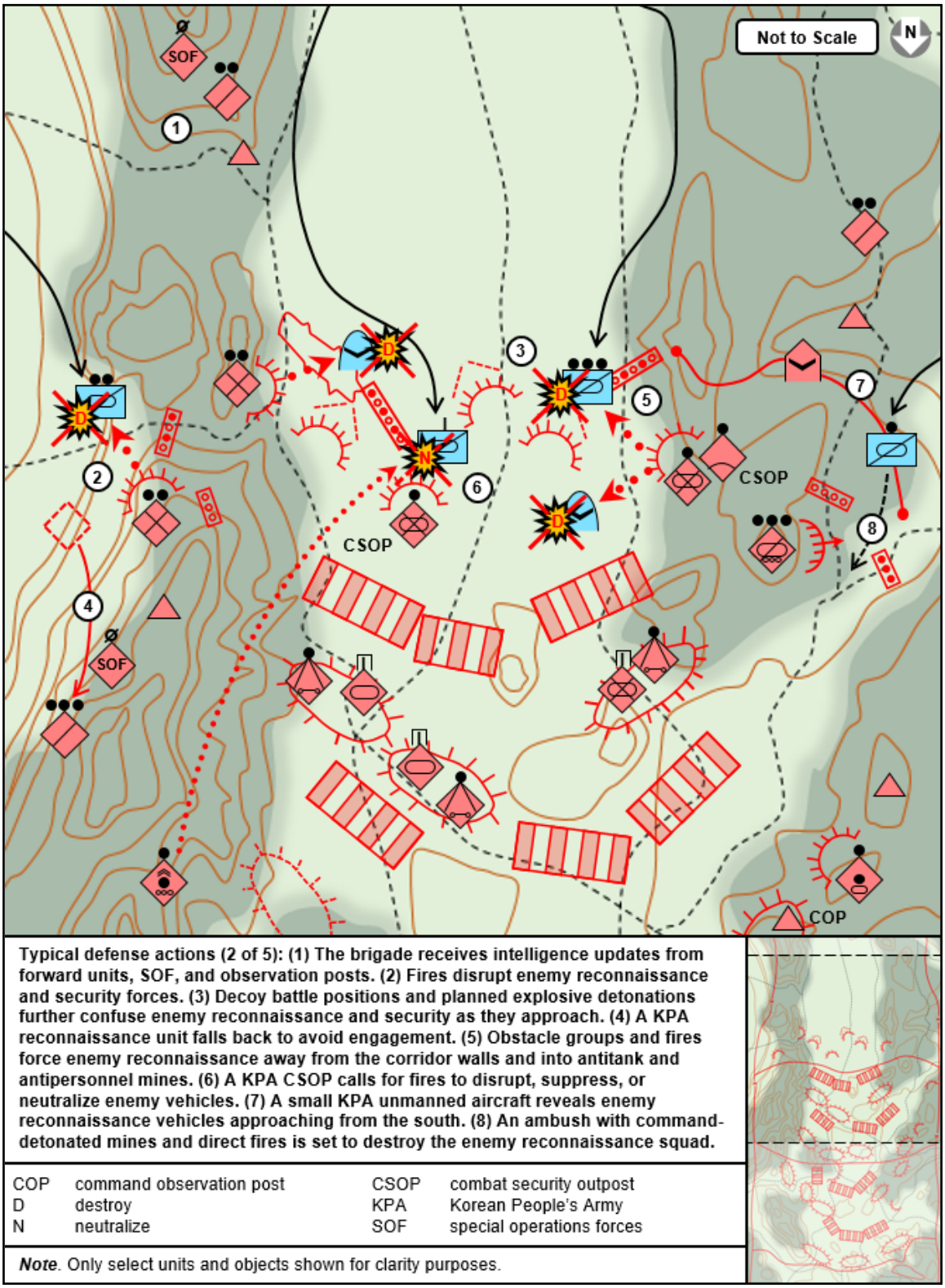


Figure 7-1. KPAGF brigade mobile defense, initial layout (example; part 1 of 5)

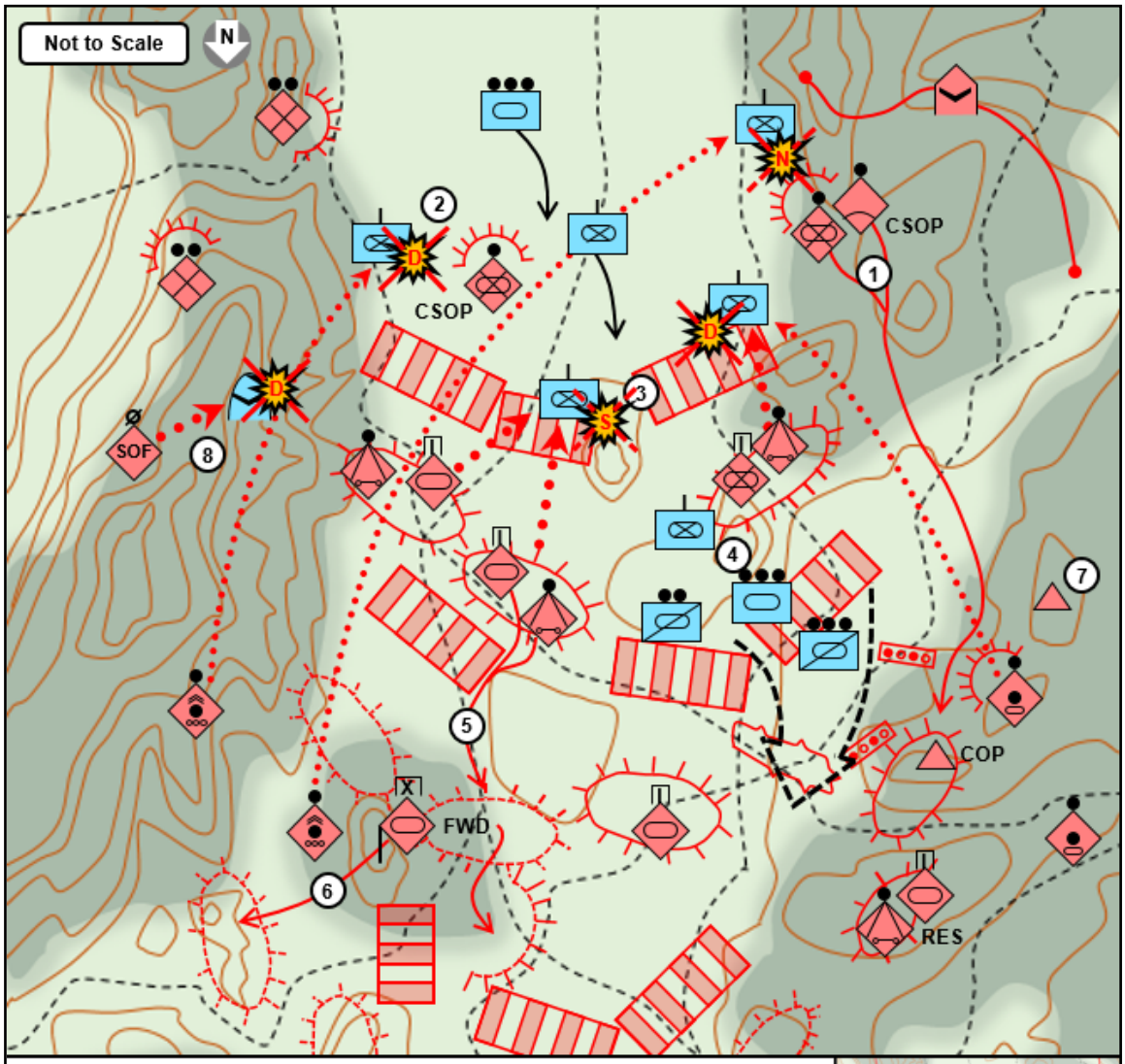


Typical defense actions (2 of 5): (1) The brigade receives intelligence updates from forward units, SOF, and observation posts. (2) Fires disrupt enemy reconnaissance and security forces. (3) Decoy battle positions and planned explosive detonations further confuse enemy reconnaissance and security as they approach. (4) A KPA reconnaissance unit falls back to avoid engagement. (5) Obstacle groups and fires force enemy reconnaissance away from the corridor walls and into antitank and antipersonnel mines. (6) A KPA CSOP calls for fires to disrupt, suppress, or neutralize enemy vehicles. (7) A small KPA unmanned aircraft reveals enemy reconnaissance vehicles approaching from the south. (8) An ambush with command-detonated mines and direct fires is set to destroy the enemy reconnaissance squad.

COP	command observation post	CSOP	combat security outpost
D	destroy	KPA	Korean People's Army
N	neutralize	SOF	special operations forces

Note. Only select units and objects shown for clarity purposes.

Figure 7-2. KPAGF brigade mobile defense (example; part 2 of 5)

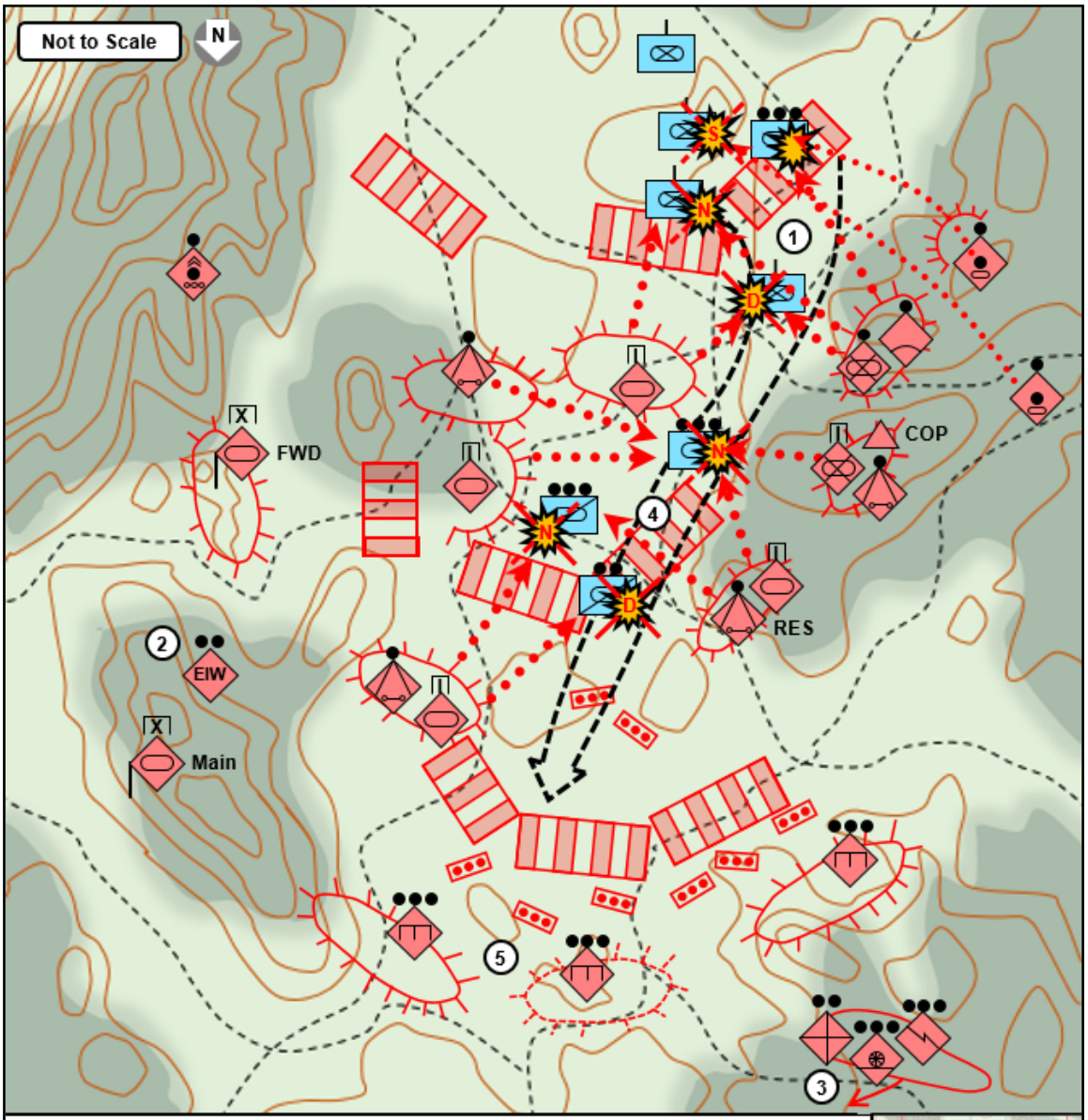


Typical defense actions (3 of 5): (1) One CSOP withdraws to main defenses and the other becomes a stay-behind OP. (2) Fires impede enemy forces while obstacles and mines channel the enemy toward the center and west of the valley floor. (3) The enemy main effort orients to the west and maneuvers into the first set of kill zones, where it is attacked by direct and indirect fires. (4) The enemy gains success in the center, a KPA deception to lure it into subsequent kill zones. (5) The CDETs and antitank platoons displace to subsequent BPs. (6) Other units displace northward as the enemy makes progress. (7) An OP reports enemy follow-on forces orienting to the northwest to perform breaching actions. (8) A SOF team engages and destroys an enemy unmanned aircraft flying north along the corridor floor.

BP	battle position	CDET	company detachment
COP	command observation post	CSOP	combat security outpost
D	destroy	FWD	forward command post
KPA	Korean People's Army	N	neutralize
OP	observation post	RES	reserve
S	suppress	SOF	special operations forces

Note. Only select units and objects shown for clarity purposes.

Figure 7-3. KPAGF brigade mobile defense (example; part 3 of 5)



Typical defense actions (4 of 5): (1) KPA fires slow the passage of follow-on enemy forces through the lanes, but adjust their tempo to draw the enemy into the area. (2) Jamming further disrupts the enemy's attack and distort its situational awareness. (3) KPA logistics units withdraw. (4) The close fight in successive BPs focuses fires into the front and flanks of the enemy attack; enemy momentum reaches the culmination point as lead vehicles are destroyed. (5) KPA engineers prepare to defend their BPs against any undestroyed enemy forces.

BP	battle position	COP	command observation post
D	destroy	EIW	electronic intelligence warfare
FWD	forward command post	KPA	Korean People's Army
Main	main command post	N	neutralize
RES	reserve	S	suppress

Note. Only select units and objects shown for clarity purposes.

Figure 7-4. KPAGF brigade mobile defense (example; part 4 of 5)

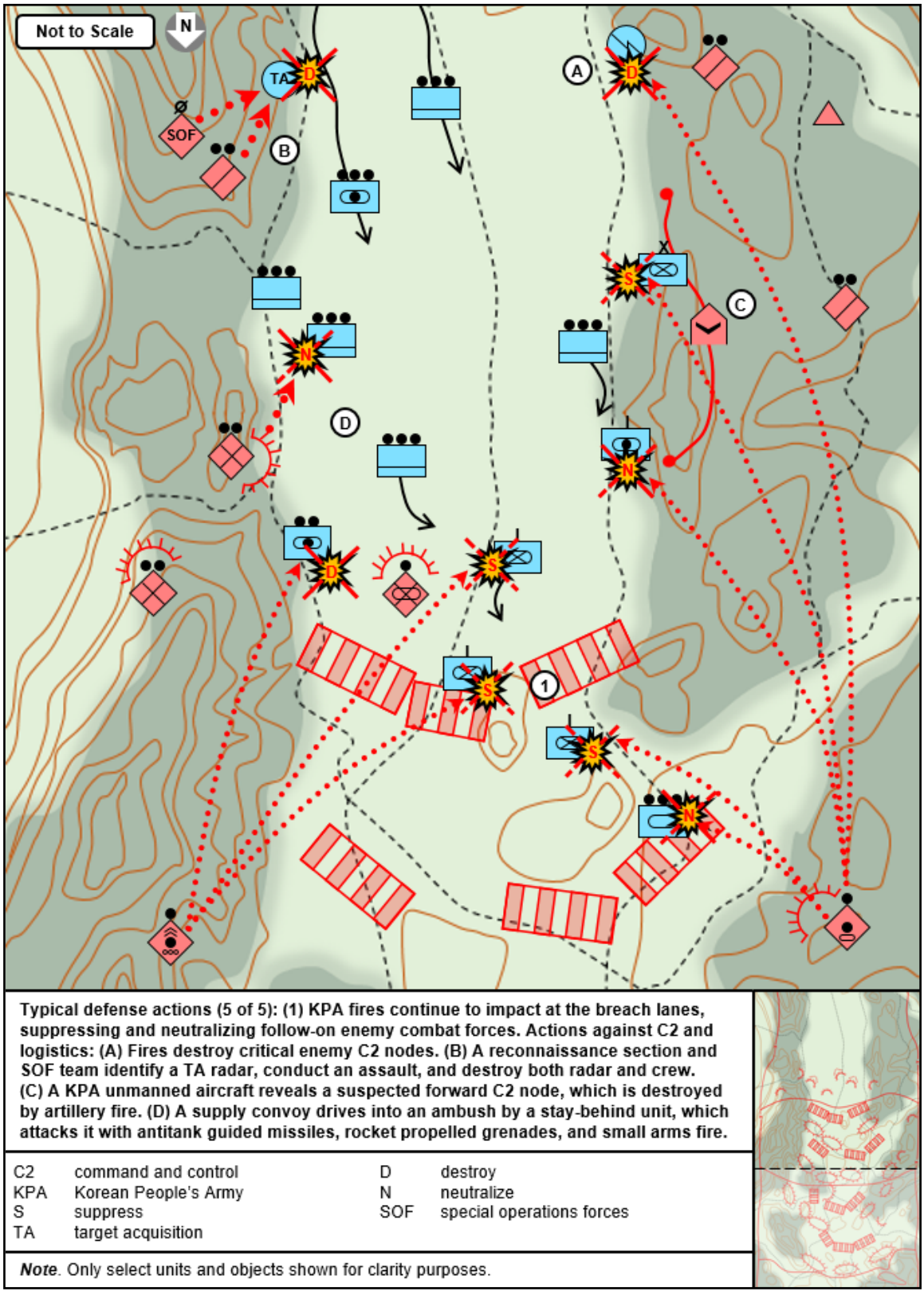


Figure 7-5. KPAGF brigade mobile defense (example; part 5 of 5)

Disruption Force

7-30. The disruption force initiates the attack on the enemy's combat system by targeting and destroying systems that are critical to enemy effectiveness. A disruption force seeks to coerce the enemy to fight on disadvantageous terrain and at a tempo of the KPAGF's selection. The disruption force may be able to cause culmination of the enemy attack before the enemy enters the first, second, and third defense zones. A disruption force can also set the conditions for a KPAGF spoiling attack or counterattack. The disruption force may be directed to occupy prepared battle positions in the defense zones to reinforce the main defense force. A disruption force may also be directed to remain in the security zone as bypassed units in order to attack follow-on enemy units.

Main Defense Force

7-31. The main defense force task is to complete the defeat or destruction of the enemy by employing contact forces and shielding forces. The basic considerations for employing a main defense force in the defense zones are kill zones, simple battle positions (SBPs), complex battle positions (CBPs), and—in concert with the defensive order—coordinate timing and repositioning of contact forces and shielding forces. A force within the main defense force may be directed to remain in a battle position as a bypassed unit in order to defend or attack follow-on enemy units.

Reserves

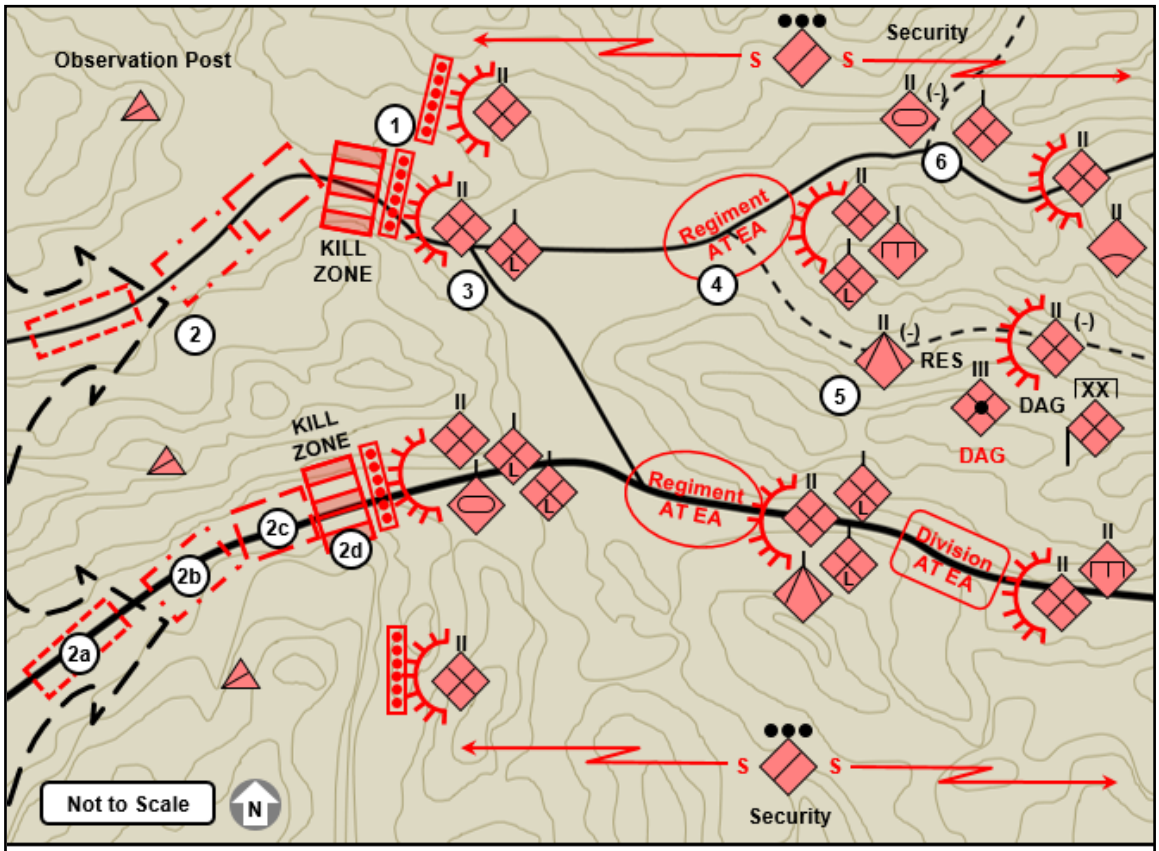
7-32. A KPAGF commander can designate a number of reserve units of varying types and capabilities. In planning, a maneuver reserve is a unit strong enough to defeat an anticipated enemy exploitation force. The commander positions a reserve in the AO to respond to probable contingencies and probable priorities of effort for reserve employment.

AREA DEFENSE

7-33. In situations where the KPAGF must deny key terrain or AO capabilities to an enemy, or access to them, a tactical area defense may be appropriate and is the KPAGF's preferred type of defense. An area defense may also be suitable when the KPAGF is overmatched in combat power by an enemy or the enemy must not advance any farther. This type of defense is designed to achieve tactical decision by defending designated terrain with a cohesive defense of mutually supporting CBPs, channeling and stopping enemy units in kill zones, and using massed fires and other parts of combat power to defeat or destroy the enemy. This defense can also have a specified duration. An area defense retains the initiative and creates windows of opportunity to use maneuver to defeat or destroy the enemy. EIW elements are key enablers, in combination with RISTA, to shape and conduct area defense.

Method

7-34. The KPAGF area defense inflicts progressive losses on the enemy, retains designated terrain, and protects friendly units in conjunction with mission and tactical risk assessment. An area defense centers on creating kill zones and CBPs on or in the vicinity of key terrain, reinforcing defenses with significant obstacle effort on designated corridors and axes, and positioning decentralized logistics. Units conducting an area defense execute offensive and defensive actions in the security zone to degrade the enemy in its attack capabilities and momentum. Integrated fires attack to defeat or destroy key components and subsystems of the enemy's combat system. Area defense creates windows of opportunity in which to conduct spoiling attacks or counterattacks and destroy key enemy systems. The KPAGF commander places two-thirds of the defensive units in the first echelon and one-third of the units in the second echelon. The KPAGF commander will designate one-ninth of the entire unit, taken from the second echelon units, as the reserve. Another one-ninth of the total combat unit, taken from the first echelon, will serve as the disruption unit in the security zone. Figure 7-6 on page 7-12 is a simplified pictorial representation of the KPAGF area defense.



A KPA division prepares for an antitank defense. The enemy is expected to approach from the west, using one or both of the main east-west roads. The KPA commander's defensive plan contains six phases: (1) Antiarmor obstacles are placed to protect infantry forces and to slow the enemy's advance. (2) Antiarmor firing zones are established on both possible avenues of approach for (a) area fires, (b) rolling fires, (c) antiarmor rectangular target fires, and (d) direct fires. (3) Antitank defensive positions are placed immediately east of the firing zones. (4) Antitank engagement areas are established further east along the main roads. (5) An antitank unit serves as a mobile reserve. (6) A counterattack force is designated and positioned in the far northeast.

AT EA	antitank engagement area	DAG	division artillery group	KPA	Korean People's Army
RES	reserve	S	screen		

Note. Only select units shown for clarity purposes; those not shown include multiple artillery and air defense units.

Figure 7-6. Division area defense (example)

Disruption Force

7-35. The security zone of a KPAGF area defense, approximately 16–20 km in width and 10–15 km in depth for a division, is designed to be an area of continuous contact with the enemy. The security zone is subdivided into a combat security area and a general security area. RISTA units and precision integrated fires disrupt enemy units as situational awareness confirms the enemy's main groupings and directions and reveals probable enemy intentions. Selective KPAGF attacks deceive the enemy as to the location and configuration of defense zone main defenses, delay enemy maneuver, canalize the enemy into obstacles and kill zones, and create time for additional improvement of defense zone defenses. Within the overall context of an area defense, the disruption force might employ a mobile defense. In this case, the distance between positions in the security zone is such that the enemy will find it necessary to displace the majority of its supporting weapons to continue an attack on subsequent positions. Table 7-1 provides information on the security units found in the security zone.

Table 7-1. Security elements in a security zone

Security Area	*Security Type*	*Purpose*	*Location (FWD of main defensive position)*	*Unit Size*
General security area	General security outposts	Attack warning, delay, ambush	10–15 km	Corps: regiment (+) Division: battalion (+)
Combat security area	Combat outposts	Attack warning, raid prevention, indirect fire observation	1–2 km	Regiment: company (+) Battalion: platoon (+)
Combat security area	Direct security	Attack warning, raid prevention	200–400 m	Security outposts, security patrols, ambush patrols

FWD forward km kilometers m meters

Combat Security Area

7-36. The combat security area is normally 1–2 km in depth in front of the first defensive zone, and is further subdivided into two areas. In the first area, from the main defensive to 200–400 m in front of the forward units, the forward battalions provide their own local security with security outposts, security patrols, and ambush patrols. The second area can extend up to 2 km in front of the other area. A platoon or larger unit sets up three to four combat observation posts; these provide early warning to their regiment, preventing surprise attacks as well as calling for and adjusting artillery fires.

General Security Area

7-37. The general security area is a KPAGF corps- or division-level operation located in front of the combat security area and extending 10–15 km in front of the first defense zone. The size of the force located in the general security area is a regiment (+) for a corps and a battalion (+) for a division. The general security outposts are tasked to provide early warning to the main defensive force, delay the enemy, and coerce the enemy to deploy into its battle formations from march formations earlier than desired.

Main Defense Force

7-38. The KPAGF main defense force defeats or destroys the enemy with fires from mutually supporting CBPs in defensive arrays. The main defense force is located in the defense zones and focuses on kill zones from simple and CBPs. KPAGF units use key terrain, reinforced with obstacles and other engineer effort, to mass combat power on kill zones. When movement and maneuver between battle positions is part of the area defense plan, repositioning routes are reconnoitered. A main defense force can conduct counterattacks in support of the defense mission and intent.

7-39. The KPAGF uses the old Soviet concept of echelons in constructing its main defensive positions. A KPAGF field army will place a single division in the first defensive zone, covering 16–20 km of the front. The field army will then place other divisions or regiments in the second and third defensive zones. Each zone will be 10–15 km in depth. Between these three defensive zones are buffer zones, 4–6 km in depth, with prepared positions if time allows their construction. Of note, the KPA has already built these defensive fighting positions in the areas north of and adjacent to the demilitarized zone (DMZ). See figure 7-7 on page 7-14 for a visual representation, but the actual deployment of the units will be based on the terrain and forces available to the KPAGF commander.

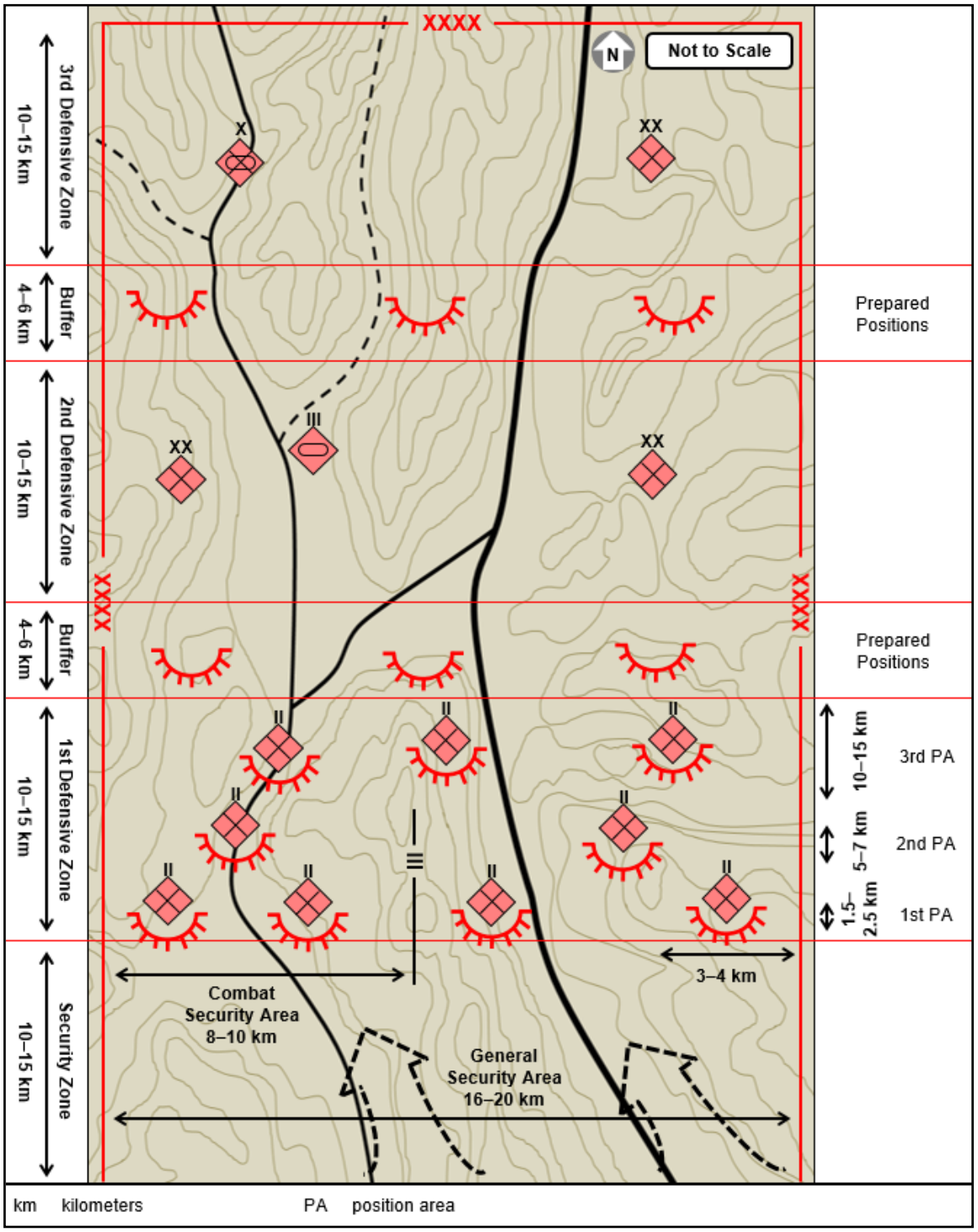


Figure 7-7. KPAGF field army defensive zone (conceptual)

7-40. Each KPAGF infantry division will normally place two regiments in its first echelon and one regiment in its second echelon. The forward regiments—but not always the division reserve regiment—will also use the same "two up, one back" echelon concept for their maneuver battalions. Each forward regiment will be responsible for 8–10 km of frontage, with each forward battalion responsible for about half of the regiment's front.

Reserves

7-41. A KPAGF commander can designate a number of reserve units of varying types and capabilities. The commander positions this reserve in the AO to respond to probable contingencies and probable priority of effort for reserve employment. The KPAGF do not commit the reserve in a piecemeal fashion. The KPAGF commander can use reserves to seal an enemy penetration. In some defensive operations, the reserve units may be for launching a counterattack to return the KPAGF unit to the offense. The reserves may move through the enjoined units to give new impetus to the battle, or into gaps between units.

Antitank Defense System

7-42. The KPAGF consider enemy tanks the most lethal ground attack vehicle and design their area defense to stop enemy armor through the use of antitank (AT) defensive positions and AT engagement areas. The KPAGF plans to fight an AT battle along the predictable routes the enemy's armor vehicles will likely travel. The KPAGF breaks down its defensive plan into six phases: antiarmor obstacles, antiarmor fire plan, AT defensive positions, AT engagement areas, the AT reserve, and the counterattack unit. Phase numbers in the following descriptions correspond to the numbers in figure 7-6 on page 7-12. (See appendix C for more information on AT operations.)

Antiarmor Obstacle Plan

7-43. The KPAGF's defense phase 1 is the antiarmor obstacle plan, with obstacles located in front of the forward defensive positions and within each AT engagement area or kill zone. The KPAGF will place these obstacle belts so they tie into the terrain and include a combination of AT and antipersonnel mines. The KPAGF will cover each concealed obstacle belt with direct fire weapons and observers to call in indirect fire. The obstacle belts will consist of several layers positioned to take advantage of the KPAGF's various AT weapon ranges, normally 400–1,000 m.

Antiarmor Fire Plan

7-44. Phase 2 of the KPAGF AT defense system is the antiarmor fire plan, which contains four subphases conducted by disruption force. These are based on the location of the enemy as observed by security elements ahead of the forward defensive line, whose task is to call in indirect fire for the purpose of preventing an effective enemy attack.

7-45. During phase 2a, the KPAGF plan area fires at potential chokepoints along the suspected enemy's avenues of approach, often along main roads. The KPAGF allocate two artillery battalions per each enemy company to their front. The KPAGF will fire mortars, artillery, or rockets at these chokepoints. The normal size of a company target is approximately 100 m wide by 900 m deep.

7-46. Phase 2b is a set of KPAGF planned rolling fires approximately 2,000 m in front of the forward battle positions, with the purpose to disrupt and destroy armor march units as they transition to battle formations. The normal width for these barrages is 400–700 m, and they may occur every 500–800 m for a maximum of four times.

7-47. Phase 2c of the KPAGF plan, antiarmor rectangular target fires, occurs immediately after phase 2b. The primary difference between these two types of indirect fire is that while the width is approximately the same (400–700 m), the depth of the fire is less (300–500 m), and is performed in three sequential volleys: first rockets, then artillery, and lastly mortars, as the enemy approaches the obstacle belts. Antiarmor rectangular fire will cease at the obstacle belt along the forward battle positions.

7-48. Phase 2d, the KPAGF direct-fire fight, begins at the forward defensive obstacle belts. Tanks, AT guns, recoilless rifles, and rocket-propelled grenades (RPGs) are fired at their maximum ranges while KPAGF soldiers fight the enemy's infantry. The KPAGF plan indirect final protective fire when the enemy closes to within 300 m of their frontline units.

Antitank Defensive Position

7-49. Phase 3 is the AT defensive position, planned by the KPAGF regimental commander and executed by a KPAGF battalion commander. The AT defensive position will be set up along the most likely armor avenue

of approach into the forward infantry regiment's AO. The KPAGF regimental commander will often select two parallel forward ridgelines running in the same direction as the enemy's movement, so the armor vehicles can be hit by a crossfire from two, if not three, directions.

7-50. The KPAGF battalion creating this defensive position will receive additional resources, such as AT missiles or recoilless rifles. When the enemy is within range, the KPAGF main defense force—composed of tanks and AT guns, such as Saggers—will engage the enemy with direct fire with a mission to concentrate on and destroy the enemy armor vehicles first. As the enemy armor continues to advance, it will meet an AT/antipersonnel minefield where KPAGF soldiers armed with recoilless rifles or RPGs will engage as the vehicles become bogged down in their attempted breach. The KPAGF will attempt to contain the enemy within the kill zone and prevent the armor from flanking the defensive battalion's position.

7-51. Any armor vehicles that successfully traverse the minefield will be attacked by additional RPG teams tasked to support by fire with the mission to prevent the armor from escaping off the desired axis of advance. Any remaining operational AT weapons from the forward-position disruption units can relocate to supplemental positions to continue engaging any enemy armor that passes through the kill zone and eliminate it.

7-52. The KPAGF battalion commander will also possess a counterattack unit composed of armor or AT weapon systems, often hidden from view and shielded from direct fire on the reverse slope of a hill. On order, the counterattack unit will maneuver and attack the enemy's flank with the purpose to destroy the remaining armor threat before the enemy escapes the battalion's AT defensive position. Even if some enemy armor vehicles pass through this first-echelon battalion AT defensive position, those vehicles could face other battalion AT defensive positions, regimental AT engagement areas, or even possibly a divisional engagement area.

7-53. Any units or personnel in the forward battalions not killed by the enemy are trained not to retreat, but to remain behind to set up stay-behind ambushes of enemy combat support and combat service support units as they enter the overrun KPAGF battalion's AO. Figure 7-8 is a pictorial representation of a possible KPAGF battalion AT defensive position.

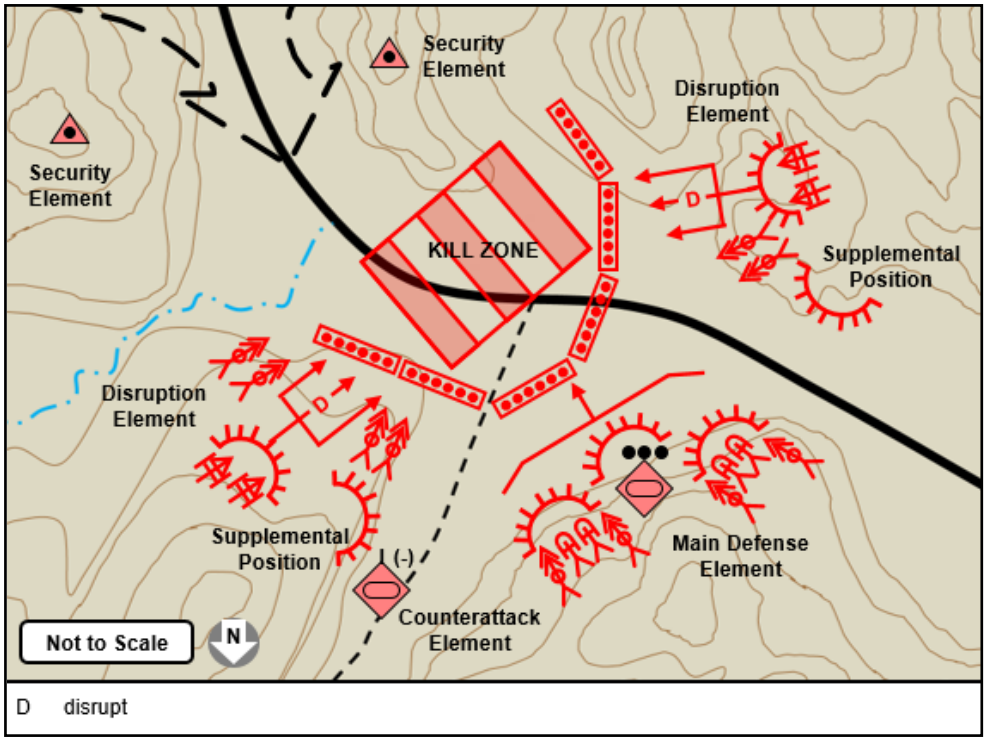


Figure 7-8. Antitank defensive position (example)

Antitank Engagement Area

7-54. Phase 4 of the KPAGF AT defense system is the AT engagement area, which is similar to the battalion AT defensive position but occurs at the regimental or divisional level. Any enemy units successfully making it through the forward regiment's battalion AT defensive positions will likely run into an AT engagement area set up by other KPAGF units.

7-55. The attack is similar to the AT defensive position described above, but on a much larger scale. The KPAGF commander will select a location so the enemy units will be canalized and can be attacked on three, if not four, sides. Two platoons of SU-100 howitzers will likely be allocated for a direct fire role and up to two RPG-7 platoons for a regimental or divisional AT engagement area. Any additional weapons systems available, such as tanks and recoilless rifles, can also be used.

Antitank Mobile Reserve

7-56. Phase 5 of the KPAGF AT defense system is the AT mobile reserve, designed to destroy any tanks appearing unexpectedly within the KPAGF's defensive system, especially in the vulnerable rear areas. This AT mobile reserve would confront any enemy tanks managing to survive the AT defensive positions, the regimental engagement areas, and the divisional engagement area. Each KPAGF division commander normally keeps two AT companies for this role and locates them between the first- and second-echelon units.

Counterattack

7-57. Phase 6, and the final piece of the AT defense system, is the counterattack conducted by the counterattack unit. All regimental and higher units in the KPAGF will possess a plan to conduct a counterattack to eliminate any enemy penetrations into their lines. Only the divisional counterattack force is shown on the division defense diagram in figure 7-6 on page 7-12, but each battalion, regiment, division, and corps will designate a counterattack unit.

7-58. Once a penetration becomes a possibility, the appropriate KPAGF commander will attempt to predict the direction in which the penetration will continue and then selects a counterattack position, normally 1 km to the rear of the penetrated unit. The type of counterattack—rapid, standard, or delayed—that is chosen by the KPAGF commander will depend on the depth of the penetration toward the unit's rear area and the criticality of the position penetrated, as shown in table 7-2.

Table 7-2. KPAGF counterattack types and criteria

Counterattack Type	*Regiment*	*Division*	*Corps*
Rapid	First-echelon platoon penetration	First-echelon company penetration	First-echelon battalion penetration
Standard	First-echelon company penetration	First-echelon battalion penetration	First-echelon regiment penetration
Delayed	First-echelon battalion penetration	First-echelon regiment penetration	First defense zone penetration

7-59. The normal KPAGF procedure at divisional level is to conduct a rapid counterattack for a company-level penetration, a standard counterattack for a battalion-level penetration, and a delayed counterattack for a regiment-level penetration. The difference between the types of counterattack is how fast the mission can be executed. For example, if a KPAGF infantry regiment received the mission to counterattack the penetration of one of its first-echelon battalions, the regimental commander would need to conduct a delayed counterattack—the type of counterattack with the longest time period before the mission can be accomplish—as it takes additional time and planning to execute. The division commander, however, might be able respond quicker with a standard counterattack against the same penetration, while the corps commander could respond the fastest with a rapid counterattack. The situation at the time and the counterattack unit available could also dictate what unit receives the counterattack mission. Once the unit for the counterattack is designated, the depth of the penetration into the KPAGF's lines will determine what method the counterattack unit employs against the penetration.

TACTICAL DEFENSIVE ACTIONS—DETACHMENTS, BATTALIONS, AND SUBORDINATE UNITS

7-60. KPAGF detachments, battalions, and companies typically participate as part of a maneuver or area defense organized by a higher tactical command. KPAGF detachments and their subordinates are structured to execute one functional mission at a time. These units conduct tactical defensive actions employing SBPs and CBPs as part of either an area or mobile defense.

SIMPLE BATTLE POSITION

7-61. A simple battle position (SBP) is a defensive location oriented on a likely enemy avenue of approach. The development and construction of a SBP is selected on terrain well-suited to an assigned mission task. A SBP typically identifies the location of a small element, unit, piece of equipment, or system. The location of a SBP is not necessarily in complex terrain or coordinated with nearby battle positions. Improving a SBP—such as increasing C3D—is a continuous action, with an understanding of how much time is allowed to initially establish the SBP, available local resources, unit capabilities, and priorities of effort and support.

COMPLEX BATTLE POSITION

7-62. A complex battle position (CBP) is a defensive location designed to employ a combination of complex terrain, C3D, and engineer effort to protect the unit(s) in the position from detection and attack, and provide capabilities to defend and deny seizure and occupation by an enemy. North Korea has had 65 years to plan and prepare defensive positions, and the majority of these only need to be reinforced prior to hostilities. CBPs typically have the following characteristics that distinguish them from SBPs:

- Limited avenues of approach.
- Existing avenues of approach are observable by the defender.
- 360-degree defensive measures and protection from attack.
- Engineer effort that provides some countermobility obstacles that do not jeopardize C3D measures or otherwise reveal the CBP location.
- Sufficient logistics caches for intended defensive operations.
- Sanctuary from which to launch local tactical actions.

7-63. The location of a CBP is not necessarily oriented to an avenue of approach, as with a strongpoint. When sanctuary is the locational purpose, a CBP occupies terrain not likely to experience regular attention or use by an enemy unit. Figure 7-9 provides examples of SBPs and CBPs.

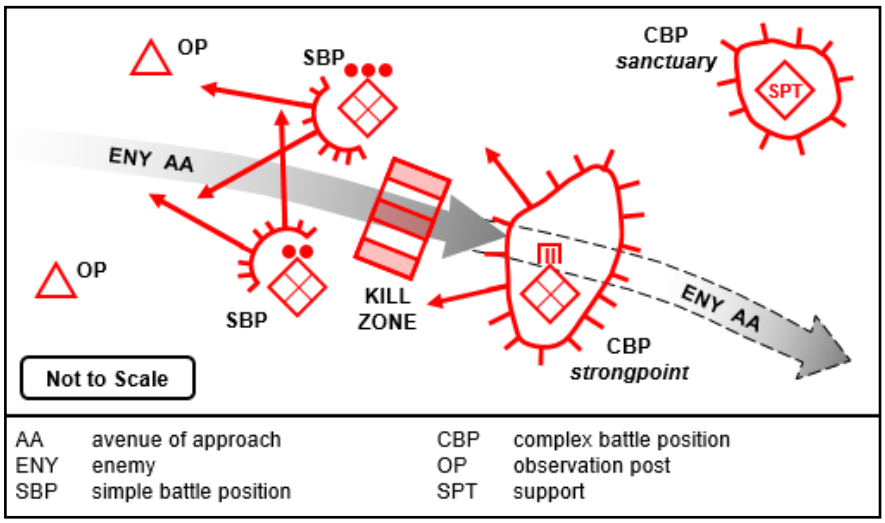


Figure 7-9. Simple and complex battle position symbols (example)

Note. The symbol for a KPAGF SBP in this ATP is typically a convex arc with spike-like lines arrayed along the outside of the arc, as in figure 7-9. The apex of the convex arc points toward the expected or known enemy direction of approach.

FUNCTIONAL ORGANIZATION OF A BATTLE POSITION

7-64. The KPAGF commander of a detachment, battalion, or company defending in a battle position designates subordinate units with functional responsibilities, with titles that describe each unit's function.

Disruption Element

7-65. The disruption element operates in a security zone to—

- Defeat enemy reconnaissance efforts.
- Determine the location, disposition, and composition of approaching enemy units.
- Report on observations and situational understanding.
- Coordinate actions and fires in conjunction with RISTA.
- Coordinate actions and fires with chemical-, biological-, radiological-, or nuclear-capable weapons systems.

7-66. Combat security outposts are typical of disruption capabilities employed outside of main defensive arrays and perimeters in an AO. They are generally composed of task-organized platoon- or squad-size elements. During counterreconnaissance and other security actions, other elements of a unit may be directed to support outpost mission tasks. See chapter 5 for more information on combat security outposts. Figure 7-10 on page 7-20 is a pictorial representation of a typical platoon with its orientation within a battle position.

Main Defense Element

7-67. The main defense element is to defeat or destroy an attacking unit. Designated elements may be directed to maneuver, attack, and defeat a penetration of the main defensive positions.

Reserve Element

7-68. The reserve element provides tactical flexibility. All KPAGF leaders consider probable and possible contingencies and identify a capability to respond to emergent situations. Some types of KPAGF reserves have an assigned mission task and are a committed element, but can be redirected to other actions based on command decision for effective defenses and mission success.

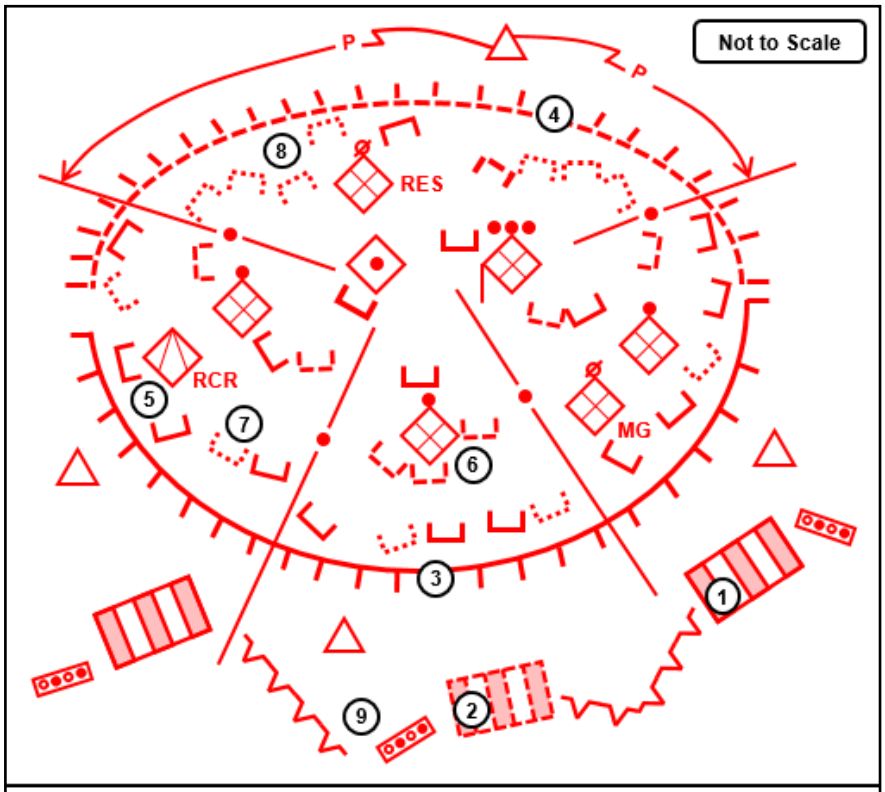
Support Element

7-69. The support element of a battle position has the mission of providing one or more of the following capabilities, including but not limited to—

- Rear service units.
- Command, control, and communications.
- Direct fires support.
- Indirect fires support.
- Support to nonlethal actions such as EIW.
- Engineer support.

ORGANIZING BATTLE POSITION ACTIONS

7-70. The organization of a defense concentrates available assets to mass combat power in designated kill zones. A kill zone is typically on a likely enemy avenue of approach. A detachment, battalion, or company commander specifies the functions and task organization of elements in a security zone or the main defenses of a defense zone.



A KPA platoon prepares a battle position. It identifies (1) primary and (2) alternate kill zones, then determines its (3) primary and (4) supplementary battle position orientation. It then selects (5) primary, (6) alternate, (7) subsequent, and (8) supplementary fighting positions within the battle position perimeter. (9) Obstacles and mines canalize the enemy into the kill zones.

KPA	Korean People's Army	MG	machine gun	P	patrol
RCR	recoilless rifle	RES	reserve		

Figure 7-10. Platoon orientation in a battle position (example)

Security Zone

7-71. The security zone is the area beyond the SBP or CBP perimeter where the KPAGF defeat enemy reconnaissance efforts, detect attacking units, disrupt and delay an enemy approach, and destroy key attacking units prior to engagement in the defense zone. A defense of a battle position may or may not include a security zone.

7-72. Defenders conduct continuous and aggressive counterreconnaissance activities to prevent the enemy from effective reconnaissance. The KPAGF observe avenues of approach to provide early warning; determine location, composition, and disposition of attackers; and direct integrated fires against key enemy systems or their components.

Defense Zones

7-73. The main defenses of a defense zone are the areas for conclusive actions to defeat or destroy attacking enemy units. A SBP will have its defense-zone fires integrated with those of adjacent SBPs. In the defense of a CBP, the defense zone can be limited to the area immediately surrounding the CBP that the defending units can influence with its direct fires, but can also be a much larger geographic area depending on the RISTA and integrated fires available. Defenders in a battle position prepare actions to defeat any penetration.

7-74. The KPAGF will place its command, control, communications, rear service units, indirect and direct support fire assets, reserve, and other supporting assets in the rear of the first defense zone and throughout the second and third defense zones. For an individual SBP, such as a combat security outpost, its immediate support is normally located inside the SBP perimeter. The support elements for a unit could be located within a CBP or can occupy a location noncontiguous to a CBP.

EXECUTING DEFENSE OF A BATTLE POSITION

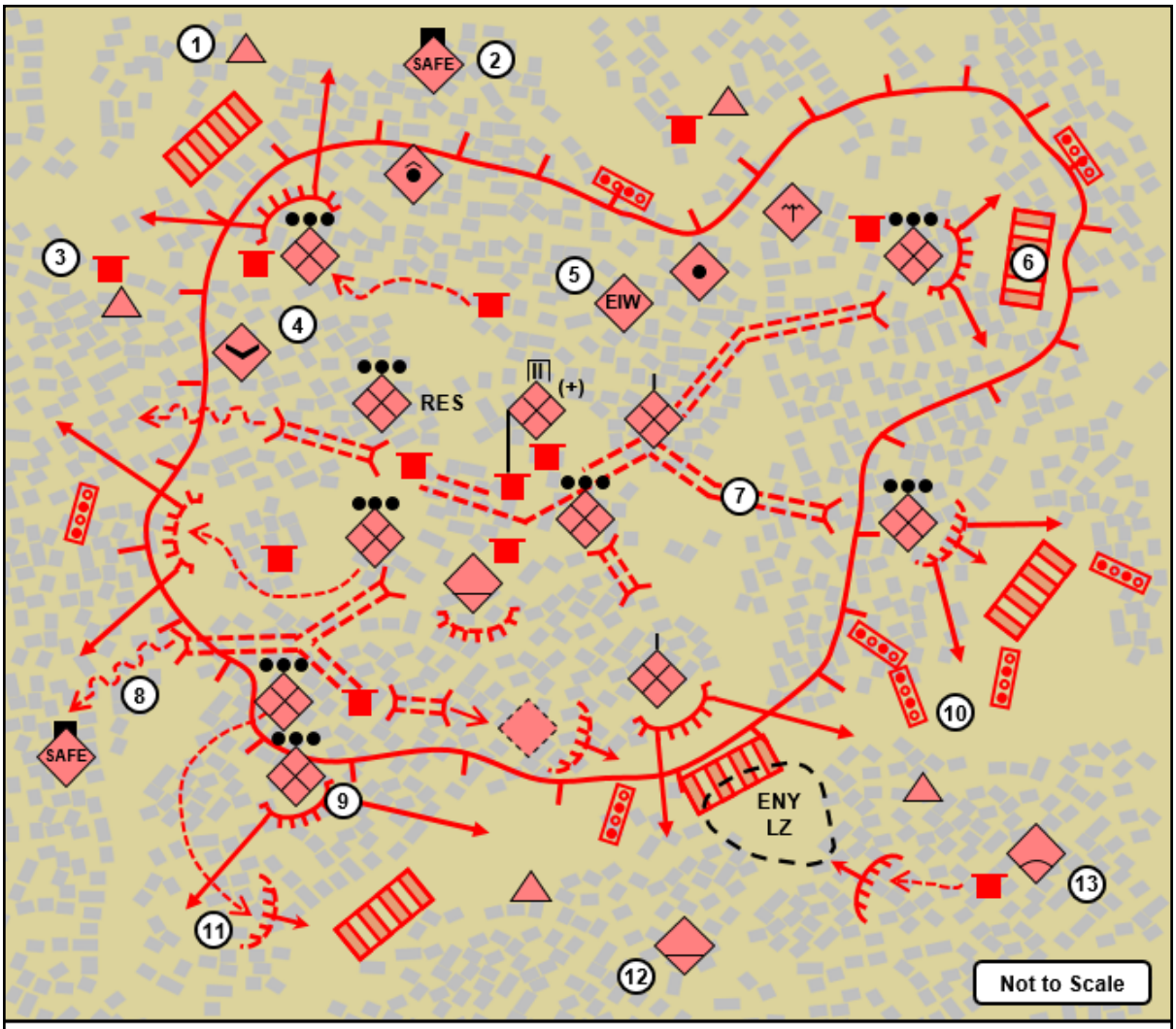
7-75. The defense includes aggressive counterreconnaissance and other security measures in the security zone and counterreconnaissance actions in all defense zones, including those with combat support or rear service units. Disruption elements conduct battle handover to elements in the defense zone, where main defense elements defeat or destroy attacking enemy units.

7-76. The KPAGF uses restrictive terrain and engineer countermobility efforts to deny the enemy the ability to approach, seize, and occupy a defensive position. Countermobility actions shape the battlefield by disrupting the enemy's approach march, blocking avenues of approach, and turning the enemy into and fixing it in kill zones. Engineer support can shift to mobility support for reserve or other elements' maneuver options, based on priorities of support and available time.

7-77. To keep the enemy from discovering the nature of the KPAGF defenses and to draw fire away from actual units, defenders will establish dummy firing positions and battle positions. In addition to enhancing unit protection, the KPAGF will employ deception positions as an economy-of-force measure to portray strength. A reverse slope defense can mask main defensive positions from enemy observation and direct fire. This type of defense can also isolate frontal elements of an attacking unit as they cross the topographic crest. Other considerations can include C3D and cultural standoff to deny the enemy the ability to detect or attack the defenses. Figure 7-11 on page 7-22 is an example of a CBP within an urban environment.

7-78. Continuous RISTA and integrated fires are fundamental to destroying the enemy in the defense zones. Integrated air defense systems complement the fundamental concept of all-arms air defense and fires. Direct and indirect fires mass in kill zones to cover obstacles and fix or isolate the enemy. Defenders employ fires to—

- Degrade attackers along avenues of approach and in areas of temporary concentration.
- Defeat or destroy attackers in the defense zones.
- Destroy penetration of battle positions.
- Support counterattacking units.



An urban complex battle position may include the following: (1) observers; (2) safe houses; (3) underground shelters; (4) unmanned aircraft system units performing reconnaissance, intelligence, surveillance, and target acquisition; (5) EIW elements; (6) kill zones; (7) tunnels; (8) exfiltration routes; (9) combat security outposts; (10) mines; (11) planned ambush sites; (12) caches; and (13) man-portable air defense systems or rocket-propelled grenades.

EIW	electronic intelligence warfare	ENY LZ	enemy landing zone
RES	reserve	SAFE	safe house

Figure 7-11. Complex battle position in an urban defense (example)

DEFENSIVE OPERATIONS IN COMPLEX OPERATIONAL ENVIRONMENTS

7-79. Certain operational environments add complexity to KPA defensive operations, both north and south of the DMZ.

URBAN OPERATIONS

7-80. The KPAGF will likely avoid urban operations in its own country—with the possible exception of Pyongyang—for several reasons. First, the large number of underground facilities throughout the country,

and especially along the DMZ, provide the KPAGF the capability to fight from prepared positions without concentrating in the cities, where their units would become a lucrative target. Second, the KPAGF will likely avoid concentrating units in a small area except where they are protected by underground facilities specifically designed to fight the enemy. Lastly, most the core supporters of the Kim regime can be found in the Pyongyang area. The KPAGF may decide to protect their country's capital city and regime supporters, while having less inclination to do the same for the other two classes of North Korean citizens throughout the rest of the country.

SUBTERRANEAN OPERATIONS

7-81. The KPAGF may rely on subterranean operations when on the defense. The nature of the KPAGF subterranean operations will be vastly different depending on whether the defense is taking place north or south of the DMZ. There is a large number of underground facilities throughout North Korea, while defense fortifications the KPAGF build in South Korea would only be what could be accomplished in the time available. The KPAGF's familiarity with underground facilities may give them a slight advantage against their enemies in any operations conducted underground.

NORTH OF THE DEMILITARIZED ZONE

7-82. Estimates of the number of underground facilities for military or governmental use within North Korea range from 11,000 to 14,000. The country has taken much of its military and governmental activity below ground because of the massive destruction that United Nations airplanes caused to above-ground facilities during the Korean War, and as a means to avoid enemy overhead collection opportunities. The actual amount of subterranean activity is only speculation, however, and often underground excavations are only discovered by the amount of debris generated—whether left on site or transported away.

7-83. North Korean use of underground concrete bunkers dates back to at least January 1951, when the U.S. Central Intelligence Agency located a bunker designed specifically for use by the contemporary North Korean leader, Kim Il Sung, a short distance outside of Pyongyang. Underground construction has slowed down in the last decade due to a materiel shortage, the lack of heavy equipment, and frequent electrical blackouts throughout the country. Nevertheless, work on underground facilities continues with much of it formerly done by machinery now being completed using manual labor.

7-84. The North Korean Government recruits its citizens, usually in their late teens, into distinctive military units constructing or operating specialized underground facilities. The soldiers sign a confidentiality agreement and the North Korean Government expects the individuals to work in the same facility until they turn 60 years old. The KPAGF expect the male soldiers to find wives from among their coworkers, but are forbidden to marry until they have served 10 years in the military. The KPAGF, however, allow females to marry after they reach the age of 24. The North Korean Government does not usually allow the workers outside of their facility, even to see their families, and defectors call the service in these underground facilities more like a prison sentence than an occupation.

7-85. Since the western corridor has been the traditional route used by armies moving north-south in Korea for centuries, the KPAGF have concentrated much of their subterranean construction in this western region of the country. The North Korean terrain varies widely, with the most arduous terrain generally in the eastern part of the country and less difficult terrain in the west. The eastern mountains are rugged and normally best suited for light infantry operations. The central region, containing part of the Taebak Mountains, is rugged, but there are some routes suitable for light armored vehicles. The western part of North Korea is least forbidding in terms of terrain. Both the North Korean capital city of Pyongyang and the South Korean capital city of Seoul lie on the western side of the peninsula. The region's geological formations, with substantial granite and other metamorphic hard rock formations, provide natural protection against damage from the weapons of war—even the most modern equipment. North Korea has enhanced nature by digging underground in order to protect itself from aerial attack while hiding its activities from overhead intelligence collection efforts. All military branches and civilian agencies are involved in keeping their activities shielded from outside prying eyes. The North Koreans use their underground construction not only for defensive purposes, but as places to launch offensive operations from as well.

7-86. The KPA is the major beneficiary of North Korea's subterranean activities. North Korean underground facilities stretch along the DMZ from east to west coasts, creating a fortified defensive belt along the entire border between North and South Korea. The bunkers and underground facilities take advantage of the mountainous terrain located along most of the mutual boundary. Due to the direction the mountains run in the Kaesong region, north of Panmunjom, the KPA opted to build many "Y" type bunkers. A Y bunker is normally built with the base of the Y along a ridgeline. Two other bunkers split off from the main bunker and are angled down each side of the ridge's slope. When viewed from the air, the bunkers appear to be shaped similar to the letter Y. The KPAGF built many of these bunkers from precast concrete and covered them with rocks and dirt. The bunkers increase protection for KPA soldiers from the anticipated direction of attack when the terrain does not.

Hardened Artillery Sites

7-87. The KPAGF deploys 65–70% of its entire military, including artillery, in three defensive belts located within 80 km of the mutual border between the two Koreas. The KPAGF selected their current artillery positions so approximately two-thirds of each weapon's range lies inside South Korean territory. Many of the artillery units operate from a hardened artillery site (HARTS), a robust position with a complex network of subterranean chambers connected by tunnels. It contains shelters, usually underground, for ammunition, fire direction center, barracks, mess hall, latrine facilities, bathhouse, recreation room, classroom, and outdoor recreation facilities. Typical HARTS may contain shooting positions for three to eight artillery pieces.

7-88. While North Korea's first defensive belt contains the majority of the HARTS, the second and third defensive belts encompass some as well. These second- and third-belt sites may not be manned, depending on the tactical situation. The KPAGF artillery units have already surveyed the unoccupied HARTS, however, in order to provide immediate indirect fires once occupied by the firing unit. It is estimated that North Korea has constructed some 500 HARTS in the central and western corridors, the most likely avenue of advance for an enemy offensive from the south. The KPAGF built the HARTS in the 1950s at mountain fronts, but later switched to positions near mountain tops. Figure 4-14 on page 4-40 provides an example of a HARTS.

7-89. Based on the terrain, the HARTS could be entirely manmade or a modification of a natural cave or cave system. If needed, a HARTS may contain surface trenches for both communications purposes and internal self-defense, including machine gun pillboxes for use against ground attack. The entrance doors to the bunkers will often be made of either solid steel or hollow steel with concrete poured between the metal slabs for additional protection. The passageways in a HARTS are typically 2–3 m in height and width and lined with 20–40 cm of concrete, often reinforced with steel. HARTS are equipped with an exhaust fan and a ventilation system to remove the smoke produced when firing for long periods of time. If the artillery is of the towed variety, the artillery prime movers will likely be nearby in a covered area for protection from counterartillery or direct aerial fire attack. Tunnels will likely connect the various guns so crew members can move between the positions without being seen by their enemy or becoming vulnerable to direct or indirect fire.

7-90. Each artillery piece in a HARTS will feature its own gun platform, crew cover, and ammunition storage areas. Each firing position, as some guns will have more than one, features a sheltered location consisting, at a minimum, of a crushed rock pad surrounded by a high berm created from the rock and dirt excavated during the construction process. Some HARTS will also contain a concrete pad for the artillery pieces or concrete walls. The HARTS position will be situated in such a way that the artillery tube or multiple rocket launcher system can be fired from inside its covered position.

7-91. Each gun or multiple rocket launcher system emplacement will likely have immediate access to one to four units of fire, consisting of 120 rounds per gun. It is estimated that the KPAGF store 30–90 days of additional ammunition in the local area. In offensive operations, the KPAGF planning factor is four units of fire on day one and two units of fire for the next 2 days, before moving forward to a new position. In defensive operations, the KPAGF plan on two units of fire per day. ZPU-2 or ZPU-4 heavy antiaircraft machine gun companies in protected positions, most likely crewed by local female militia members, will protect most HARTS from aerial attack.

Fortified Tank Positions

7-92. The KPAGF not only place their infantry in underground facilities, but also place their armor in fortified tank positions for protection against indirect fire and aerial targeting. The KPAGF tanks do not expect to fight from these positions. A fortified tank position is similar to a HARTS, but must be constructed at the bottom of the hill or ridge.

7-93. There are two primary types of fortified tank positions. In the first type, the tank must enter through the front entrance. In the other type, there is a rear entrance and the tank drives through the tunnel to its firing point. Both types are built similarly, except for the entrance/exit procedures. There is an earthen or rock berm in front of the entrance to provide the tank with a hull defilade firing position.

7-94. There are prepared machine gun positions on the flanks of the tank to prevent enemy infantry from approaching. Inside the tunnels are steel doors at various points in order to close them off. The tunnels also contain a ventilation system to remove exhaust fumes and smoke. The tanks can maneuver out of their positions or flee out of the back entrance if it is available.

Infantry Company Strongpoint

7-95. There are many infantry company strongpoints that are actually CBPs located 200–1000 m north of the DMZ; these contain concrete tunnels for shelter against indirect and aerial fire and for safe storage of food and ammunition. A typical strongpoint includes three interconnected tunnels burrowed through the upper portion of a hill or ridge. Within the tunnels are living quarters, ammunition storage areas, a water storage unit or well, and perhaps a kitchen. Two of the tunnel entrances face the expected enemy's avenue of approach, and the third is on the reverse side of the hill. All three openings are guarded with a machine gun pillbox.

7-96. The concrete and steel pillboxes take maximum advantage of natural and artificial camouflage in order to blend in with the environment. Each of the pillboxes has two or three firing ports, and some are equipped with two machine guns. Some of these strongpoints will have prepared mortar positions on the reverse slope of the hill or ridge. There are heavy steel doors with rubber gaskets at each tunnel entrance that can be sealed to protect the occupants from chemical, biological, or radiological contamination. Open communications trenches interconnect the pillboxes and contain prepared fighting positions for soldiers with small arms.

Naval Underground Facilities

7-97. The Korean People's Army Navy (KPAN) is responsible for North Korean coastal defense and operates several subterranean activities to support its mission. Like the KPAGF, the KPAN also uses HARTS situated on likely landing spots along both coasts, near major ports, and on KPAN naval bases. HARTS have been spotted on islands off North Korea's western coast that can cover the Northern Limit Line, the naval dividing line between North and South Korea. This line is an extension of the military demarcation line on the peninsula, but is located over the water. Evidence indicates the KPAN, sometime around November 2011, constructed 20 new artillery positions in Hwanghaedo Province capable of reaching the Northern Limit Line. It is likely that there are at least 1,000 KPAN artillery pieces designated for defensive operations, mostly 76.2-mm and 130-mm, on the North Korean west coast alone.

7-98. The KPAN also uses underground facilities to store some of its warships for protection from aerial attack. The KPAN uses its subterranean areas for ammunition and fuel storage, training, operations centers, and command posts. Some of these protected tunnels will even allow KPAN boats to travel from their underground berths all the way to the sea without being seen from the air. According to one Central Intelligence Agency report, at least 10 port cities provide underground berthing facilities for ships. Once the KPAN ships leave their protective positions, however, they become susceptible to aerial attacks.

Air Force Underground Facilities

7-99. Because the KPA does not believe the Korean People's Army Air Force (KPAAF) can obtain air superiority in the skies, ground antiaircraft fire as well as C3D will serve as the best protection for the KPAGF against enemy aircraft. A KPA manual smuggled out of North Korea in 2010 emphasizes the protection of facilities located in cave strongholds, such as command posts, fighter jet bases, naval bases, and runways.

This realization over the last half-century caused the KPAAF to build many of its airfields with underground runways or hangers for protection from aerial attack.

7-100. The KPA takes great solace in the knowledge that 1999 NATO aerial attacks in the former Yugoslavia actually destroyed only 13 of the Serbs' 300 tanks, despite early claims that the attacks destroyed 40% of all Serbian armored targets. The KPA believes its underground facilities, paired with its C3D operations, will only further reduce its units' vulnerability to aerial attacks. The KPAAF conducts much of its support operations from underground facilities. This includes airplane manufacturing; vehicle, fuel, and ammunition storage; aircraft repairs and maintenance; and ground training.

7-101. While many KPAAF runways may be soft-surfaced, at least 20 North Korean airfields feature some type of underground aircraft shelters, dispersal facilities, or maintenance bays. North Korean airfields often feature taxiways leading away from the runways to fortified dispersal tunnels located in nearby hills. The distance to these protective locations may be as far as 1–2 km from the actual runways. The doors to these tunnels often feature moveable blast walls, concrete barriers, or earth blast barriers.

7-102. Inside the dispersal area, the tunnels may curve within the hill and contain several separate rooms. Most tunnels are 14 m wide and 10 m high, and they may be as long as 600 m in length. Some tunnels feature internal blast walls cordoning off the inside rooms from the main tunnel. At Sunchon Air Base, possibly the most important KPA airfield, the KPAAF stores at least half of all its MiG-29 and Su-25s airplanes in underground hangers. The MiG-29 is the KPAAF's most advanced fighter, and the Su-25 is the KPAAF's only modern ground attack airplane. The KPAAF operates one "underground" air base and is in the process of constructing a second. The completed underground air strip is located near the western coastal town of Onchon-up. The base under construction is on the east coast at Kangja-ri and will serve as a replacement for the nearby Kangja-ri highway strip—a road that can be used as a runway. These two bases feature runways and concrete taxiways that extend into the nearby mountains so airplanes can take off without taxiing in the open or land directly into the protection of the mountains.

7-103. Due to the fear of aerial attack, the KPAAF operates over 50 ground-control intercept and early-warning radar facilities throughout North Korea. While the system is overlapping, there are blind spots due to the mountainous terrain. Many of these ground-control intercept and radar facilities operate from underground locations. In many cases, the actual radar system is mounted on a hydraulic lift system the KPAAF personnel can raise out of the ground when in use. When the radar is not in use or maintenance is needed, the radar operators can retract the system to reduce its vulnerability to an enemy attack.

7-104. Some of the KPAAF air defense weapon systems may also be housed in underground facilities. The air defense weapons are also situated on retractable lifts and only elevated when preparing to fire. The underground air defense complex will house additional missile launchers, support vehicles, administrative offices, and crew sleeping quarters. It is likely that 20% of the air defense bases are unoccupied at any one time, allowing the crews to change locations depending on the tactical situation.

Logistical Facilities

7-105. The KPA maintains a 2- to 3-month level of strategic supply reserves in case of war. These strategic stocks include food (primarily rice); petroleum, oils, and lubricants for its armored units; and ammunition of all types. The KPA stockpiles these war materiels in underground facilities constructed for this purpose. At one time it was estimated that North Korea stores 1.2 million tons of food, 1.46 million tons of fuel, and 1.67 million tons of ammunition in subterranean facilities. Reports indicate North Korea now constructs its fueling facilities underground in the missile launch sites. The KPA provides security for these below-ground facilities, as the resources are not available for general public use. It is likely that some of the supplies are colocated with units using underground facilities such as HARTS, where several days' worth of ammunition is already on hand. The movement of supplies from these facilities, if conducted above ground, would likely to occur at night when there is limited visibility. The KPA may use trucks, civilian tractors, carts pulled by animals or people, or porters to move the supplies to where they are needed on the battlefield.

7-106. North Korea may operate up to 300 underground munitions factories supported by numerous other civilian factories, also built underground. If needed, the country could convert some of these civilian-goods factories to war production. The construction of underground manufacturing plants dates back to the Korean War, when North Korea felt compelled to do so to avoid United Nations air strikes. After the armistice in

1953, underground factory construction halted due to the fiscal reality of the increased cost of construction projects in a subterranean environment. In 1964, however, Kim Il Sung reinstated his underground facility construction policy by stating that all new major plants must be built underground instead of on the surface.

7-107. Almost all of North Korea's critical industries are now located underground. About 180 factories dedicated for military support or capable of being converted are located in the Jagang-do region, a mountainous province adjacent to China. Often the workers do not even know the plant's final product, but only their small role in the process. The factories' subterranean locations may make it difficult for any military to destroy North Korea's military production capability.

SOUTH OF THE DEMILITARIZED ZONE

7-108. If it is necessary to go on the defense within a major South Korean city containing an underground infrastructure network, it is likely the KPAGF will use those networks to move from building to building to avoid exposure above ground. This would then become an urban operation with its associated issues. It is likely the KPAGF would attempt to use CBPs built in urban South Korean areas as they would in North Korea. The primary difference would be the amount of time available to create these CBPs; therefore the level of sophistication would be less than CBPs found north of the DMZ, though the KPAGF would create the strongest CBPs possible with the time and resources available.

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