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FORWARD SUPPORT BATTALION

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Preface

This manual provides information on the structure and operations of the FSB. It is directed toward the commander and staff of the FSBs of divisions organized and operating under L-edition TOES as modified by the Force Design Initiatives for an Army of Excellence Study. It is also designed to be used by commanders of the FSB's subordinate companies.

The manual outlines the functions and operations of each section within the FSB and how the FSB commander and staff integrate their activities. This includes both the logistics and medical mission and the tactical responsibilities. The manual describes the many coordination links the FSB must maintain with supported and supporting units.

This manual is based on doctrine in FMs 100-5,100-10,71-3, and 63-2-2. FM 100-5 is the Army's keystone doctrinal manual. It outlines how the Army will fight the AirLand Battle. FM 100-10 is the Army's keystone CSS doctrinal manual. It provides an overview of the CSS system for supporting the Army in the field. FM 71-3 is the doctrinal publication on armored and mechanized infantry brigade operations. It provides information vital to the FSB commander's understanding of the unit he must support. FM 63-2-2 describes the support provided by resources within and outside of the division. It is directed toward commanders and staff who are concerned with providing CSS within armored, mechanized infantry, and motorized divisions organized and operating under "Division 86" TOES as modified by the Army of Excellence Study. (Work is currently underway on a new FM 63-2, which will cover the operations of a heavy division support command in depth. The new manual is designed to supersede FMs 63-2-2 and 63-22.)

A wide range of publications support this manual by providing details in specific CSS functional areas. FM 42-4 covers the organization and operations of the FSB forward supply company. FM 43-12 describes division maintenance operations, including those of the forward maintenance company of the FSB. FM 8-15, currently under development, will detail the operations of the forward support medical company. Numerous other functional manuals are referenced throughout this manual and listed in the References section at the end.

The proponent of this publication is HQ TRADOC. Submit changes for improving this publication on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward it to Commander, US Army Logistics Center, ATTN: ATCL-CLD, Fort Lee, VA 23801-6000.

Unless otherwise stated, whenever the masculine gender is used, both men and women are included.

CHAPTER 1

Sustaining the Heavy Brigade

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THE HEAVY DIVISION BRIGADE

A brigade of a heavy division is a flexible organization designed to close with and destroy enemy forces on the battlefield using mobility, fire power, and shock effect. Its main focus is to defeat the enemy by conducting close operations while protecting its combat support, combat service support, and command and control facilities with successful rear operations. The brigade normally fights as part of a division. It influences the battle by task organizing assigned and attached combat and combat support forces, assigning missions and sectors, applying force multipliers, assigning and changing CS and CSS priorities, and constituting and committing the reserve.

The brigade is assigned varying numbers of armor and mechanized infantry battalions by the division commander to accomplish a specific mission. CS and CSS units are task organized to support the brigade as required. How the DISCOM commander task organizes to support units in the brigade area is addressed in Chapter 2. Though the supported units will vary, they will likely include both division and nondivisional elements. Corps units that may be operating in the brigade area are addressed in Chapter 3. Division elements which may typically operate in the brigade area include—

- Brigade HHC.
- Maneuver battalion task forces,
- Field artillery battalion.
- Engineer company.
- Air defense artillery battery.
- Military police platoon.
- Military intelligence company.
- Forward signal platoon.
- Chemical platoon.
- Smoke platoon.
- Attack helicopter battalion.

- Cavalry squadron.
- Forward support battalion.
- Air liaison officer.

All these units will require CSS on a battlefield unlike any encountered in the past. The AirLand Battlefield will be characterized by fluid, nonlinear operations and enormous demands for resources.

SUSTAINMENT PRINCIPLES

Sustainment of the brigade in such an environment is the challenge facing CSS planners and operators. The brigade must be armed, fueled, fixed, and moved and its soldiers sustained to allow the brigade commander to take advantage of opportunities to achieve tactical advantage. This requires the FSB commander and staff as well as CSS planners and operators at division and DISCOM level and within the brigade units to incorporate the sustainment imperatives in every action taken. The sustainment imperatives are anticipation, integration, continuity, responsiveness, and improvisation. These are not substitutes for the basic tenets of AirLand Battle doctrine; they complement them.

CSS leaders and staffs must *anticipate* future missions. They do this by understanding the commander's plan and translating current developments into future requirements. The main purpose of anticipation is to help the brigade commander form a supportable plan. So the FSB commander and staff must develop the close relationship with the brigade staff as described in Chapter 3. The FSB commander may attend brigade staff meetings. He monitors the brigade command net to anticipate required changes to the FSB organization, employment, and operations.

This close relationship with the brigade staff is also required to ensure that sustainment operations are *integrated* with operations of the maneuver force. The brigade commander and staff plan tactical and CSS operations concurrently. The FSB commander and staff must provide the required input to the brigade planning process to ensure the scheme of maneuver and fire support plan can be supported logistically.

Another imperative is *continuity* of sustainment. The brigade commander will require continuous support to retain the initiative and to ensure the depth of operations is not inhibited by breaks in support. This represents a considerable challenge for the FSB and other CSS elements in the brigade area. It will require CSS assets to be able to provide continuous support while frequently relocating.

The CSS system must also be *responsive*. It must meet needs that change with little notice. FSB personnel must assume that changes in priorities, support operations, and organizations will be the norm; they must be ready to respond quicky.

Finally, sustainers must be prepared to *improvise.* The fluid nature of the AirLand Battlefield may quickly render routine support methods obsolete. This manual will suggest a number of support techniques for the FSB. However, leaders and staffs must not interpret a guideline or technique as an absolute requirement. If it is not effective in maintaining maximum combat power and momentum, FSB personnel must not be afraid to discard it. Sustainers must be innovative.

SUPPORT CONCEPTS

The two most important concepts in supporting the heavy brigade are forward support and area support.

FORWARD SUPPORT

As the name of the FSB implies, the focus of the CSS structure is on providing support as far forward as practical. Supplies, weapon systems, and repair assets for easily reparable equipment should be provided by the corps, MSB, or FSB to the field trains or beyond whenever practical. Also, the FSB should ensure damaged equipment not easily reparable is evacuated from as far forward as practical. Health service support should also be focused on forward support. As discussed in the next section, CSS assets organic to the combat and CS elements in the brigade are scarce. They should not be burdened by picking up supplies in the DSA or recovering damaged equipment to a maintenance collection point in the rear.

AREA SUPPORT

Because of the ever-changing combination of division units operating in the brigade area, it would be almost impossible and certainly inefficient to dedicate CSS units to support of strictly structured units. As discussed later in this manual, the DISCOM commander will have to cross-level assets when substantial changes are made in the size and types of units supported by an FSB. However, sufficient flexibility has been put in the FSB to accommodate minor variations in supported units and still provide direct support level logistics to all division and (with required augmentation) supporting corps units operating in the brigade area.

THE BRIGADE LOGISTICS AND MEDICAL SYSTEMS

The FSB is part of the overall logistics system (and medical system) which sustain the brigade. The FSB is the operator providing the support link between DISCOM elements in the DSA and COSCOM units on the one hand and the supported units in the brigade area on the other. Support is pushed forward to the BSA based on requirements passed from the FSB in coordination with logistics planners in the brigade. Whenever possible, the FSB continues to push support forward. Specifics on such support are described later in this manual. Examples include maintenance support teams sent to work in battalion task force unit maintenance collection points, service battery sites, or field trains locations; FSB ambulances stationed at battalion aid stations; and forward tactical refueling points.

The support system does not end with the FSB. The FSB is essentially a DS-level support organization. (However, as discussed in Chapter 9, the medical company provides Level I and II medical care to division units on an area basis.) In most cases, individual units such as maneuver battalions are responsible for unit-level support. Also, elements such as teams may operate away from their parent units. Unless the elements are attached for logistics, parent units are responsible for providing unit-level support to those elements. When mission requirements exceed the organic support capabilities of the parent unit, the unit may coordinate for support with the brigade rear CP before the unit enters the brigade area. The brigade may task a subordinate unit to provide support. However, if it does, the tasked unit will likely require additional assets from the parent unit. Required assets will probably include class III and V haulers and maintenance personnel, class IX items, and tools.

For instance, a CS platoon/company with a direct support mission may be preparing to operate in a battalion task force area for an extended period. The parent company/battalion may coordinate with the brigade S4 to have the battalion provide support. Although the parent unit's logistics assets may not be capable in all cases of splitting up to provide support, as much as possible the parent unit should send cooks, trucks and drivers, and maintenance and medical assets to work with the battalion task force trains personnel.

Such support is unit-level support. It includes food service, distribution of supplies to companies and other subordinate elements, unit maintenance, unit-level health service support, movement of organic assets, and unit-level graves registration. The assets available to provide this support vary among the division units in the brigade, as follows:

- The brigade HHC has food service, unit maintenance, and limited supply distribution assets.
- The maneuver battalions have a full complement of unit-level assets. A complete discussion of their operations is in FM 71-2.
- The field artillery battalion in direct support of the brigade also comes with assets to perform unit-level support of the battalion, as covered in FM 6-20-1. The service battery has a battalion supply element, an ammunition platoon, and a maintenance platoon. The battalion also has a food service section and medical section. A general support reinforcing corps battalion operating in the brigade area will bring similar unit-level support assets.
- The division engineer company comes with organic support assets, though fuel-handling and medical capabilities are limited. Currently, the company has one mobile kitchen trailer, two tank and pump units, and a number of cargo trucks. Corps mechanized engineer elements operating in the brigade area bring comparable unit-level support personnel and equipment as well as organic assets to perform DS maintenance on engineer equipment.
- The ADA battery (plus or minus a platoon) can normally be expected to locate in the brigade area. The battery has ammunition-hauling, unit maintenance, and limited refueling capability. It receives medical support on an area basis and is fed by the brigade HHC and task forces. The battery normally has a maintenance slice in the UMCP of each supported task force. The remainder of the battery headquarters, along with some refueling and recovery assets and several cargo trucks, locate in the BSA. Operations are discussed in FM 44-3.
- The direct support MP platoon works out of the BSA and has no CSS assets with it except for one unit mechanic from the MP company headquarters. Other support, including DS maintenance, is received from the FSB on an area basis. Details appear in FM 19-1.
- The military intelligence company team is typically in general support of the division. As discussed in FM 34-10, CSS has been a particular problem due to the limited assets in the MI company and the wide dispersion of small teams throughout the brigade area. Meals and ammunition are coordinated through S4 channels to be provided in conjunction with support to the nearest maneuver element, or the company team support element must distribute them. Fuel is a special problem. If the MI battalion TPU is not available to the company, it

should try to coordinate through S4 channels to receive fuel from the nearest maneuver element. If that is not possible, the company must rely on shuttling 5-gallon cans from the BSA to all forward sites.

- The forward signal platoon DS to the brigade typically receives support from the brigade HHC at the main CP and from the FSB in the BSA. Details on signal CSS appear in FM 11-50.

- Like the MP platoon, the chemical elements bring no organic CSS assets and rely on the FSB. The resupply of MOGAS for decontamination apparatus and the smoke generators will require purchase of CTA fuel containers. Decontaminants will be resupplied by using downloaded decontamination equipment or a TPU. (Fog oil resupply is covered in Chapter 7.)

- The attack helicopter battalion and division cavalry squadron have full complements of organic support assets to include supply, maintenance, and medical assets. Assets are deployed in either unit or echeloned trains. Unit-level support operations are discussed in FMs 1-111 and 1-112.

- The FSB also has its own unit-level resources. However, when elements are employed forward for extended periods, unit support will be coordinated with the supported battalion. For example, as thoroughly discussed in Chapter 8, maintenance support teams are task organized to support battalion task forces. Since these teams habitually work at the battalion UMCP, their support must be coordinated with the battalion.

CHAPTER 2
FSB Organization and Functions

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ORGANIZATION AND MISSIONS

DISCOM

The forward support battalion is part of the heavy division support command. The DISCOM provides direct support-level logistics and medical support to all organic and attached elements of the division. As depicted in Figure ***2-1,*** it consists of the following elements:

- *HHC/MMC.* The HHC supervise and controls DISCOM operations and advises the division commander and staff on logistics throughout the division. The MMC provides materiel management for weapon systems, controls maintenance priorities, and coordinates supply functions to meet the needs of the division. FM 63-22 provides a full discussion of the responsibilities, organization, and operations of the HHC/MMC.
- *Main support battalion.* This multifunctional logistics and medical unit is the division CSS operator in the division rear area. It provides direct support to division units in the division rear and designated and backup support to the FSBs. It is based in the DSA, though it provides support forward as required. Information on the MSB is in FM 63-21.
- *Forward support battalions.* The DISCOM has one FSB to provide direct support to each division maneuver brigade.
- *Aircraft maintenance company.* This separate company under the DISCOM provides AVIM support to division units. It is the subject of Chapter 6 of FM 63-2-2. Other operational information appears in FM 1-500.

FSB

The FSB itself is organized as shown in Figure 2-1. The battalion has a headquarters and headquarters detachment, supply company, maintenance company, and medical

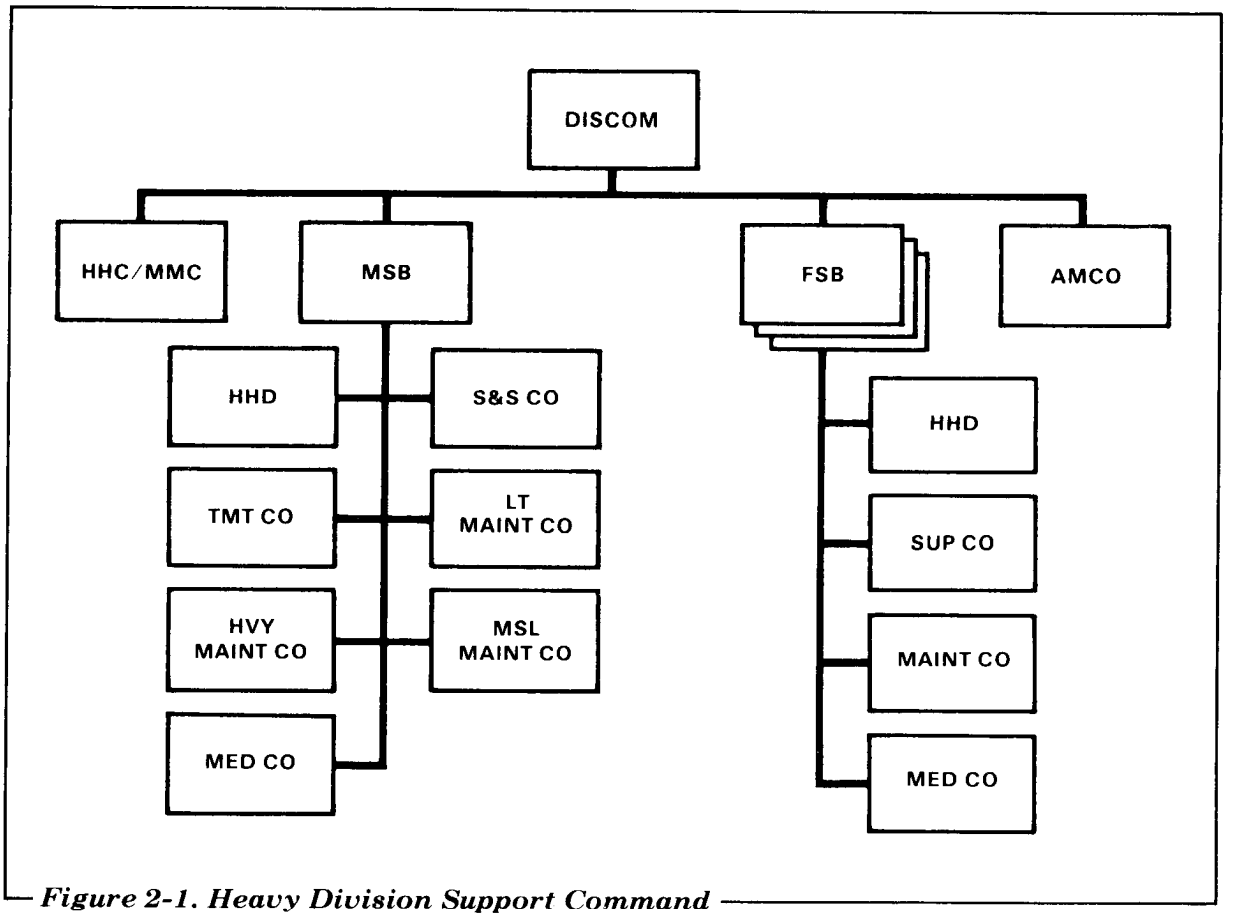


Figure 2-1. Heavy Division Support Command

company. As part of the maintenance company, the FSB is assigned tank, mechanized infantry, and artillery systems support teams. The FSB maintenance company has one team to support each maneuver battalion assigned to the supported brigade, as well as the DS artillery battalion.

The FSB's primary role is to provide direct support to the brigade and division units operating in the brigade area. This role entails a dual requirement. First, the FSB must plan to support future operations. It must anticipate requirements and incorporate planning guidance. In addition, the FSB must support current operations. It must monitor the implementation of the support plan. This requirement involves the continuous coordination discussed throughout this manual. The FSB must actively monitor all support operations in conjunction with the brigade S4. It makes adjustments as required to ensure support requirements are met. For example, it is not enough for the FSB to plan when supported task force HEMTTs should pick up fuel. If the HEMTTs do not show up, the FSB must know about it and coordinate with the brigade S4 to find out what the problem is and what needs to be done to resolve it.

The FSB also provides support to nondivisional units, such as corps artillery and engineer battalions, located in the brigade area of operations. The FSB is the single point of contact for support in the brigade area of operations. However, in order to

support nondivisional units, it must be augmented with elements of the corps logistics task force operating in the division area. (See FM 100-10.)

In addition, the FSB is responsible for base cluster defense of the BSA and operates under the brigade command for this mission. Chapter 5 is a detailed discussion of the BSA security and terrain management operations of the FSB.

The FSB performs its mission if it supports the brigade's course of action and meets the DISCOM commander's guidance. Specifically, it supports the brigade and reinforcing/supporting units by providing or coordinating to provide all classes of supply, as well as maintenance, medical, field services, and transportation support in the amounts and at the times specified in the brigade service support annex and the FSB SOP. It must replenish its supported units' basic loads of all supplies except repair parts. Prescribed loads of maintenance-significant class II and IV items and repair parts must also be replenished. Equipment must be maintained to meet prescribed operational levels. Class VII items are distributed in accordance with the brigade commander's priorities. The FSB coordinates transportation requirements with the movement control officer to meet the needs identified by the brigade. Finally, medical evacuation and treatment operations and field services activities must be coordinated between the brigade and FSB to ensure brigade needs are met. Specific information on the elements of the FSB appears in Chapters 6-9 of this manual.

TASK ORGANIZATION

The FSB organization as outlined above and discussed later provides flexibility. The DISCOM commander and staff are responsible for tailoring resources to support tactical operations. They maintain constant contact with the division staff to anticipate future support requirements–who will require what types and amounts of support in what battlefield locations at what times. The DMMC, medical operations center, support battalions, and AMCO keep the DISCOM aware of the current and projected status of logistics and medical resources. As a result of this information, the DISCOM task organizes to best support the force.

The FSB commander may receive additional assets from the MSB or a corps logistics battalion task force to provide required support beyond the FSB's capability. The FSB may also receive resources from or have to relinquish them to another FSB. There is no magical formula the FSB commander can use to tell him what assets he may receive or have to give up. The DISCOM commander must decide on the basis of numerous variables including the tactical situation, changes to the task organizations of supported units, shifting support priorities, and status of resources available throughout the division area of operations. The FSB's responsibility in this process is to keep the DISCOM commander abreast of the logistics and medical situation in its brigade area and of current and anticipated support problems.

One example of a requirement for task-organizing would be the cross-attachment of a battalion-sized unit within the division. Before such a cross-attachment takes place, support to the unit must be coordinated and identified in the attachment order. Coordination takes place among the FSBs involved, the DISCOM support operations branch, the MSB support operations section, and the affected brigade and battalion S4s. In addition, medical support is coordinated among the MSB and FSB support operations sections and medical companies, the DISCOM

medical operations center, the division surgeon, and the affected brigade and battalions.

Planners must know what CSS assets are available to accompany the battalion. This will include the battalion's support platoon as well as any DS maintenance team associated with the battalion. For instance, if a division artillery battalion has been in direct support to a maneuver brigade which is now placed in reserve, the artillery battalion will receive another role since artillery is never in reserve. If the battalion is placed in support of another brigade, the artillery MST from the maintenance company of the FSB supporting the brigade in reserve would come with the battalion and continue to work out of the service battery site. Also, the ATP section of the supply company would augment the ATP of the receiving brigade. The FSB medical company treatment squads/teams may operate with the maneuver battalion HHC's medical platoon in support of task force operations. Cross-leveling of other assets from the losing FSB would depend on the requirements of its supported brigade, the units being cross-attached, the status of resources in the FSB, the support priorities, and the length of time for the cross-attachment. Sometimes support elements cannot be evenly split. For example, if the FSB has only one or two soldiers in a particular MOS, it may not be possible to send any support of that type when a brigade element is cross-attached to another brigade. In such cases, elements of the MSB may be sent forward to augment the capability of the FSB which receives the additional requirements.

In all cases, planners responsible for organizing logistics and medical elements in the brigade areas must consider the following:

- The mission of the additional unit.
- The number of people in the unit.
- The number and types of equipment.
- The priority of support to each brigade.
- The level of combat effectiveness required for the additional battalion.
- The length of time the battalion will need support.

BATTLEFIELD LOCATIONS

The base of operations for the FSB is the brigade support area. The brigade S3 approves the BSA location based on the tactical situation and the recommendation of the FSB commander and staff and the brigade S4. The FSB commander must ensure the area is small enough for C3 and security purposes, yet large enough to accommodate the dispersion required by the FSB and all the other elements normally located in the BSA. The size will vary with the terrain, but an area of 4-7 kilometers in diameter is a planning guideline.

In addition, the FSB commander, FSB S2/S3, and brigade S4 must consider—

- Availability of roads.
- Capability of roads to handle heavy traffic and large vehicles in all weather.
- Availability of built-up areas.
- Overhead cover and concealment.
- Suitability for technical operations.
- Defendability.

- Communications profiles.
- Accessibility to air support assets.
- Distance from enemy artillery. A typical distance from FLOT to BSA is about 25-30 kilometers during support of defensive operations. This distance would put the FSB and brigade trains elements outside the range of all but long-range multiple rocket launcher fire, for example, from the BM-27. The distance may be less during offensive operations. However, it will vary with METT-T.

Though the FSB is based in the BSA, elements will be positioned on the battlefield to maximize forward support. Typical locations are depicted in Figure 2-2. In addition to the elements in the BSA, MSTs are often sent to work out of the maneuver battalion UMCPs and artillery battalion service battery sites. Also, medical company ambulances are typically stationed at maneuver

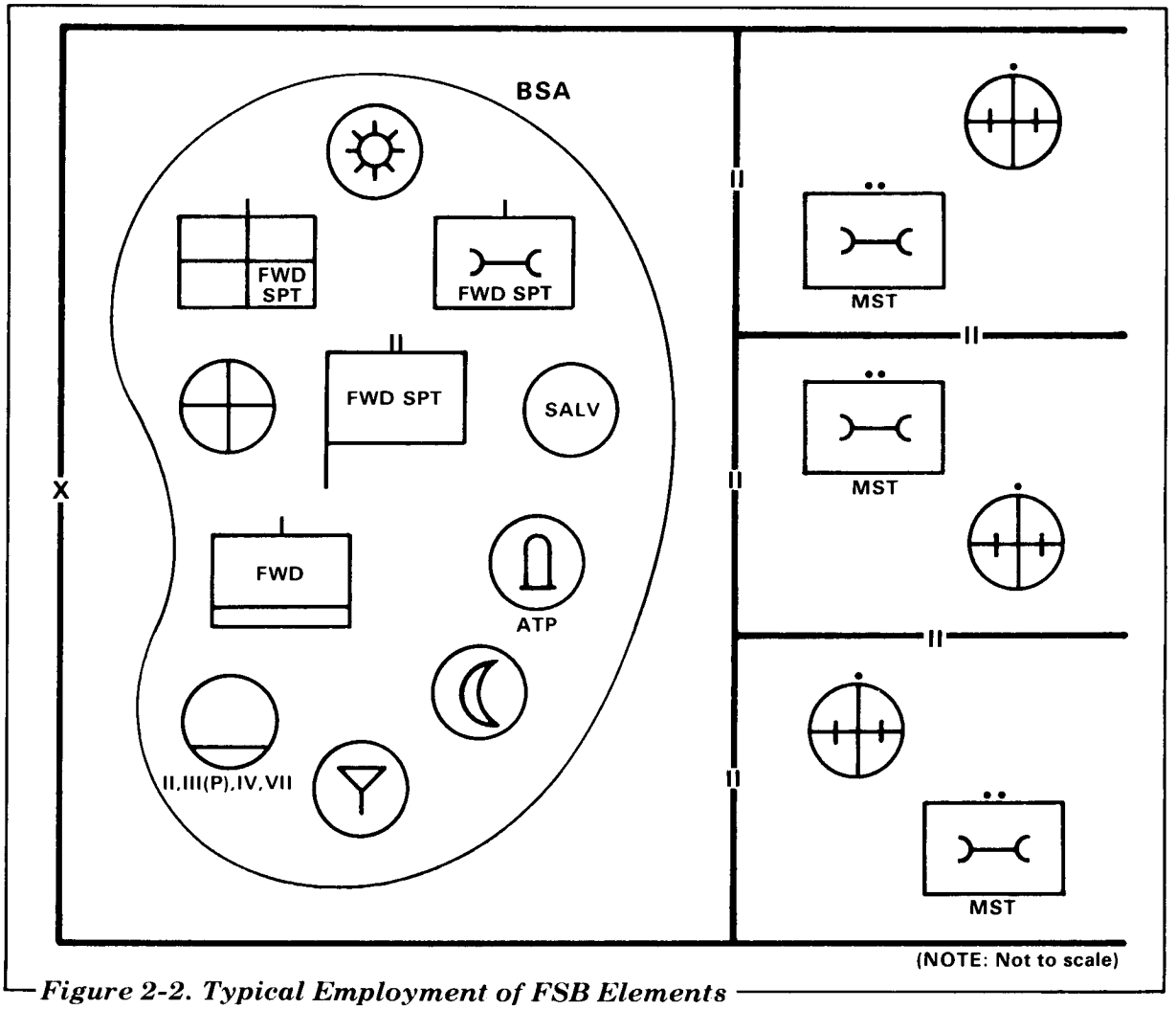


Figure 2-2. Typical Employment of FSB Elements

battalion aid stations. In addition, ambulance exchange points are set up between maneuver battalion aid stations and the clearing station in the BSA. This reduces ambulance turnaround time. It also provides an FM communications link between medical platoons of maneuver battalions and the FSB medical company for air and ground patient evacuation. In addition, LRPs are preplanned and plotted on CSS overlays to expedite forward projection of support to customers. Other specific deployment possibilities for FSB elements are discussed in Chapters 7-9.

SUSTAINMENT PLANNING

The FSB, along with supported battalion S4s, HHC commanders (field trains), service battery elements, and other support units, sustains the brigade across the entire depth of the battlefield. However, at brigade level, close, deep, and rear activities are practically indistinguishable. They are usually conducted with the same assets.

CLOSE OPERATIONS

Offense

An offensive operation maybe launched at any time and with little notice. To have as much advance notice as possible and to ensure the brigade commander's course of action is supportable, the FSB commander and staff anticipate requirements and maintain continuous contact with the brigade staff. They monitor tactical nets whenever possible. In planning for an attack, the FSB ensures support equipment is ready, supplies are in position, and coordination is made to meet transportation needs.

As the attack develops, communication links between the brigade and FSB must remain operational. The FSB must also ensure the preparations discussed below do not give away tactical plans. In addition, all elements of the FSB should be prepared to move forward by echelon as described in Appendix A. Figure 2-3 depicts a representation of the brigade area during an offensive operation.

Supply. The most critical supplies are classes III, V, and IX. To handle high fuel consumption, forward stocks are built up and the class III point is prepared to move forward rapidly or set up forward tactical refuel points as described in Chapter 7.

Though ammunition expenditures may not be as high as with a heavy defense, responsive resupply is essential. A significant problem will be maintaining this support over extended supply lines. The sustainer cannot require artillery service battery vehicles to travel far from firing elements or maneuver battalion support platoons to haul ammunition over great distances. The FSB must ensure ATP elements areas far forward as tactically feasible. The support operations officer, in coordination with the DAO, must plan for the forward movement of the ATP and coordinate for transportation assets. The FSB also coordinates with the artillery battalion S4 and DAO representative to preposition ammunition on request at designated firing positions.

Other supply considerations include–

- Weapon systems replacements requirements.
- Use of preplanned push packages of essential items, such as water, fuel, medical supplies, ammunition, and chemical defense equipment.
- Obstacle-breaching and bridging materiel requirements.

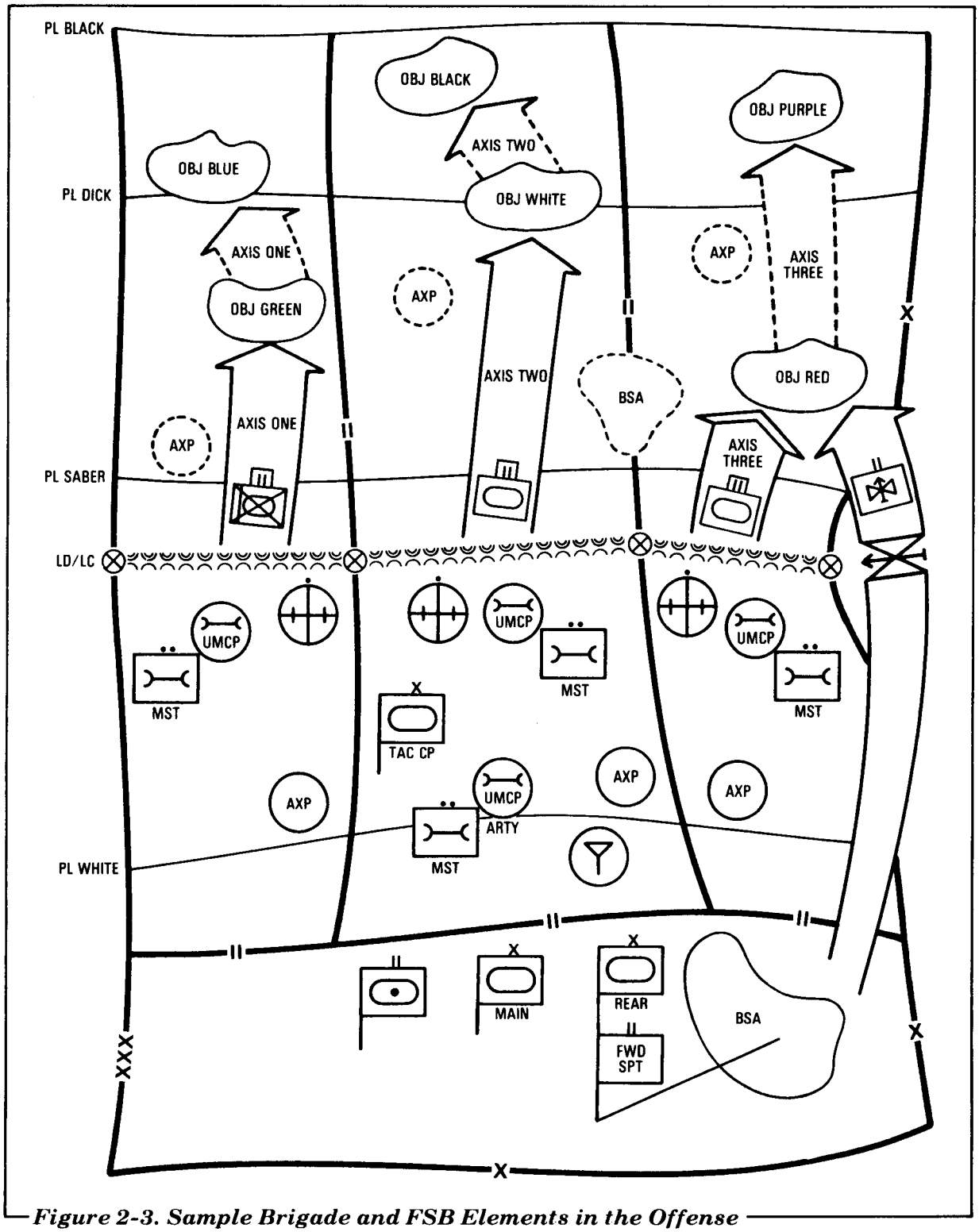


Figure 2-3. Sample Brigade and FSB Elements in the Offense

- Potential use of captured supplies, especially vehicles and fuel.
- Increased use of MREs.
- Use of controlled exchange and cannibalization as a source of repair parts.
- Availability of host nation support, particularly procurement of class III packaged items, building supplies, barrier materiel, and in some cases sundry items.

Transportation. Transportation assets will be heavily taxed in the offense. Long lines of communications and high requirements for selected supplies and personnel replacements will stress the system. The FSB has extremely limited transportation resources. The resources it has must be used to keep the FSB mobile to advance with the attack and, whenever possible, to push support forward. This support may include such techniques as short-term pushing of supplies or moving refuel-on-the-move equipment. The support operations section must ensure that transportation requirements to sustain the momentum of the attack are communicated to the MCO in the DISCOM in a timely manner. Also, the FSB coordinates with the brigade S3 and DISCOM MCO to use road nets efficiently. The opening and securing of routes must be included in the tactical plan.

Maintenance. Maintaining momentum also requires keeping in or returning to the current battle as many weapon systems as possible. Therefore, emphasis is on battle damage assessment and rapid return of equipment to the brigade. As described in Chapter 8, the FSB maintenance company sends MSTs forward to UMCPs to support this concept. The MSTs must be task organized to ensure the right people go forward with the necessary transportation, communications assets, tools, TM DE, repair parts, and components. Teams must include mechanics who can make rapid and informed decisions on what can be repaired on site, what to evacuate, what to cannibalize, and what to abandon after being made useless to the enemy. The DISCOM may establish timelines which suggest that equipment that cannot be repaired on site within a certain period of time be evacuated or reported and left for follow-up maintenance elements to repair. Each MST will work closely with the supported battalion's BMO to make maximum use of lulls in the battle to get as much equipment as possible ready for when action resumes. In fast-paced actions, the maintenance control officer, acting on requirements made known by the MSTs, will arrange use of air transportation to bring repair parts forward and evacuate damaged equipment.

Medical. Deliberate attacks will likely result in high casualty rates. High casualty rates and long evacuation lines will stress the medical resources of the DISCOM and may require them to be augmented. Before the onset of an attack, FSB medical company assets are placed as far forward as combat operations permit. The medical company commander must ensure treatment elements have a full basic load of supplies before the attack begins. Once operations begin, the DMSO pushes prepackaged sets of class VIII supplies to battalion aid stations and the clearing station. Unit loads must be topped off. To keep the medical company mobile, patient holding in the BSA is minimized. Ground evacuation assets are positioned at battalion aid stations.

In fast-moving situations, predetermined ambulance exchange/patient collection points are identified along the axis of advance and evacuation routes. Such points when colocated with a treatment team from the medical company also provide units

without organic medical support with a patient disposition site when the situation is so fluid that full area support is difficult.

In exceptional cases, increased evacuation demands may require nonmedical transportation assets to be used. If required, this intensifies the burden on the already stressed transportation system.

Field Services. Due to the mobility of offensive operations, some field services provided by corps (such as laundry and clothing exchange and bath) may be temporarily suspended. However, GRREG operations will intensify. The FSB must ensure adequate GRREG supplies are available. The other field service that assumes greater importance in the offense is airdrop. It may be required to increase support mobility. Although airdrop support comes from corps, if the FSB is the supported unit, the FSB staff must plan request procedures, drop zone selection and control, recovery of supplies, and evacuation of airdrop equipment.

Defense

The role of the FSB in the defense is to support defensive battles while maintaining the capability to shift to the offense with little notice (Figure 2-4). This requires the FSB CP to stay current with the battle. Emphasis must be placed on locating FSB support points out of reach of possible penetrations in protected and concealed locations without sacrificing support. Elements must also be out of the way of potential retrogrades. FSB units should be dispersed as much as possible without impairing command and control or security. Built-up areas will also be used as much as possible. ADA coverage must be planned; emphasis will be on passive measures. The FSB must also dig in as much as equipment and time allow. This includes positions for personnel and equipment.

Supply. Supply operations will be most intensive during the preparation stage. The FSB will plan to preposition critical supplies (particularly fuel, ammunition, and barrier materiel) far forward and in successive defensive positions. As soon as the FSB knows a defense is planned, it must begin required coordination to have obstacle materiel throughput by corps assets as close to the emplacement sites as possible. If available, FSB assets may help unload barrier materiel at emplacement sites.

Throughout the defense, class V expenditures are likely to be high. Therefore, the FSB must position the ATP to maximize responsiveness. Requirements may also be high for chemical filters, MOPP gear, and decontaminants. In many defenses, however, consumption of fuel will be low relative to rates during an offense.

Transportation. As implied in the discussion on supply, transportation is most critical while preparing for a defense. Prepositioning supplies and shifting personnel and equipment before the operation will tax the system. The FSB's major role in this area is to coordinate transportation requirements with the DISCOM MCO for support operations.

Maintenance. The maintenance company's emphasis in the defense is to take all required steps to maximize the number of weapon systems available at the start of the operation. Once defensive operations begin, the principles are the same as for the offense. However, in some defenses where lines are not extended, forward support may be maximized by consolidating all maintenance company assets, including the SSTs, in the base shop and sending out small, highly mobile MSTs to perform quick, on-site repairs or component exchanges.

Medical. Though casualty rates are likely to be lower than in an attack, patient flow

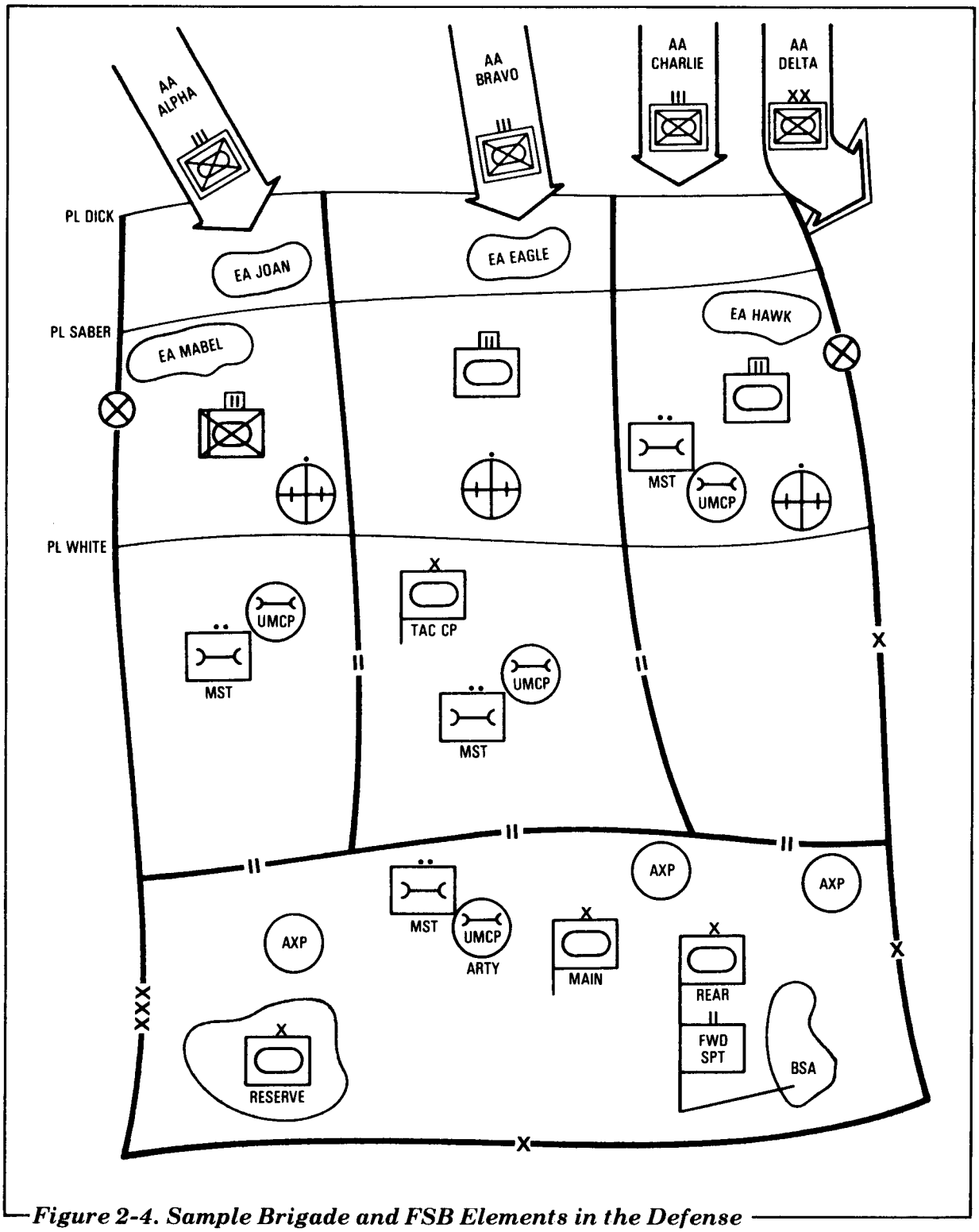


Figure 2-4. Sample Brigade and FSB Elements in the Defense

from forward areas will be complicated by enemy activity. This activity may also inhibit evacuation as well as increase casualties among medical personnel and damage to evacuation assets. Medical company personnel must be prepared to get to casualty sites faster and to minimize time to perform emergency treatment and evacuation. Predetermined ambulance exchange points should also be designated. The medical company commander and FSB support operations section should have coordinated with the medical operations center for increased use of air ambulances.

Field Services. If laundry and CEB facilities are located in the BSA, the FSB staff should ensure they do not interfere with tactical operations.

Retrograde

Support for a retrograde operation is particularly complex. Communication with the brigade and tracking of the tactical situation is especially important. Maneuver elements at a given time may be defending, delaying, attacking, or withdrawing. Thus, it is essential that FSB elements are echeloned to continue to provide support to the delaying force at an old defensive site while establishing support to withdrawing elements moving rearward. Any FSB personnel and equipment not essential to supporting forward elements should be moved as soon as possible.

Supply. Planning must ensure that supplies are delivered to projected sites along the withdrawal route where requirements will exist. Only critical supplies (classes III, V, and IX) will be moved forward to support the delaying force. Also, only enough supplies will be moved forward to meet requirements which cannot be met with supplies already positioned in forward areas. Any supplies which are already forward but not required by the delaying force should be moved back. The same applies to transport assets. Guidance on civilian property should be supplied by DISCOM headquarters.

Transportation. Retrograde operations will stress transportation resources. The MCO and provost marshal will require the FSB support operations section to assist in the critical tasks of controlling MSB transportation assets in the brigade area and in ensuring road nets stay open. The FSB must evacuate nonessential personnel and items early to avoid congested roads later. In addition, it must ensure only essential items are moved forward. Finally, the FSB support operations section makes sure all transportation assets moving resources forward assist in the evacuation effort.

Maintenance. Maintenance planning emphasizes support forward while moving most of the maintenance company rearward. Time for repairs is limited. Forward elements should concentrate on exchange versus repair and maximize cannibalization. Efficient recovery and evacuation is required. HET support should be coordinated with the DISCOM. However, evacuation assets will be scarce so forward repair is essential. Since command and control will be difficult, MST leaders must take the lead to keep the maintenance control officer aware of the team's location, resource status, and class IX requirements.

Medical. Patient evacuation is complicated by several factors. Evacuation routes may be congested with withdrawing forces. Evacuation assets will be required to move patients that would normally be treated in the clearing station. Nonmedical transportation assets may not be available to assist. Also, medical company assets should be moved back by echelon as early as possible. This will then require prompt patient sorting

and evacuation. Locations of successive treatment sites must be predetermined.

Field Services. Any laundry and CEB units in the brigade area will also be moved to the rear as soon as possible. Nonessential services may be temporarily suspended. Facilities of suspended activities may be integrated in deception plans.

DEEP OPERATIONS

A divisional brigade does not normally conduct separate deep operations. However, as part of deep operations conducted by the division, the heavy brigade can direct battles against enemy battalions and regiments up to 15 kilometers forward of the FLOT. The brigade controls its maneuver battalions and supporting attack helicopter units, sets priorities of supporting artillery fires, and coordinates USAF close air support operations. Its focus in the offense is interdiction of regiments and battalion reserves. In the defense, the brigade focuses on second echelon elements. Deep fires are sustained the same as close operations. Sustainment of deep maneuver, however, must be carefully planned. Deep maneuver is a high-speed, short-duration, audacious operation. CSS will be austere. Early in the planning phase, the FSB commander through the brigade S4 informs the brigade commander of available logistics and medical assets, replenishment prospects, and likely effect of support on the tactical operation in terms of a risk analysis the brigade commander can understand. There are two general methods for supporting a deep operation.

Self-Sustainment

If there is no open, secure line of communication, self-sustainment will be required. CSS will be limited to what the brigade can carry with it or forage. The brigade will carry as much class III and V as possible. To carry more critical class 111 and V supplies, maneuver elements will likely download nonessential supplies and equipment. They will leave behind with the field trains all nonessential personnel and major equipment (for example, food service teams, trucks, kitchen trailers, S1 sections). If more downloading is required, consideration should be given to leaving behind class I and 11 items. These are relatively easy to resupply by road or air. They also allow at least some leeway from the time the need is determined to exist and when items must be delivered. Maintenance elements for quick repairs and medical personnel and equipment to perform emergency treatment may also accompany the brigade.

If the operation is limited in distance and duration, the FSB's role may be to—

- Help ensure the brigade is fully loaded before the operation. This may include providing refueling support as far forward as possible.
- Coordinate for transportation assets to move nonessential items which brigade elements do not move immediately.
- Prepare to displace as a single entity to forward positions on the call of the brigade commander with the approval of the DISCOM commander.

If an increase in the brigade's self-sustainment capability is required, some FSB assets may go with the brigade. How this is done will depend on the situation. If the operation is to be of relatively long duration and secure LOCs are likely to be opened before the end of the operation, the FSB may move its critical assets with the brigade. These assets would probably include the 5,000-gallon tankers with refuel-on-the-move equipment, the ATP (if resupply is projected), MSTs, and additional medical assets. The FSB in this case will fold into the

brigade movement formation. It will be protected by surrounding combat elements.

If even more mobility is required or the operation is to be of very short duration, FSB assets may be used to augment the battalion support platoons. The tankers with drivers would be the most likely assets to augment the battalions though their trafficability and survivability must be considered. This method would be the quickest means of providing additional capacity. However, keeping the FSB assets centralized provides more flexibility to maximize support as priorities change.

In all cases, only essential resources which will not inhibit the operations of the brigade should accompany it. Planners must remember that the FSB's hauling assets are limited and have little off-road capability. The FSB's supply assets are designed to receive and issue or transload supplies, not to move them over substantial distances. So, for instance, it will profit the brigade little to bring MHE if the lack of a secure LOC prohibits resupply during a brief operation. Also, equipment that cannot be quickly repaired will probably have to be abandoned after being made useless to the enemy.

Sustainment Over a Line of Communication

If sustainment is to be provided over a LOC, the essential elements of the FSB will likely accompany the brigade. They will be required to receive and issue supplies, assist in the effort to repair and recover/evacuate damaged equipment, and provide additional patient acquisition, treatment, and evacuation capability.

Such an operation will likely involve the brigade's participation in a division deep operation over extended distances or time periods. In such cases, the brigade should avoid downloading items; return trips to retrieve them may be impossible, and division transportation assets are likely to be unavailable to move maneuver unit nonessential items. To support such operations the FSB itself will normally require additional support from the MSB or other division or nondivisional elements. This may include low-bed trailers or, when available, HETs to move FSB MHE, additional 5,000-gallon tankers, trucks to move ammunition, fuel pumps and hoses to permit use of captured materiel, and commitments to provide on-call aerial resupply of designated items. Additional corps tractor-trailers uploaded with ammunition may travel with the class V section so that when the ATP arrives at the new site ammunition is immediately available.

If a surface LOC is used, much combat power will be tied up either to keep it continuously open or to reopen it each time a convoy moves over it. Air LOCs permit faster, more responsive support, but require air superiority or at least parity. Support may involve either air-landing, airdrop, or both. If air-landing is used, the FSB is likely to be involved in establishing and securing landing zones. Engineers may also be required to prepare landing zones. If enough planning time is available, preplanned airdrop resupply missions should be considered to enhance responsiveness. If planning time is limited, immediate airdrop resupply requests may be used for urgent or priority requirements. Planners should be aware that receipt of airdrop deliveries in the BSA will require labor, MHE, security teams, and transportation assets of the FSB and the supported brigade. Evacuation of recovered airdrop equipment to the corps for reuse is a critical consideration. Priority should be given to the return of parachutes, followed by containers and platforms. Recovery of the equipment in deep operations will be difficult.

REAR OPERATIONS

Rear operations are conducted to secure the force, neutralize or defeat enemy operations in the rear area, and ensure freedom of action in close and deep operations. The goal is to provide BSA security to ensure operations in the rear are not impaired. If the BSA is not secure, brigade elements conducting close and deep operations cannot be sustained. This important topic is covered in depth in Chapter 5.

CHAPTER 3

Command and Control

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PRINCIPLES

Commandant control is the system used by the FSB to direct, coordinate, and control the activities used to accomplish the logistics and medical mission. The processes complicated by the FSB's terrain management and BSA defense responsibilities, as discussed later. Command and control involves the personnel, equipment, facilities, and procedures for gathering and analyzing data. They also involve planning what is to be done, issuing instructions for doing it, and supervising how it is done.

The complexity of the mission and dynamic battlefield of today require flexibility, creativity, and initiative by subordinate commanders. Command and control must be mission oriented. Just as the DISCOM commander must give the FSB commander the resources and authority to accomplish his mission, so too must the FSB commander ensure subordinate commanders and leaders have the assets and willingness to innovate to get the job done. They must be well trained in communications and decision making. They must also understand doctrine and their organization. They must know when and in what circumstances they have the prerogative to act.

Commanders and leaders in the FSB must—

- Understand their responsibilities.
- Be familiar with responsibilities and capabilities of higher, lower, and supporting units. They must know the support required and what support each level can provide.
- Maintain contact with higher, lower, adjacent, supported, and supporting units.
- Write clear directives, reports, orders, and studies.
- Use effective oral communications.

- Understand the information systems related to CSS.
- Ensure radio and data transmission nets are used effectively.
- Be able to execute a well-rehearsed plan for command succession.
- Provide capability in meaningful terms to the brigade commander.
- Stay personally involved in and appraised of the CSS and tactical situations.
- Be familiar with the law of land warfare with respect to civilians, civil affairs, and civil-military operations.
- Understand their responsibility to the soldiers under their command.

ORGANIZATIONAL RELATIONSHIPS

To perform its C2 functions, the FSB must develop and maintain a variety of relationships. They include relationships with—

- Higher organizations—DISCOM.
- Lateral organizations—MSB, other FSBs, and corps logistics task forces.
- Supported organizations—supported division and corps units in the brigade area, in particular, the brigade rear CP.
- Subordinate organizations—FSB companies.
- All organizations in the BSA (for defense and terrain management).

FSB AND DISCOM HEADQUARTERS

While the FSB supports the divisional brigade, it remains under the command of the DISCOM commander. Requests for support beyond the FSB's capability flow through the FSB support operations section to the DISCOM staff and MMC. This ensures logistics and medical needs are staffed with the DISCOM S2/S3, DISCOM medical operations center, DMMC, and MSB. The FSB keeps the DISCOM aware of the support status in the brigade area and anticipated requirements beyond capability of the FSB. The DISCOM commander will make decisions on cross-leveling assets among the MSB and the FSBs. The FSB/DISCOM relationship is depicted in Figure 3-1.

FSB AND DMMC

The DMMC provides supply and maintenance management for the FSB. The DMMC manages all classes of supply except class VI, VIII, and X, and classified maps. It develops and manages the authorized stockage lists. It maintains division property book and Army equipment status reporting data. The DMMC also specifies the items and amounts of class I, 111, IV, and IX materiel to be physically located in the BSA. It provides instructions for turn-in of excess items and for evacuation of items that cannot be expeditiously repaired by the FSB maintenance company. The technical relationship between the FSB supply and maintenance companies and the DMMC is illustrated in Figure 3-2.

FSB AND MSB

The MSB provides designated DS supply support, backup DS maintenance, motor transport support, some field service functions, and limited medical reinforcement and augmentation of the FSB. The companies of the FSB maintain technical relationships with their related companies in the MSB. These technical relationships simplify technical training and operations. However,

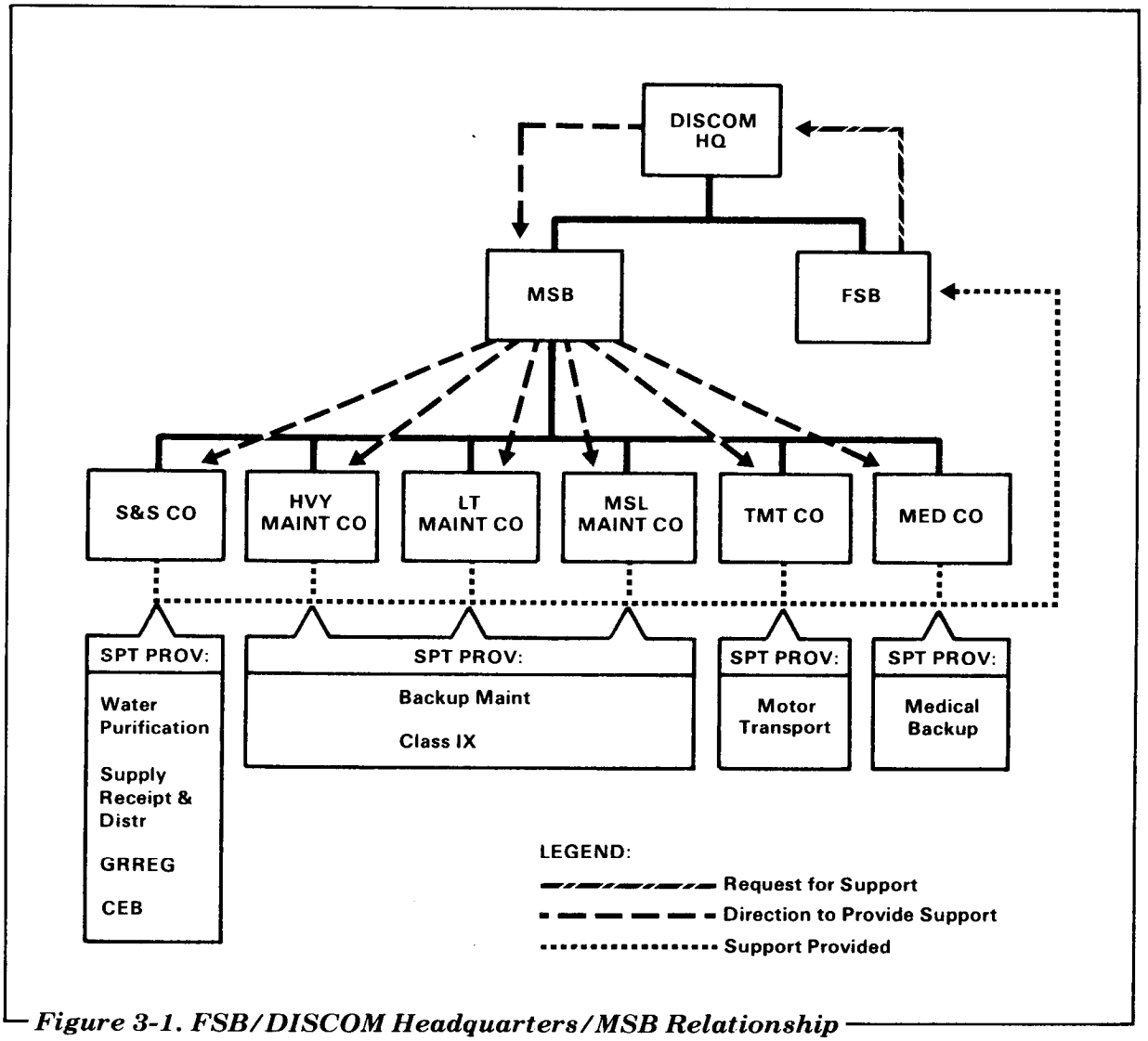


Figure 3-1. FSB/DISCOM Headquarters/MSB Relationship

these relationships do not take the place of command channels. Questions of who will support and with what priorities are decided within command channels. When FSB companies need reinforcing support from the MSB, the FSB support operations section coordinates with the support operations branch of the DISCOM S3 section. For medical support, the S3 will work with the medical operations center. Figure 3-1 shows the relationship between the FSB and MSB.

FSB AND OTHER FSBs

FSBs are normally widely dispersed and operate independently of each other. However, as discussed in Chapter 2, the DISCOM commander may choose to cross-level assets between FSBs to most effectively support the units in each brigade area.

FSB AND SUPPORTED DIVISION UNITS

The FSB provides direct support to a divisional maneuver brigade. It thereby

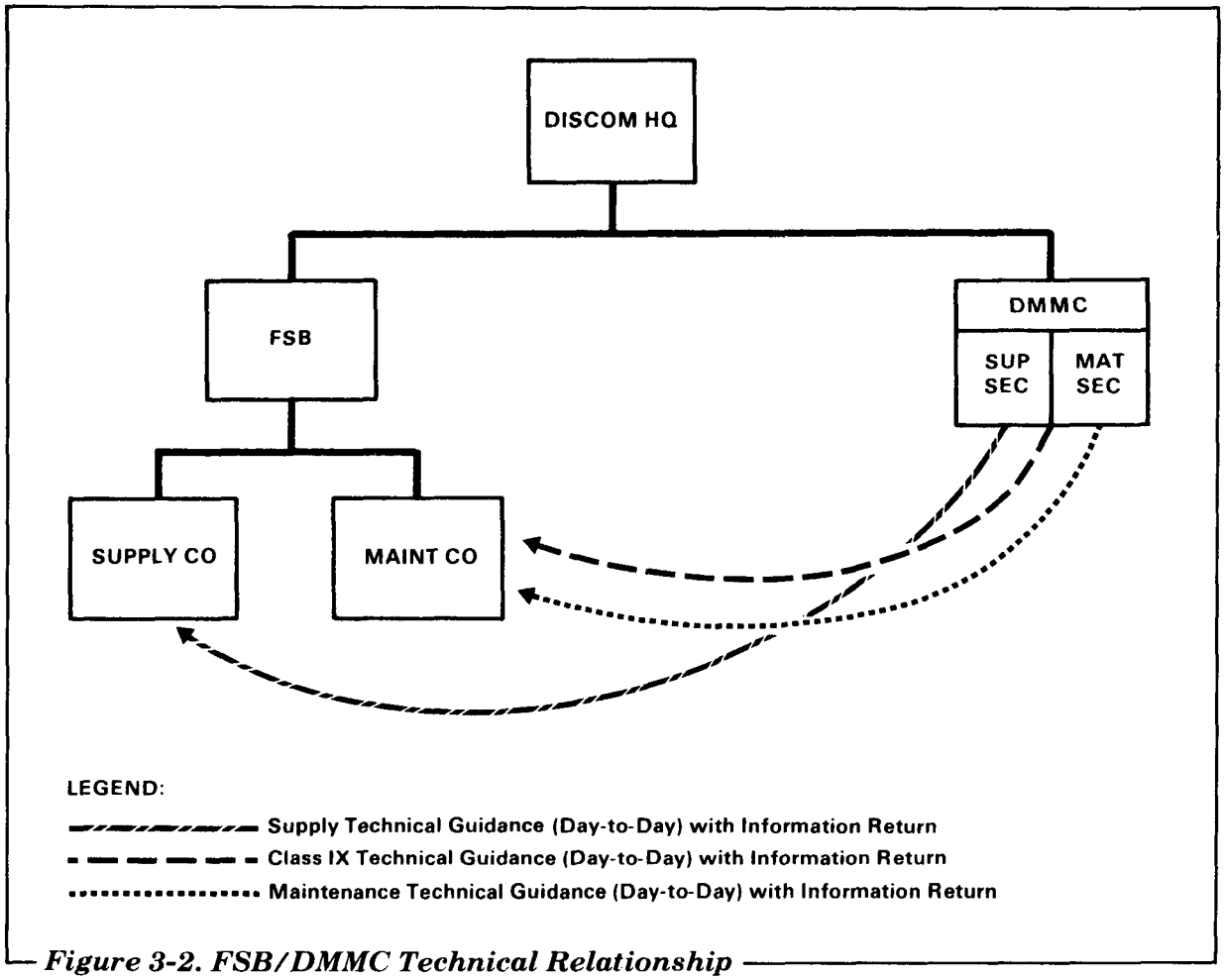


Figure 3-2. FSB/DMMC Technical Relationship

establishes a close working relationship with the supported brigade commander and staff, as well as the subordinate battalions and other attached and assigned units.

The brigade commander is responsible for planning all aspects of brigade operations, including logistics. The staff officer charged with assisting in the area of logistics is the brigade S4. He provides logistics information to the commander and acts as the brigade's logistics planner. As such, he coordinates the status of supplies and equipment with the maneuver battalion XOs and S4s and with representatives of CS elements attached and assigned to the brigade. He also maintains continuous contact with the FSB commander and support operations officer to keep track of the FSB's status and capabilities, -and to ensure they understand the commander's priorities. To maintain this coordination, the brigade rear CP normally colocates with the FSB CP, and the brigade S4 has representatives there at all times.

The FSB deals directly with the battalion S4s and the designated logistics representatives of the other division elements in the brigade area. Together they work out the day-to-day details of logistics operations in the brigade. These include specific requirements and time schedules. Figure 3-3 depicts the relationship between the FSB and the supported brigade and maneuver and artillery

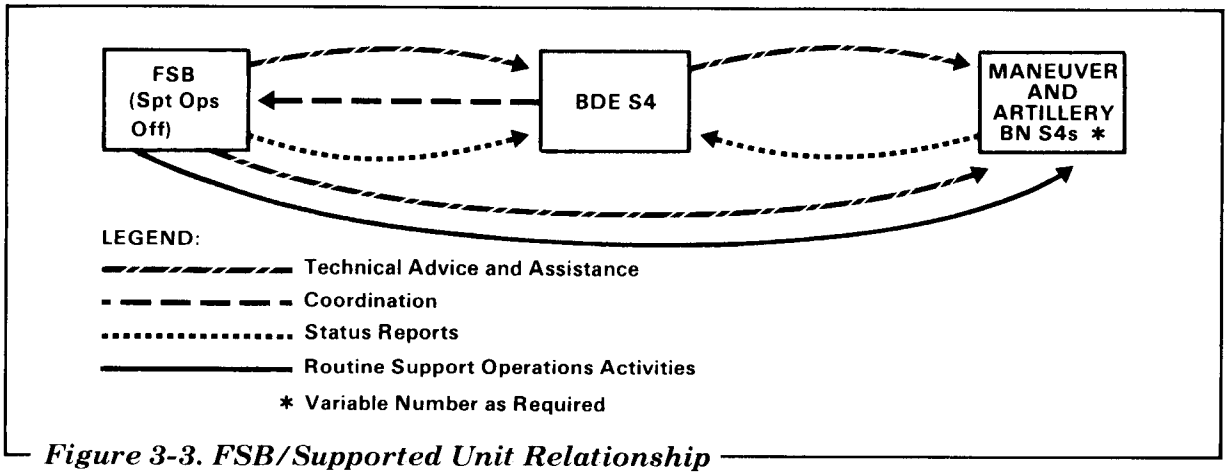


Figure 3-3. FSB/Supported Unit Relationship

battalions. For routine operations, the FSB companies also develop relationships with supported unit CSS operators such as support platoon leaders, battalion maintenance officers, and medics.

Division aviation elements may also require support from the FSB. When a unit assigned to the division aviation brigade (cavalry squadron, AHB) will be operating in a maneuver brigade sector and require support from that sector, the AB S4 will notify the DISCOM support operations branch and arrange for support to be provided by the FSB. The DISCOM support operations branch will coordinate with the MSB and the affected FSB support operations sections for any cross-leveling of DISCOM assets required. The CSST from the MSB will accompany the cavalry squadron. If JP-4 support is required from a maneuver BSA, the FSB will require additional assets. Other assets that must be considered include maintenance, class V, ground fuel, medical, and general supply elements. General principles of task organizing described in Chapter 2 also apply.

Support relationships may have to be adjusted in extreme circumstances. For instance, if a unit is cut off from its parent unit, one task of the senior maneuver commander is to reorganize logistics assets. All assets, both unit and DS level, are put under the centralized control of the senior logistics or other designated individual. If the whole brigade with the FSB is cut off, the FSB commander will normally be given control. He must take several actions. He must gather information on all available assets as well as the personnel and equipment in the supported force. He will advise the maneuver commander who will select the best alternative—break out, defend encircled, attack deeper, or exfiltrate. On the basis of the commander's intent, the logistician rations key supplies, authorizes cannibalization, develops plans to destroy equipment, and develops a casualty evacuation plan.

In addition to its support relationship to the brigade and other division elements in the brigade area, the FSB has terrain management responsibilities and operational control for all elements located in the BSA for security. This topic is discussed in depth in Chapter 5.

FSB AND CORPS UNITS IN THE BRIGADE AREA

As noted above, a number of corps units are likely to be operating in the brigade sector. Examples of such units include—

- Elements of a combat engineer battalion.
- Military intelligence teams.

- Platoons from Chaparral and Hawk batteries.
- Field artillery battalions/batteries (155-mm, 203-mm, Lance, MLRS/Army TACM).
- Air and ground ambulances.
- Motor transportation elements.
- Finance support unit.

These corps units receive medical support from the nearest medical facility regardless of unit affiliation. This may require moving some MSB medical assets forward. To coordinate logistics support to these units, the forward corps support group or logistics battalion task force operating in the DSA will send a liaison officer to coordinate with the support operations section. The LO and support operations officer together work the most efficient and effective way to support these units. If the corps elements are in the brigade rear and the number of personnel and items of equipment to be supported are small enough, the FSB may support them on an area basis. If the numbers are substantial or dispersion taxes the FSB's assets, the logistics task force must augment the FSB with corps assets. The principle of the FSB as the single logistics supporter in the brigade area must be followed to ensure the brigade retains control over unit locations and to avoid confusion on support relationships.

In addition to these elements which operate in the brigade area, corps forces may move through the area. For instance, corps units withdrawing from a covering force mission may pass through the brigade area. In addition to having to coordinate movement through the area, the FSB may be tasked to provide minimal support to assist the units in reaching their destination. Support most likely to be required will be supplemental maintenance and fuel. The FSB will provide support within its capability.

FSB AND FSB COMPANIES

The FSB commander must maintain close personal contact with his subordinate company commanders. He depends on them to provide timely information on the status of their companies. In addition, the company commanders must understand the FSB commander's intent to perform their roles with initiative. This understanding is enhanced through frequent face-to-face discussion.

Though the company commanders will likely be in the vicinity of the FSB CP to facilitate coordination, they must not tie themselves to one spot. They command their companies from the locations where they can best assess and influence the support operation. These commanders use verbal orders, radio, visual signals, or wire among themselves, the FSB staff, their platoon leaders, and the supported elements.

PROCESS

As with any other Army organization, the FSB commander and staff use the command and control process outlined in FM 101-5 to make decisions and supervise execution of orders. This process is a continuous one; the FSB commander and staff are always involved in estimating and planning. However, the focus becomes more precise when the FSB receives a mission. Typically, it has already received a warning order when the commander, XO, S3, or support operations officer attends a DISCOM or brigade staff meeting. In some cases, the FSB commander must deduce the mission, but usually he receives the planning guidance and a restated mission from the DISCOM and

brigade commanders. He also obtains the brigade OPLAN/OPORD, and throughout the planning process, he and his staff work closely with the brigade S3 and S4 sections.

When it receives or infers its mission, the FSB begins mission analysis. The commander and staff take into account all the planning considerations discussed in Chapter 2. These include the force to be supported, FSB capabilities, and the brigade commander's priorities of support. The command section identifies tasks required to accomplish the mission, restates the mission, and issues a warning order along with the commander's planning guidance to all FSB elements.

The FSB commander provides his subordinate commanders and staff with planning guidance as often as required. The frequency, as well as the amount and content of the guidance, will vary with the mission, available time, tactical situation, available information, and historical data. Planning guidance is used to prepare estimates. Therefore, the commander must ensure the nature of the guidance does not bias staff estimates. The purpose of the estimate is to provide a common start point for staff planning. Planning guidance may include a restated mission, specific courses of action to develop or eliminate from consideration, assumptions, constraints, critical information required, or specific considerations (such as NBC, deception, or EW).

The FSB staff provides functional area estimates as discussed in Chapter 6 and FM 101-5. On the basis of these estimates, the FSB commander finalizes his concept of operations. The XO then gives guidance on preparation of the OPLAN/OPORD. The S2/S3 consolidates the input and publishes and distributes the OPLAN/OPORD after the FSB commander approves it.

The FSB command section must keep in mind two points related to the decision making process summarized above. First, planning is continuous. It does not begin on receipt of a mission. The commander and staff are always gathering data and anticipating future requirements. When the mission is received, however, steps must be taken to finalize all the operational details of the CSS and BSA security plans. In addition, the command section must adjust to time constraints. In some cases, time is the most critical factor in the planning process. In such cases, planning guidance may have to be less specific and formal. When appropriate, FRAGOs on previous orders are preferable to a new orders. They save time.

After the order is issued, the FSB commander and staff supervise its execution. The primary purpose of the staff is to assist subordinate units to carry out the intent of the FSB commander's order. Plans and orders are refined as the situation changes. Information comes back to the command section through reports and personal observations of the commanders and staff. On the basis of this information, they evaluate whether the mission is being accomplished. When required, instructions are revised.

HEAVY/LIGHT MIXES

To capitalize on the strength of each type of unit, heavy and light forces may be cross-attached. The decision on such cross-attachments will likely be made at corps or division level. The FSB staff must be prepared to support them. The mixes with which the FSB may be involved include the following:

- *Division heavy brigade OPCON to LID.* This mix is viable for a short mission (48 hours or less) when the heavy division can support it without negatively affecting the overall mission. A key consideration for supporters would be distances from the heavy division DSA to the location of the brigade OPCON to the LID. The requirements of the rest of the heavy division must also be considered. Normally, the heavy brigade would deploy with its associated FSB and elements of the MSB. The MSB elements may include HETs, 5,000-gallon tankers, water purification and distribution assets, and maintenance assets including the brigade portion of the class IX ASL. Because of the austere CSS structure of the LID and differences in the support concepts, attachment of a heavy division brigade to a LID is the least preferred option. If it becomes necessary, the heavy brigade FSB with MSB elements should plug directly into the corps support structure, rather than the LID's DISCOM.

- *Heavy battalion OPCON to light brigade.* Again, OPCON is the preferred relationship for cross-attachment at this echelon if the situation allows. Because of different requirements and austere support capabilities, the light brigade will not be able to support a heavy battalion attached to it. FSB assets likely to be required to accompany the battalion include the associated MST, a portion of the class IX ASL, a recovery vehicle, and fuel tankers. In addition, HETs from the MSB would be required.

- *Light battalion attached to heavy brigade.* Attachment of a light battalion to a heavy brigade is preferred to OPCON. Therefore, if the brigade supported by an FSB receives a light battalion, the FSB will likely be required to provide support. The FSB staff can expect the battalion to bring with it a battalion slice of maintenance and food service assets from its parent brigade in addition to the battalion's organic assets. It will also require transportation support, maintenance assets, and assets to deliver water to the battalion.

The actual combination of support assets accompanying units in a heavy/light mix will depend on the following factors:

- Distance from the parent unit.
- Duration of the mission.
- Support requirements.
- Proximity to other similar light or heavy units.
- Intensity of conflict.

FACILITIES

Command and control facilities include command posts and supporting automation and communications systems. These facilities make possible processing and transmission of information and orders necessary for effective C2. C2 automation and CP guidance are discussed below. Communications is covered in Chapter 4.

C2 AUTOMATION

Automated systems throughout the DISCOM are designed to allow commanders

to manage information to optimize use of limited resources. The systems include the machinery, programs, specialists, and organizations which process data through the use of computers.

Past automation has been ineffective to support logistics C2 operations. Staff estimates and plans have been developed manually based on data collected through voice, message, or courier-based communications. Use of technical data for command and control has been hampered by the fact that data has been too detailed, in unusable formats, and not readily accessible from current automated functional systems. There are some one-to-one interfaces between functional systems, but there is no integration of data bases to support cross-functional decision making. This deficiency is being corrected through a new command, control, and subordinate system that includes a CSS control system.

Command, Control, and Subordinate System Structure

CCS2 will provide the means of interfacing the five battlefield control functions of maneuver, air defense, CSS, intelligence/EW, and fire support. This interface is called the Army Tactical Command and Control System. (Note: Initial fielding will begin in the second quarter of FY 90. A full interactive, automated system is expected in 1995 when the objective CCS2 is realized.)

The CSS Control System of the ATCCS will be an automated system that provides logistics, medical, and personnel command and control information. It will rapidly collect, analyze, project, and distribute this information to the maneuver commander. This allows timely and sound tactical decisions to be made. This information will also help CSS commanders perform their command and control functions. In addition, this information helps combat support commanders to execute their missions. The CSSCS retrieves data from CSS subordinate units and systems, called Standard Army Management Information Systems. The CSSCS will be employed at maneuver brigade, division, corps, and echelons above corps. (Note: At EAC, the CSSCS will also provide C2 financial information.)

At brigade level, there will be two CSSCS devices. The CSSCS node of the ATCCS at the brigade will be located in the FSB support operations section. This device will respond to information requirements generated by the DISCOM commander, the brigade commander, and the other ATCCS nodes at brigade level. The FSB–DISCOM S2/S3 interface will pass information requirements from the brigade area to the DISCOM commander and staff to permit more informed and responsive decisions. It also will provide the means for the DISCOM commander and staff to disseminate information, such as OPLANS, orders, and inquiries, to the FSB. The interface with the other CCS2 nodes (fire support, air defense, IEW, and maneuver) will permit integration of all battlefield control functions to synchronize activities.

Another CSSCS device will be located in the brigade rear CP to support the brigade S1 and S4 sections. This device will enable the S1 and S4 to conduct planning for personnel and internal logistics support operations. It will also be used to feed brigade personnel and logistics data to the brigade commander. Figure 3-4 depicts CSSCS in support of the brigade.

Functional Systems

Besides providing information to the CSSCS for command and control purposes, the CSS automated systems will continue to perform the functional missions for which they were originally designed. These systems operate on TACCS and the unit-level logistics system. Operator input automatically

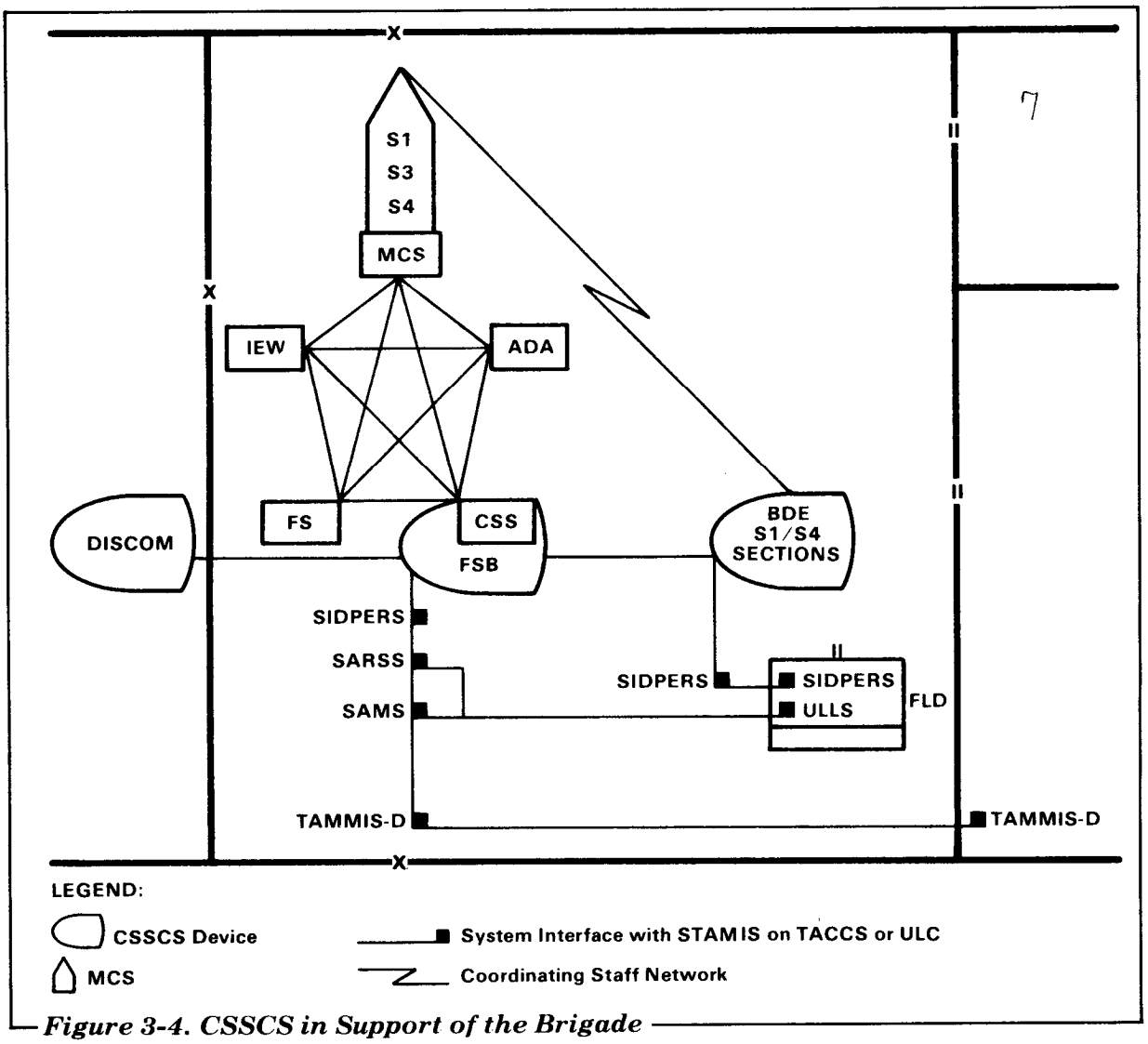


Figure 3-4. CSSCS in Support of the Brigade

updates data within files which are stored on magnetic media. Transactions are transmitted either electronically or through use of magnetic media. The systems used by the FSB are discussed below.

Standard Army Maintenance System. At the FSB maintenance company, SAMS-1 operates on TACCS and receives data from and transmits them to all supported maintenance elements via an interface with the ULLS. SAMS-1 automates production control, providing immediate job order and backlog status information. It provides, through file inquiry, critical repair parts and shop stock asset status. It screens production parts requirements against on-hand assets and automatically generates, edits, and passes requests to the supply system via SARSS-1. The maintenance company SAMS-1 interfaces with SAMS-2 at the DMMC. SAMS-2 receives SAMS-1 data and provides immediate production and supply requirements to managers. It gives daily visibility to deadlined equipment.

Standard Army Retail Supply System. SARSS-1 operates on TACCS hardware in the FSB supply and maintenance companies. SARSS-1 automates class II, III (packaged), IV, VII and IX supply actions. It performs time-sensitive functions such as receipt, storage, issue, replenishment, inventory adjustments, supply performance reporting and excess identification. It also maintains accountable stock record balances. Normally, SARSS-1 interfaces directly with SARSS-2A on TACCS at the DMMC. SARSS-2A receives asset balance reports from SARSS-1 and routes unfilled requisitions received from SARSS- 1 activities to the appropriate source of supply. It also performs lateral transfers, substitutes item identification and release, submits catalog changes to SARSS-1, and maintains asset balance visibility for all SARSS-1 subordinate activities. In contingency operations, SARSS-1 can operate in the autonomous mode without SARSS-2A support and route requisitions directly into the wholesale system.

Standard Installation/Division Personnel System. SIDPERS automates strength accounting, assignment, organization recordkeeping, personnel recordkeeping, and labor-intensive military personnel operations within the S1 section. SIDPERS operates on TACCS hardware.

Tactical Army Medical Management Information System—Division. TAMMIS-D consists of two subsystems:

- *Medical Patient Accounting and Reporting–Division.* MEDPAR-D is used by medical platoons and sections at battalion and brigade level, medical companies at division level, and medical staff agencies. It allows users to maintain patient demographic data and to initiate and maintain individual soldier medical files. It provides command roll-up reports on the medical situation and resources, patient status, and patient evacuation and mobility.
- *Medical Logistics—Division.* MEDLOG-D accommodates management of medical supplies and equipment. It identifies authorized levels of medical supplies and allows rapid reordering of medical assemblage items. It maintains a log of medical equipment, accumulates repair cost data, and identifies calibration safety testing and preventive maintenance schedules. It also maintains data on critical items and sends them through command channels as required.

Unit Level Logistics System. ULLS is a standard automated logistics system for unit class IX PLL and maintenance management operations. It automates repair parts supply documentation, maintenance management operations, and historical document data. It will be employed in unit maintenance sections. It will interface with both the SAMS-1 and SARSS-1 in the FSB maintenance company.

COMMAND POST

The primary C2 facility in the FSB is the command post. The brigade rear CP colocates with the FSB CP. Together they plan and coordinate the logistics support of the brigade. They actively track the battle. The brigade rear CP must be ready in the event it becomes necessary to assume control. Both CPs must track the situation to anticipate support requirements.

The FSB commander identifies FSB CP functions that must be done on a routine basis to support operations and those which require command approval. He sets priorities and defines levels of authority in SOPS. Also defined in SOPS are staff responsibilities and interrelationships.

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CP personnel normally operate in a two-shift mode to permit continuous operations. Table 3-1 is an example of how the FSB CP positions could be organized into two shifts. This is only an example of minimum staffing. During intense activity, all available personnel may be required for short periods. However, maximum staffing cannot continue indefinitely. FSB commanders and staffs must consider fatigue and sleep loss that occur during combat. Fatigue caused by lack of sleep is a major source of battlefield stress. Leaders are particularly susceptible. Principles to minimize fatigue include the following

- Specific sleep plans must be developed and enforced.
- Plans should allow for at least 3 to 4 hours of sleep every 24 hours. Even at this rate, performance, especially decision making skills, will become degraded in several days.
- Priority of sleep must go to those whose decision making is critical to the mission.

In order for sleep plans to work, soldiers must be cross-trained. One technique which may help is to develop performance supports to simplify critical tasks. These include aids such as specific SOPS or checklists.

- Table **3-1.** *FSB CP Organized — in Two Shifts*

PEAK ACTIVITY	REDUCED ACTIVITY
Spt Ops off	S2/S3 Off
Ops Sgt	Intel Sgt
Bn Comm Ch	Swbd Op
Maint Off	Mech Maint Sgt
(Covered by OIC)	Spt Ops Sgt
NBC NCO	Ops Sgt (Meal Spin Spt Ops)
Spt Ops Typist	S2/S3 Typist

Site Selection

The FSB commander and S2/S3 in coordination with the brigade S4 select the location of the BSA which is approved by the brigade S3. (Considerations are discussed in Chapter 5.) Positioning of elements within the BSA is the responsibility of the FSB commander and is performed by the FSB S2/S3.

A key consideration in determining the location of the CP within the BSA is the ability of the site to provide for good communications with higher, lower, and adjacent units. Considerations must include capability to remote antennas and to use terrain to mask transmission. FM 24-1 has details. The CP should be near enough to the road network to allow relatively easy access. However, prominent terrain features and major road junctions should be avoided for security reasons.

When possible, the CP should be located in built-up areas. Barns, garages, and warehouses eliminate the need for extensive camouflage. Basements provide protection from enemy fires. Using basements or covering windows enhance noise and light discipline. Use of built-up areas also reduces infrared and electromagnetic signatures. However, commanders must also consider the risk of undue injury to the civilian populace or protected places when selecting the CP site. When use of a built-up area is not feasible, the CP should be located on the reverse slope to provide cover and concealment from both ground and air observation and fires. In addition, the ground must be firm enough to support vehicle traffic, have good drainage, and provide enough space to disperse vehicles.

Layout

The CP may be laid out in a number of different arrangements and still perform its functions effectively. Obviously, if it is located in a built-up area, the layout will have to conform to the structure of the available buildings. What follows here is one way to organize the CP in a field environment.

This sample CP is organized into a dual shelter configuration, as depicted in Figure 3-5. The CSS mission is managed in , the direct support operations van. The communications, intelligence, and operations missions are performed in the S2/S3 tent. To ensure the best possible communications and coordination, the brigade rear CP is colocated with the FSB CP.

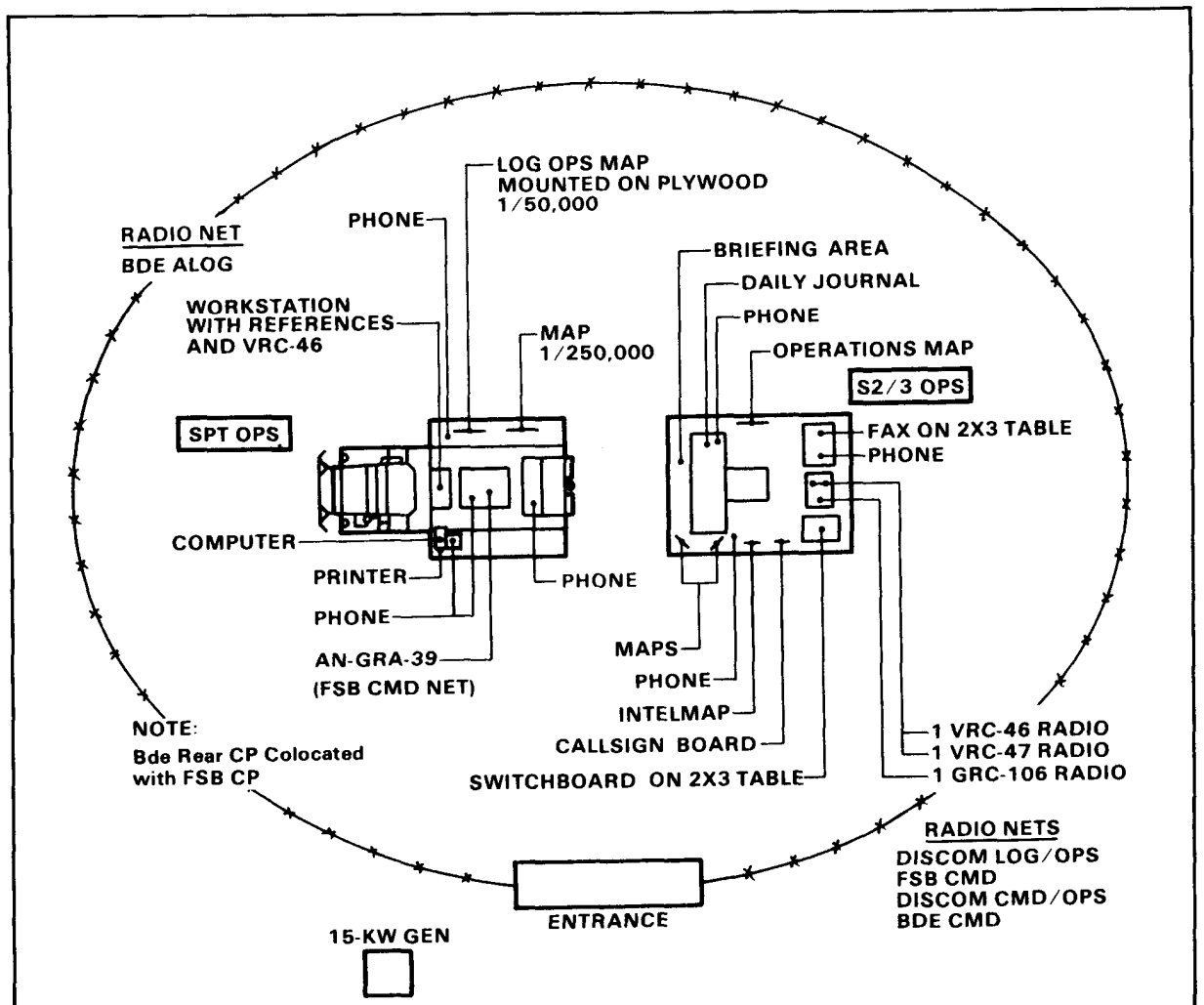


Figure 3-5. Sample FSB CP Layout

CHAPTER 4

Communications

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PRINCIPLES AND DEVELOPMENTS IN COMMUNICATIONS SYSTEMS

Communications are essential for gathering data, planning operations, performing C2 functions, and supervising performance. Effective management of FSB functions depends on adequate communications to keep abreast of changing situations and requirements.

The FSB relies on both its organic communication assets and the support of the division signal battalion. Due to the length of CSS transmissions and the high density of elements in the BSA, use of couriers and wire communications should be maximized to lessen the security risk of substantial radio use.

Communications equipment and systems in the corps and division are changing. The current area communications system described below will be replaced by the MSE system. Current FM (AN/VRC-12 series) radios and AM (AN/GRC-106) radios will be replaced by the single-channel ground and airborne radio subsystem and the improved high frequency radios.

These changes will affect the FSB in the area of connectivity to the area system. Under the current system, the forward support platoon of the signal battalion runs wire to the FSB switchboard. When MSE is deployed, the FSB will run wire from unit locations to the MSE interface point. The amount of wire the FSB headquarters and companies will need will be based on the dispersion requirements of the particular

situation. With the deployment of MSE, the wire-laying for all units will have to be covered by the unit SOP. It must cover who does it and in what priority. The actual communications means will remain essentially the same. The FSB will depend on couriers, combat net radios, and wire access to the signal-corps-provided area communications system. Automated hardware systerns will be subscribers to the area via wire access.

CURRENT AREA SYSTEM

The current area communications system is shown in Figure 4-1. The FSB headquarters and companies use their organic switchboards and telephones for internal wire communications. Wire nets are depicted in Figures 4-2 through 4-5. The FSB will normally tie into the area communications system (signal battalion multichannel system) at the signal battalion forward support platoon switchboard, The companies will tie into the FSB switchboard or directly into the signal battalion switchboard to gain access into the area system.

When the mobile subscriber equipment area system replaces the current area system, the current organic 2-wire switchboards and telephones will not be capable of entering the 4-wire digital system. The FSB and its companies will retain the two organic switchboards for BSA security and internal operations.

MOBILE SUBSCRIBER EQUIPMENT AREA COMMUNICATIONS SYSTEM

MSE is the area common user voice communications system within the corps. It is the backbone of the corps system and will be deployed from the corps rear boundary forward to the maneuver battalion main CP. The MSE system is comprised of five functional areas:

- Area coverage.
- Wire subscriber access.
- Subscriber terminals.
- Mobile subscriber access.
- System control.

The FBS will participate in the first four of above functional areas.

AREA COVERAGE

Area coverage means that MSE provides common user support to a geographic area, as opposed to dedicated support to a specific unit or customer. Figure 4-6 shows the deployment of area nodes across a corps area. These nodes are called node centers. They are depicted in Figure 4-7. They are under the control of the corps signal officer.

At division level, the signal battalion operates four of these nodes. Connected to these nodes, via line-of-sight radios, are small extension node switchboards and large extension node switchboards. The following switchboards are organic to the division signal battalion:

- 12 SEN (VI) switchboards capable of supporting 26 customers each.
- 4 SEN (V2) switchboards capable of supporting 41 customers each.
- LEN switchboard capable of supporting 176 customers.

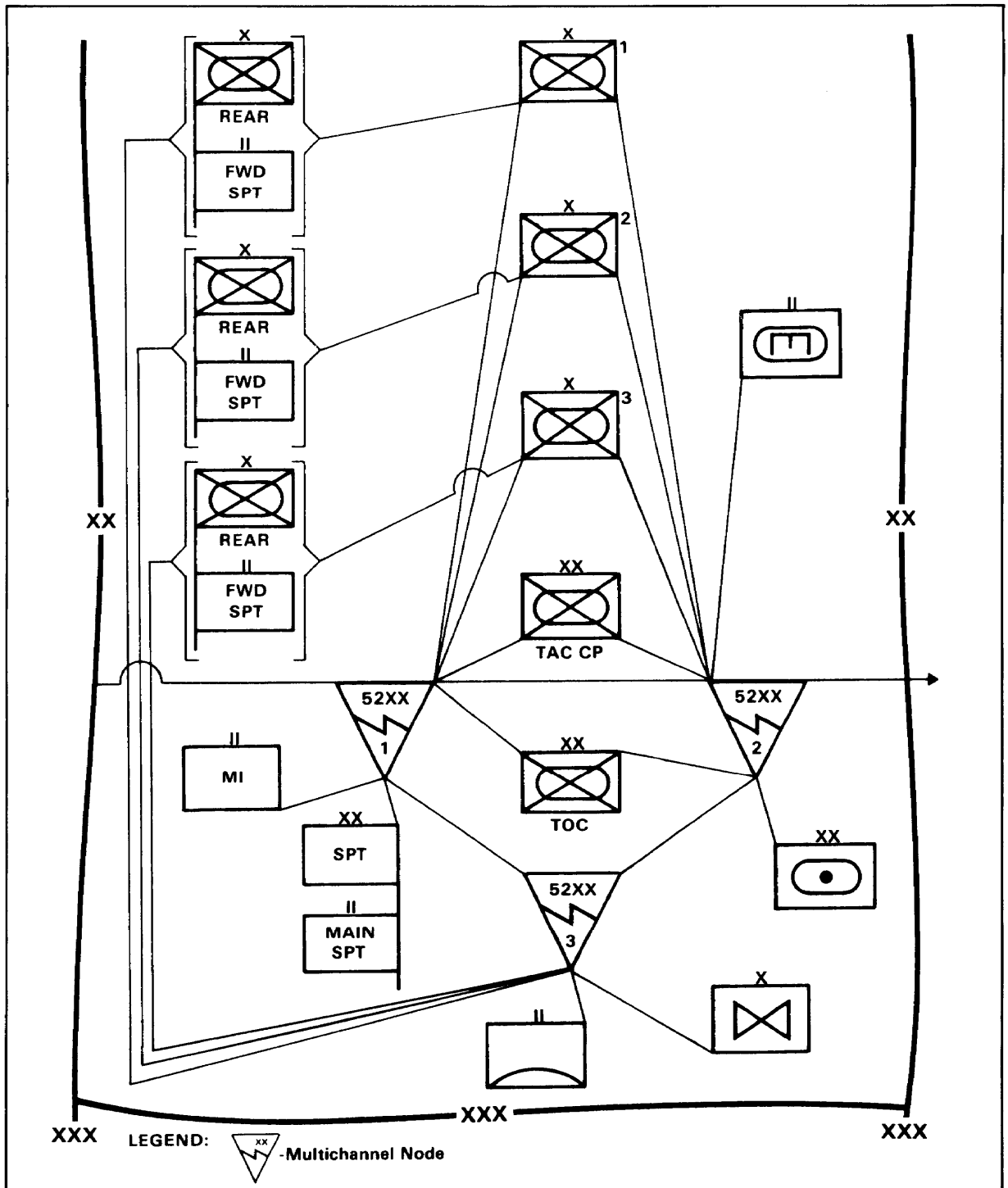


Figure 4-1. Sample Armored/Mechanized Infantry Division Multichannel Diagram (Current Area System)

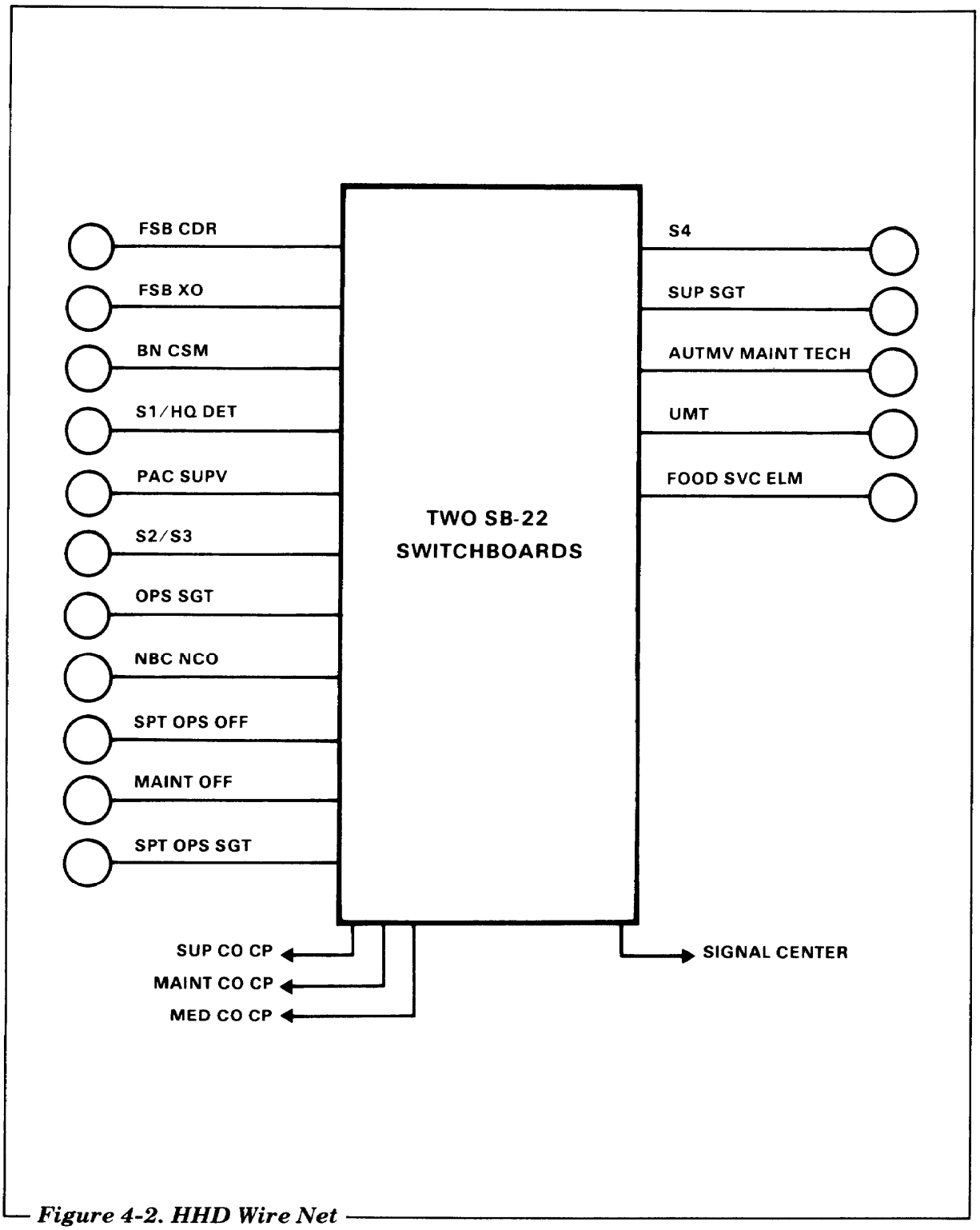


Figure 4-2. HHD Wire Net

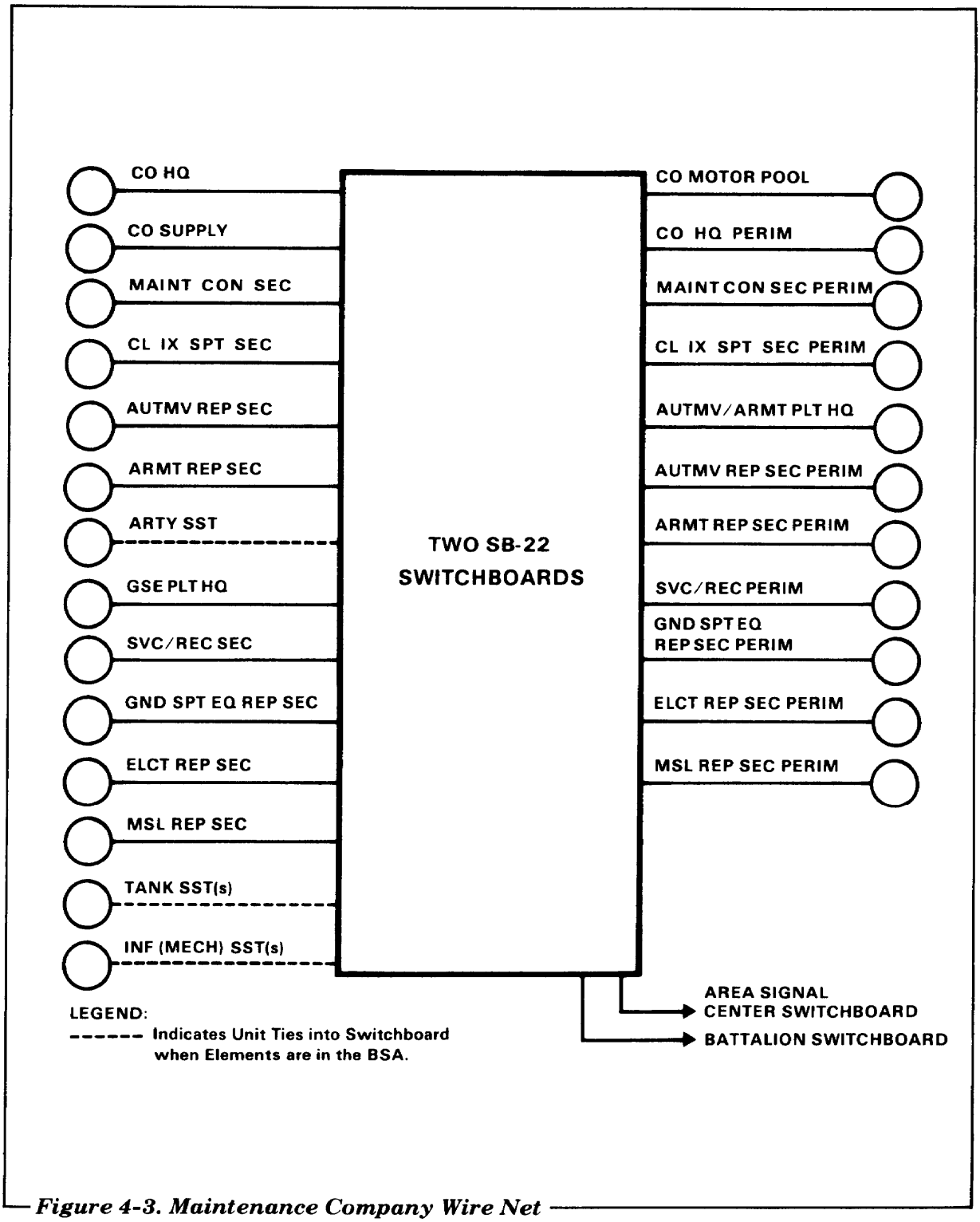


Figure 4-3. Maintenance Company Wire Net

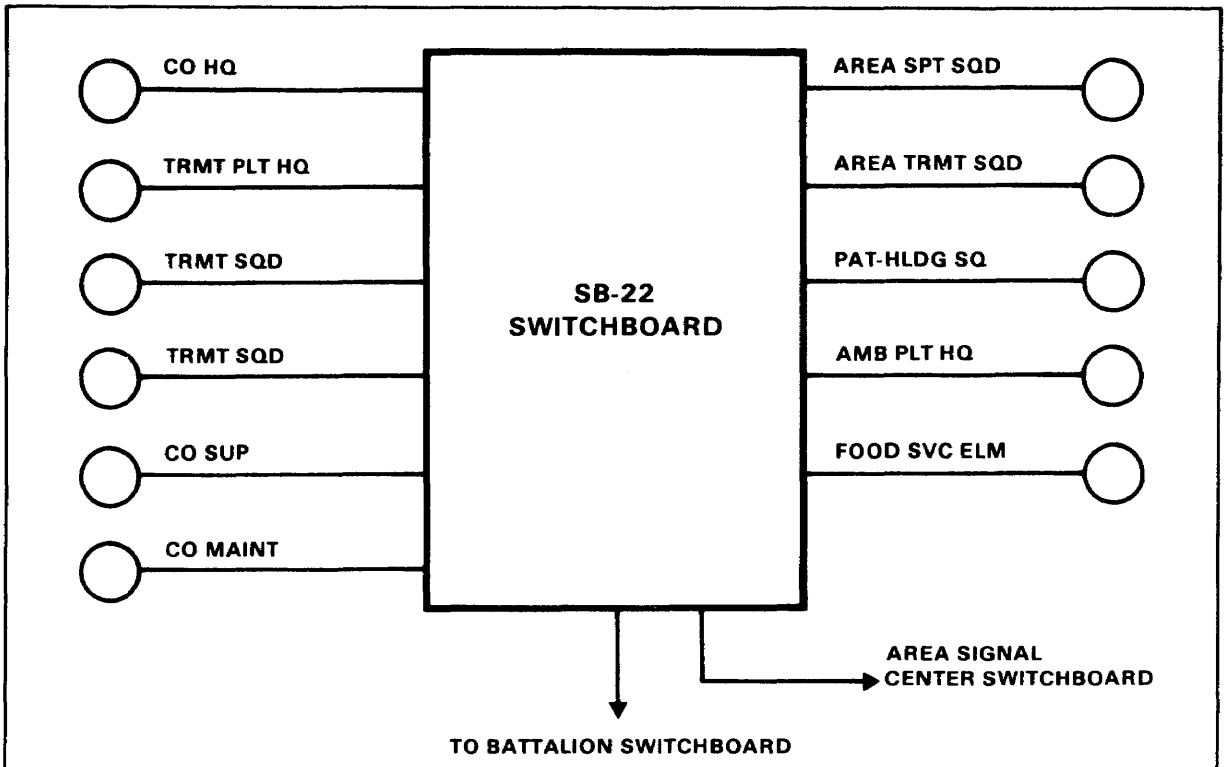


Figure 4-4. Medical Company Wire Net

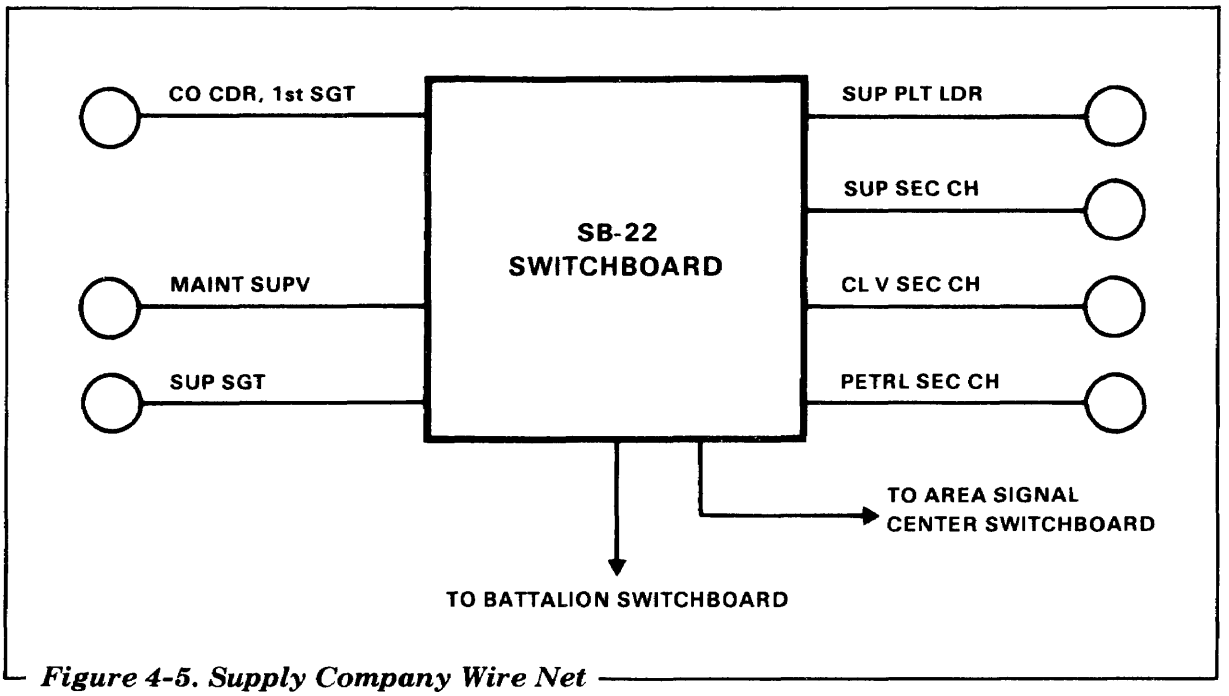


Figure 4-5. Supply Company Wire Net

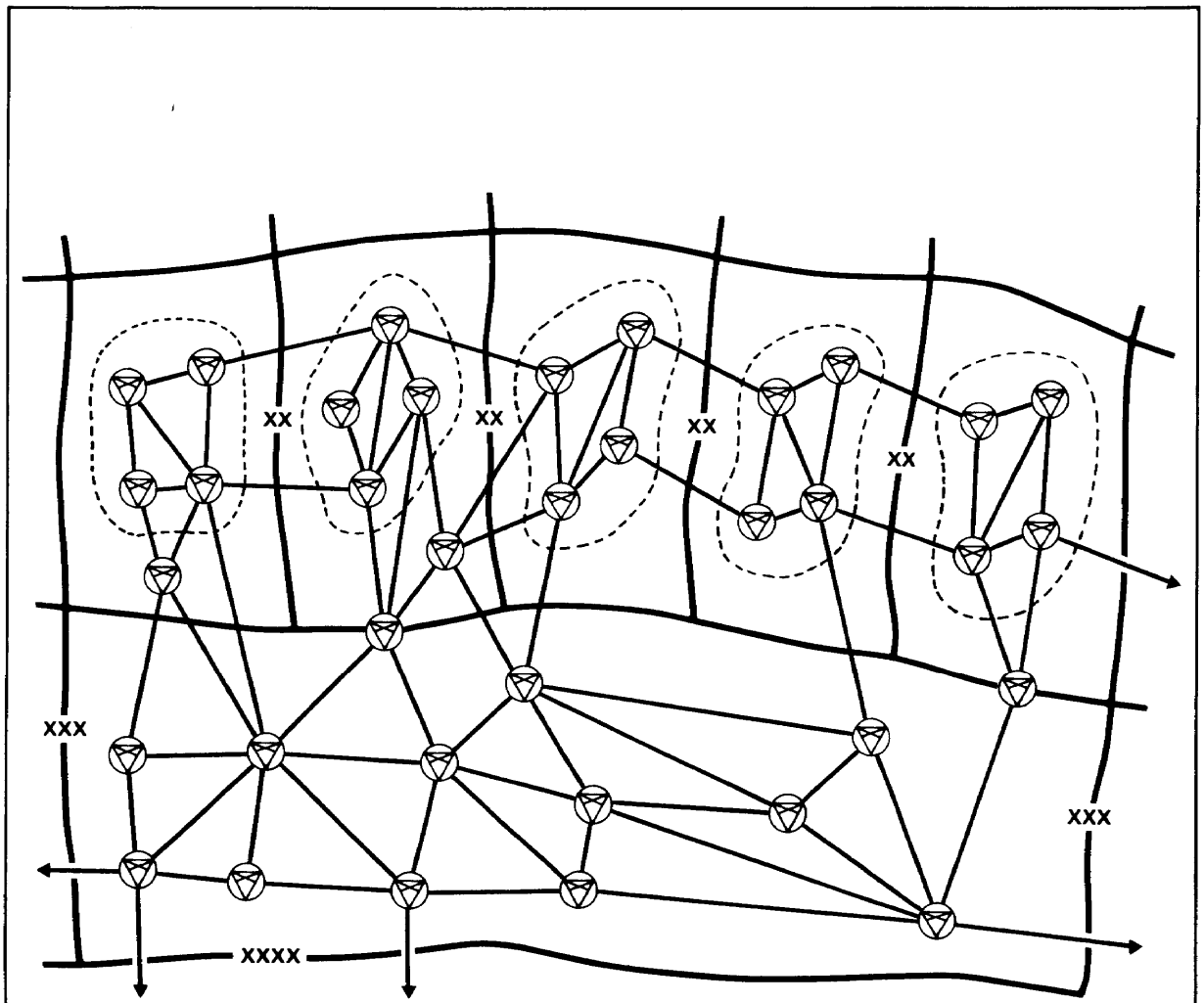


Figure 4-6. Representative Deployment of Area Nodes (MSE)

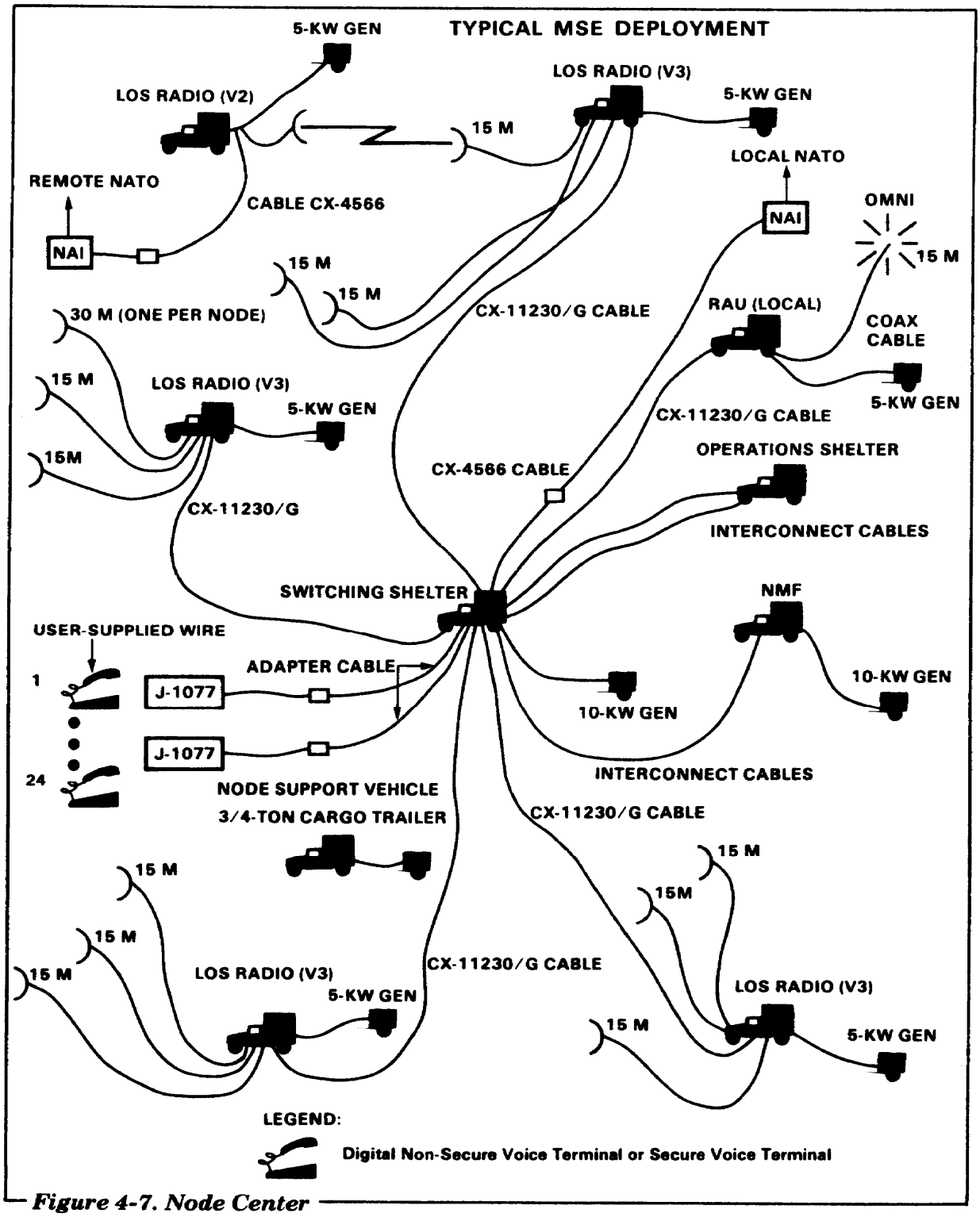


Figure 4-7. Node Center

A typical deployment of switchboards within the division is shown in Figure 4-8, (Tactical dispersion requirements require the FSB to tie into a SEN.) Figure 4-8 is only one approach. The location of switchboards will be determined by the G3 based on the recommendation of the division C-E officer. The C-E officer considers the commander's intent, customer requirements, and other factors of METT-T. Switchboard location cannot be consistently related to specific units.

WIRE SUBSCRIBER ACCESS

Wire subscriber access points will provide the entry points (interface) between fixed subscriber terminal equipment owned and operated by users and the MSE area system operated by signal units.

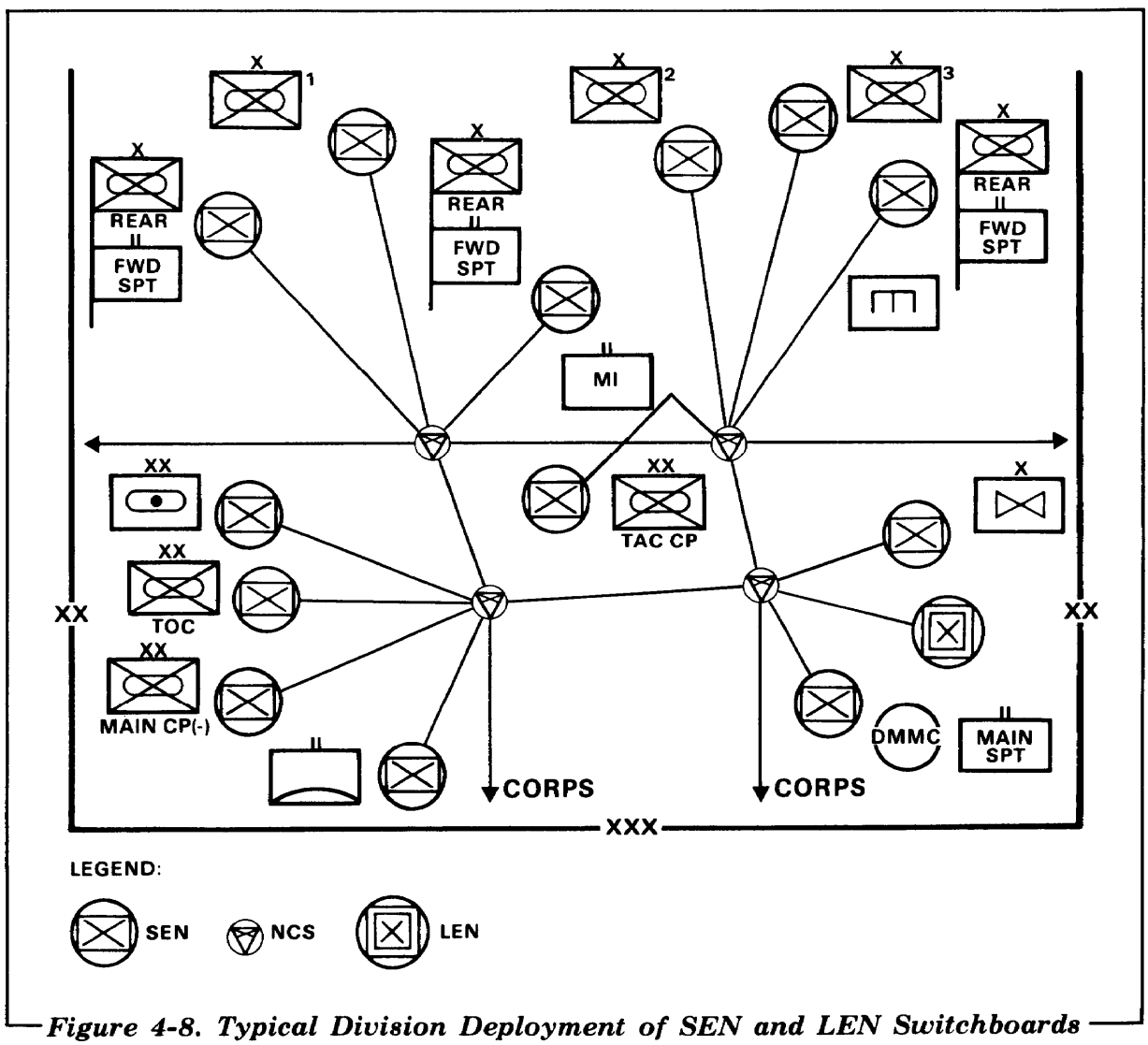


Figure 4-8. Typical Division Deployment of SEN and LEN Switchboards

Figures 4-9 through 4-11 show the MSE switchboard configurations through which the FSB may tie into the area system. The two types of interface equipment are—

- The signal distribution panel (junction box) J-1077. Each panel provides up to 13 subscriber access points.
- Remote multiplexer combiners which provide access for eight subscriber access points.

Normally the FSB will interface through the panel. In either case, the FSB is responsible for installing and operating fixed subscriber terminal instruments. It must also install and maintain the WF 16 field wire from the instruments to the interface points. WF 16 wire consists of two pairs of wire. One is olive drab and the other brown. The olive drab pair has a ridge along the side for night identification.

SUBSCRIBER TERMINALS (FIXED)

Subscriber terminals used by the FSB are digital nonsecure voice telephones. These provide full duplex digital, 4-wire voice as well as a data port for interfacing the AN\UXC-7 facsimile, the TACCS computer, and the unit-level computer, as depicted in Figure 4-12. They also provide the interface for the FSB to enter the ATCCS. Figure 4-13 portrays the assignment of DNVT, facsimile, ATCCS, and ULCs for the FSB. The DNVT ties into the area system through a panel or RMC.

MOBILE SUBSCRIBER TERMINAL

The MSE mobile subscriber terminal is the AN/VRC-97 mobile subscriber radiotelephone terminal. This MSRT, which consists of a very high frequency radio and a digital secure voice terminal, is a vehicle-mounted assembly. It interfaces with the MSE system through a radio access unit. The primary use of the MSRT is to provide mobile subscribers access to the MSE area network. Figure 4-14 is a typical MSRT interface into the area system. RAUs are deployed to maximize area coverage and MSRT concentrations. MSRTs can also operate in CPs to allow access to staff and functional personnel. Figure 4-14 represents assignment of MSRTs in the FSB, The MSRT in the supply company is located at the ATP. It is used by the DAO representative to coordinate class V requirements. The MSRT user will have a KY 68 telephone connected to the radio mounted on his vehicle. As long as the radio unit has line-of-sight contact with the RAU, it has connection into the area system. The operational planning range is 15 kilometers from any RAU.

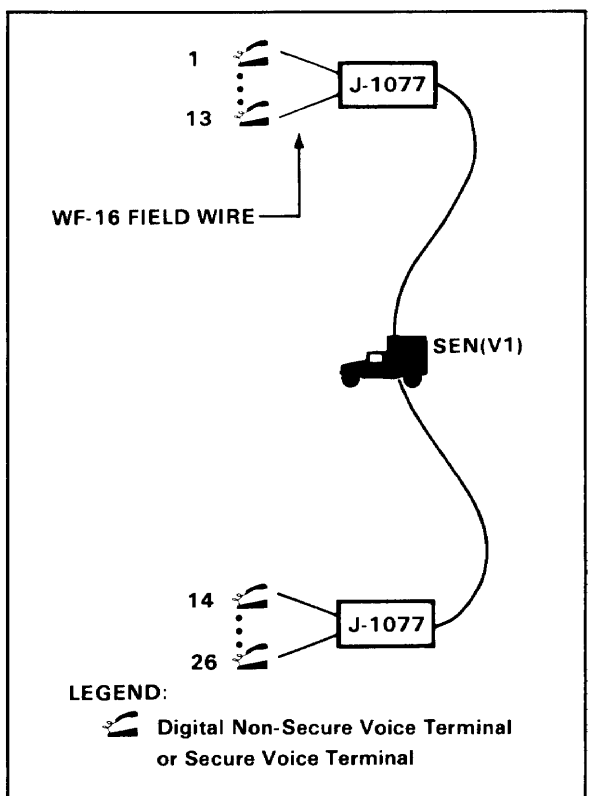


Figure 4-9. SEN Switchboard Interface (V1)

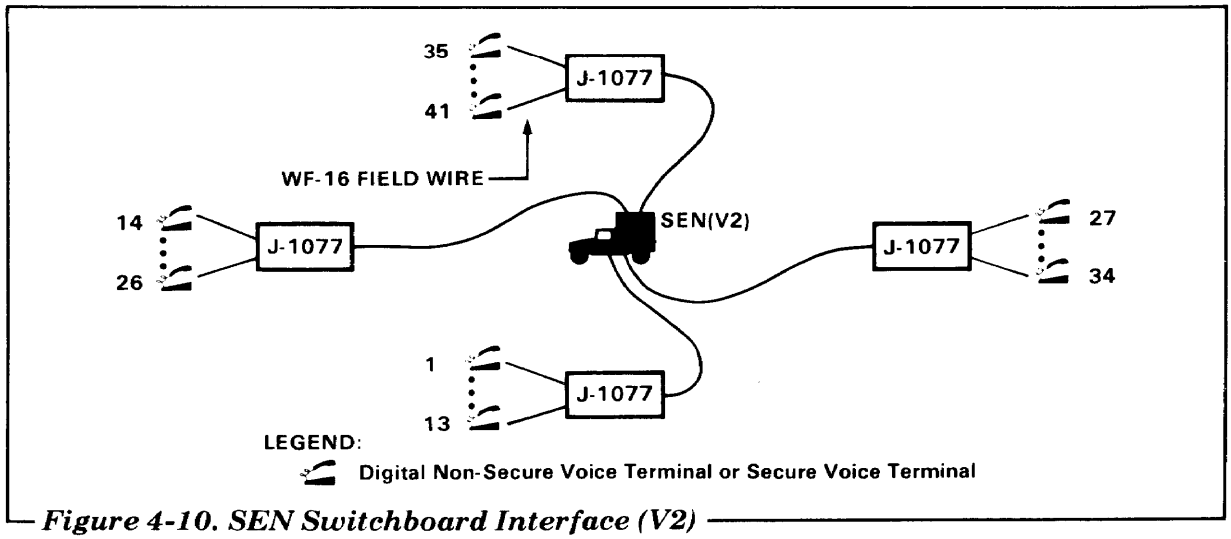


Figure 4-10. SEN Switchboard Interface (V2)

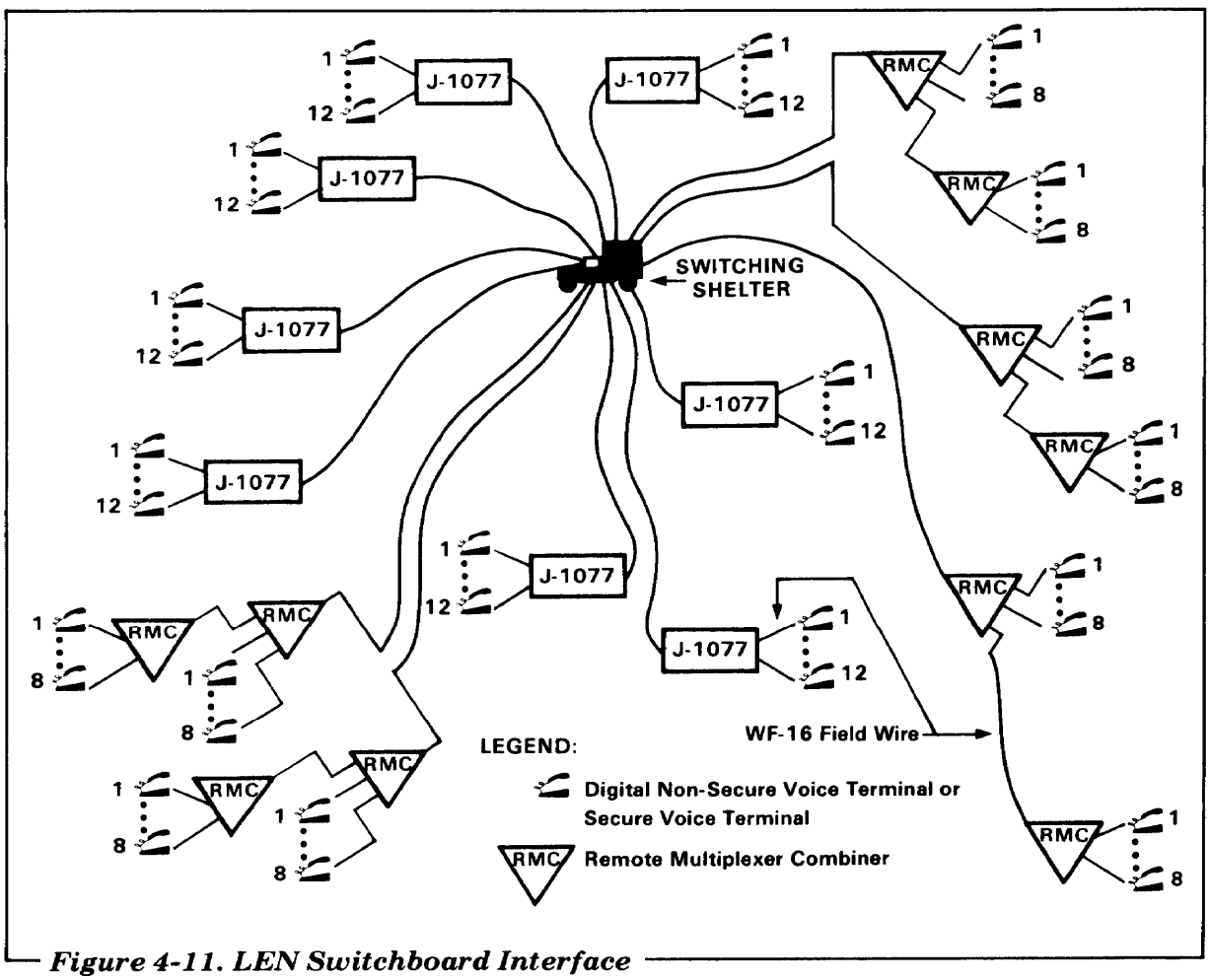
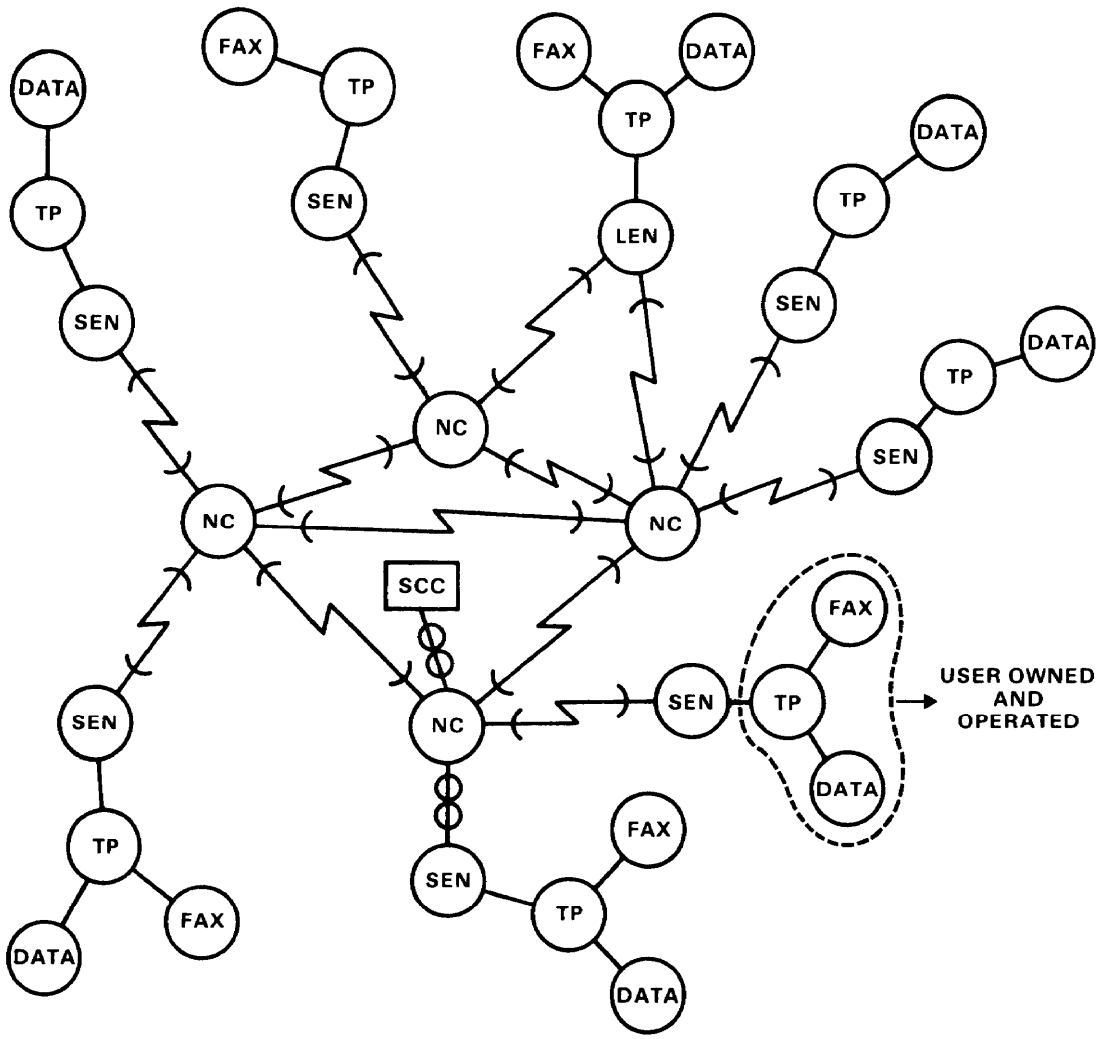


Figure 4-11. LEN Switchboard Interface



LEGEND:

SCC - System Control Center
NC - Node Center
LEN - Large Extension Node (Switchboard)
SEN - Small Extension Node (Switchboard)
TP - Digital Non-Secure Voice Telephone (DNVT-TA1035/U)
FAX - AN/UXC-7 Facsimile
DATA - Tactical Army CSS Computer System/Army Tactical C2 System/Unit Level Computer

Figure 4-12. Division Fixed Subscriber Terminals

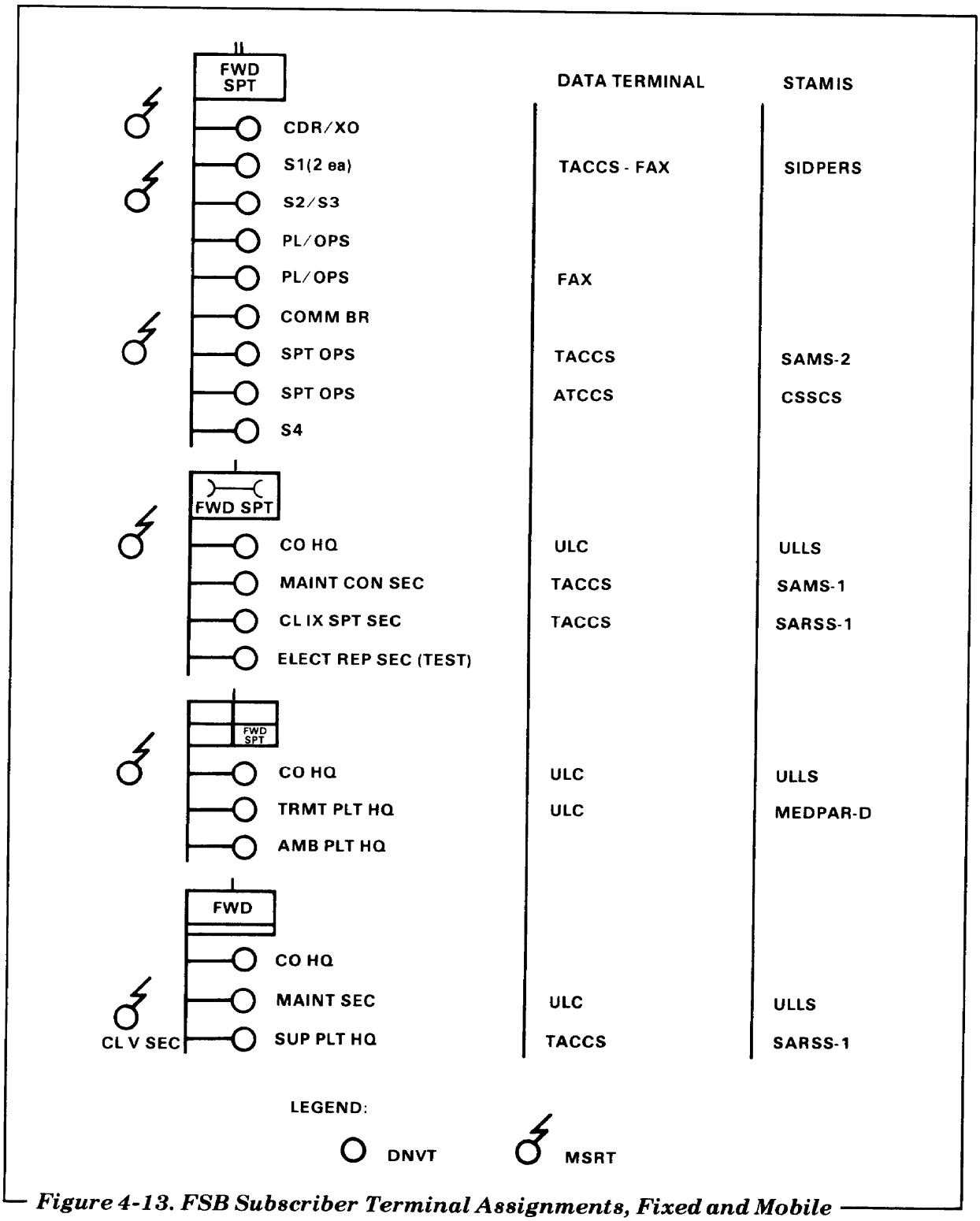


Figure 4-13. FSB Subscriber Terminal Assignments, Fixed and Mobile

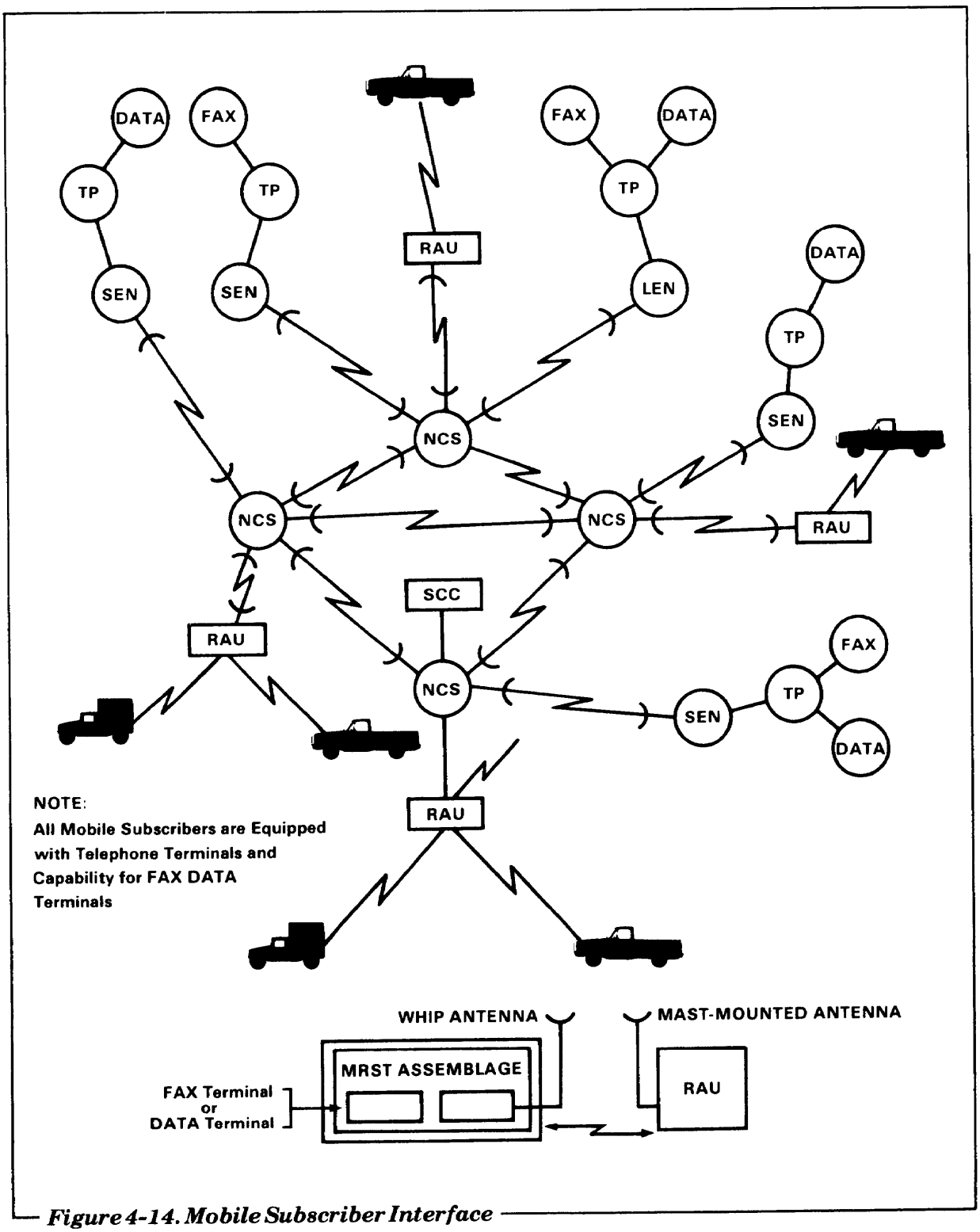


Figure 4-14. Mobile Subscriber Interface

COMBAT NET RADIO SYSTEM

The combat net radio structure is designed around three separate radio systems; each has different capabilities and transmission characteristics. The three systems are—

- Single-channel objective tactical terminal.
- Improved high frequency radio.
- Single-channel ground and airborne radio.

SCOTT is a stand-alone transportable tactical satellite communications terminal which will be transparent to the FSB. The other two systems, IHFR and SINCGARS, will provide a means of voice transmission of C2 information and a means for data transmission, which will be required if data transfer requirements cannot be met by the MSE system.

Current CNR equipment in the FSB consists of the AN/GRC-106 and the AN/VRC-12 series radios. These will be replaced by the AN/GRC-213 (IHFR) and SINCGARS series respectively. The AN/GRC-231 is a low-power manpack/vehicular radio. It interfaces with the other configurations of the IHFR system. SINCGARS is a new family of VHF-FM radios. These radios are designed for simple, quick operation using a 16-element keypad for push-button tuning. They are capable of short-range or long-range operation for voice or digital data communications. The planning range is 8 to 35 kilometers. They are capable of a single-channel operation for interface with the AN/VRC-12 series or other FM radios operating in a single-channel mode. They also operate in a jam-resistent, frequency-hopping mode which can be changed as needed.

FSB RADIO NETS

Diagrams for each net in the FSB are presented in this section. Each is presented first with the current equipment (AN/VRC-12 and GRC-106 radios) and then with the SINCGARS and IHFR radios. The second diagram for each net does not represent a simple, one-for-one replacement, old for new. Rather the diagram reflects the application of incremental change packages for SINCGARS and IHFR over a period of time. (The assignment of radio equipment to specific sections was influenced by a requirements validation review.)

FSB COMMAND/OPERATIONS NET

The principal radio net operated by the FSB headquarters is the FSB command/operations net (Figures 4-15 and 4-16). This is the net used to command and control the elements of the FSB, both from a command standpoint and from a CSS mission perspective. The net control station of this net is the S2/S3 site in the CP. In addition, headquarters personnel/sections monitor the following nets:

- FSB commander—DISCOM command/operations net.
- Support operations section—brigade admin/log net.
  (remote to FSB command net radio in S2/S3 tent with AN-GRA 39).
- S2/S3—DISCOM command/operations net.
  —brigade command net.
  —FSB command net.
  —DISCOM log ops net (AM-HF).

Collocation of the FSB CP and the brigade rear CP may help to overcome perpetual shortfalls in radios. This collocation may allow the support operations section access to

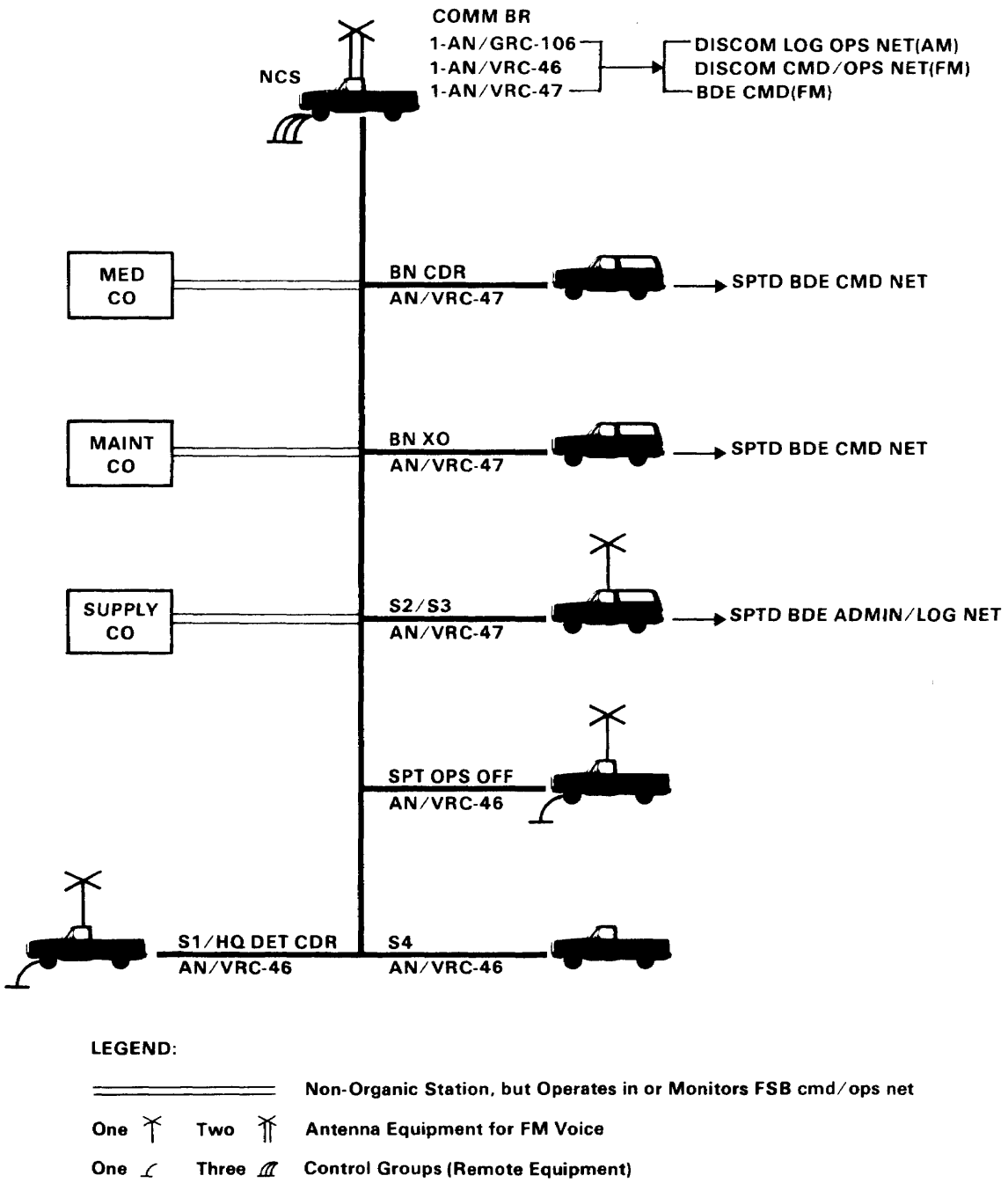


Figure 4-15. FSB Command/Operations Net, FM (AN/VRC-12 Series)

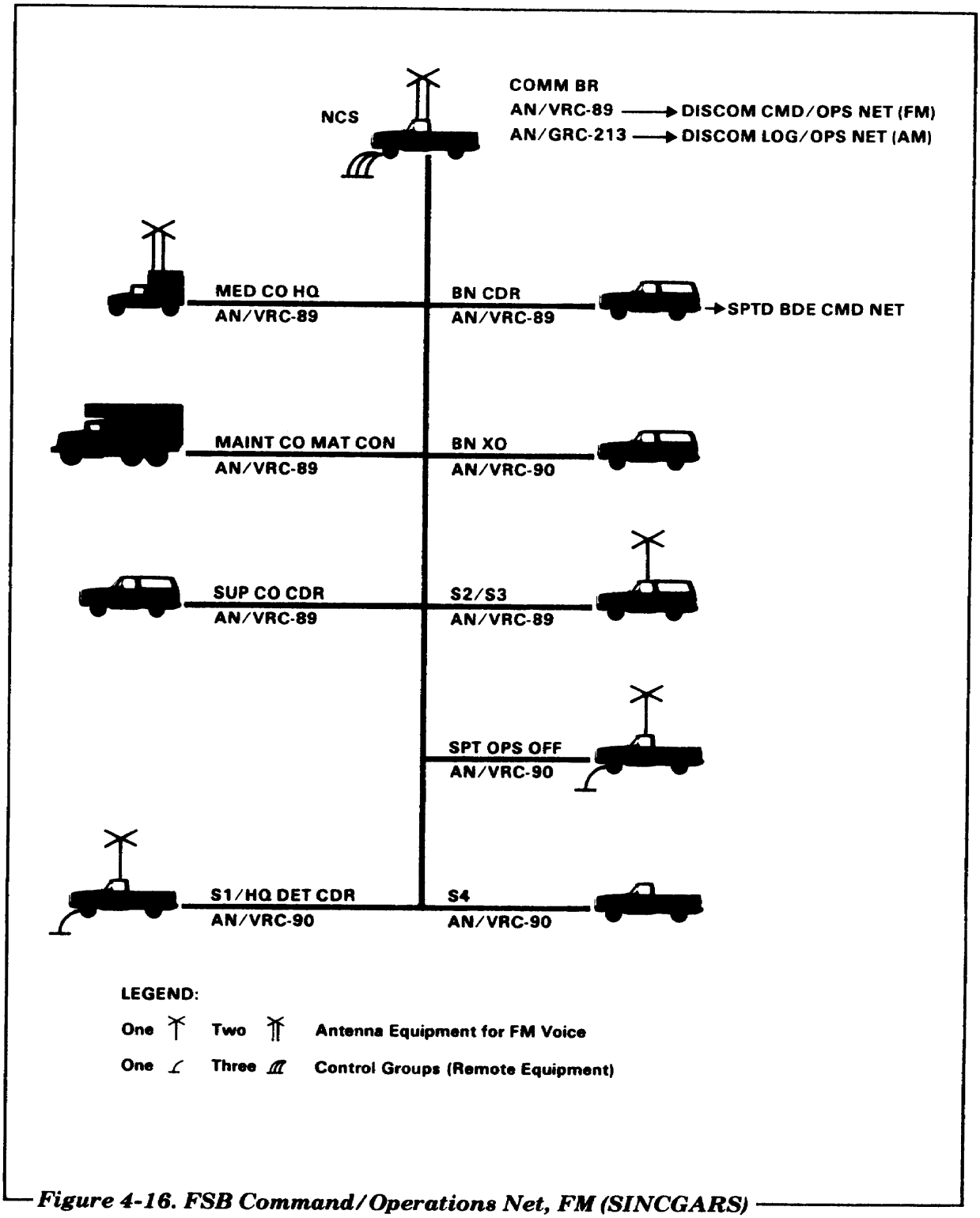


Figure 4-16. FSB Command/Operations Net, FM (SINCGARS)

the brigade administrative/logistics net and the S2/S3 section access to the brigade command net.

SUPPLY COMPANY COMMAND NET

This command net provides C2 for the supply platoon headquarters and the petroleum and ATP sections. In the petroleum section, every third tanker unit has a radio for control purposes, In the ATP, the section chief and each forklift have radios to expedite the transloading of class V to units. Due to the isolation of the ATP and the requirement for corps management of class V, additional CNR capability is located at the ATP. The DAO representative at the ATP will have an FM radio (AN/VRC-46 or AN\ VRC-90) to coordinate the flow of class V with the DAO located at the DMMC. This radio operates in the DMMC net. When MSE is deployed, an MSRT will also be located at the ATP, thus providing access to the corps class V structure. The supply company net is shown in Figures 4-17 and 4-18.

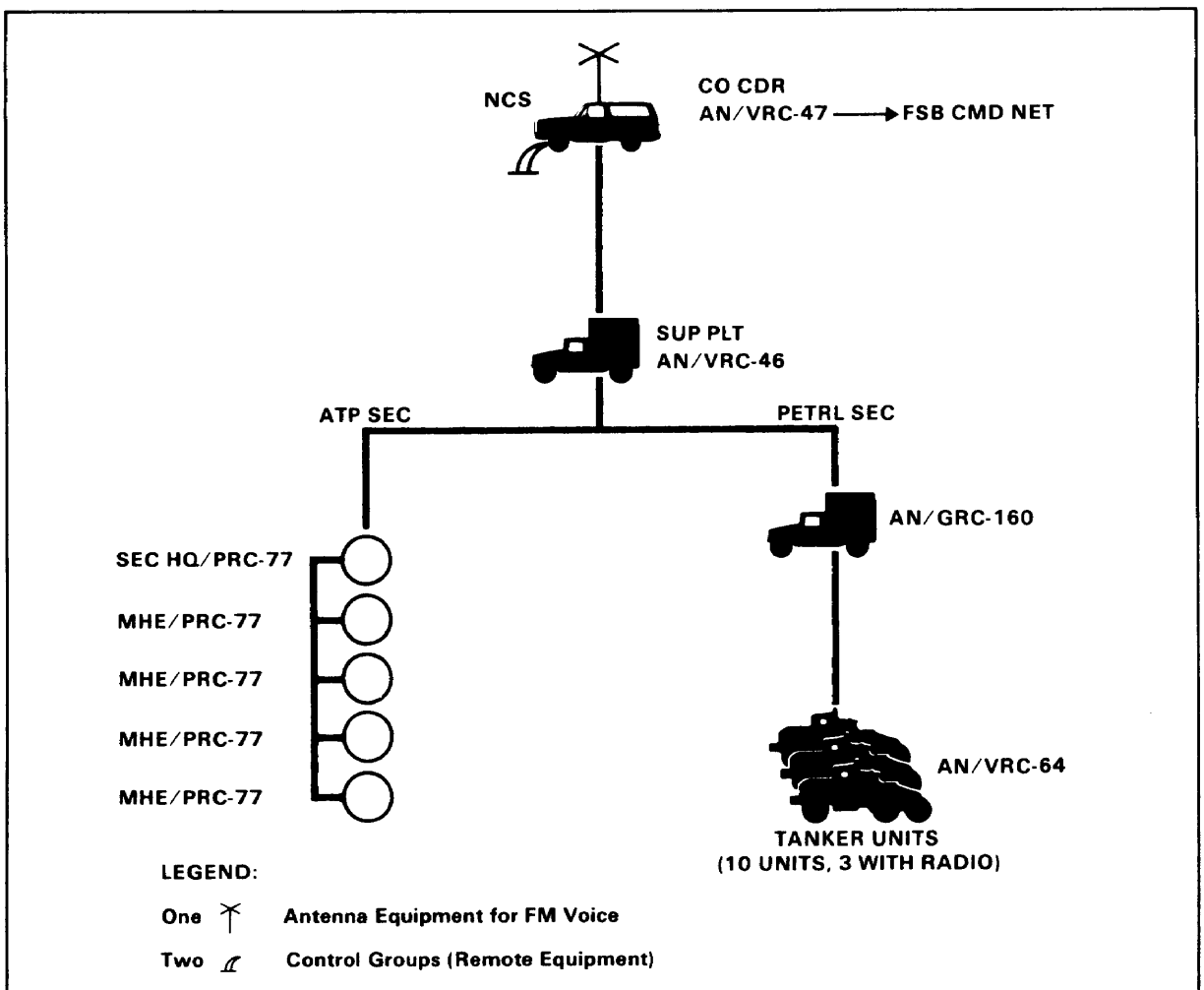


Figure 4-17. Supply Company Command Net, FM (AN/VRC-12 Series)

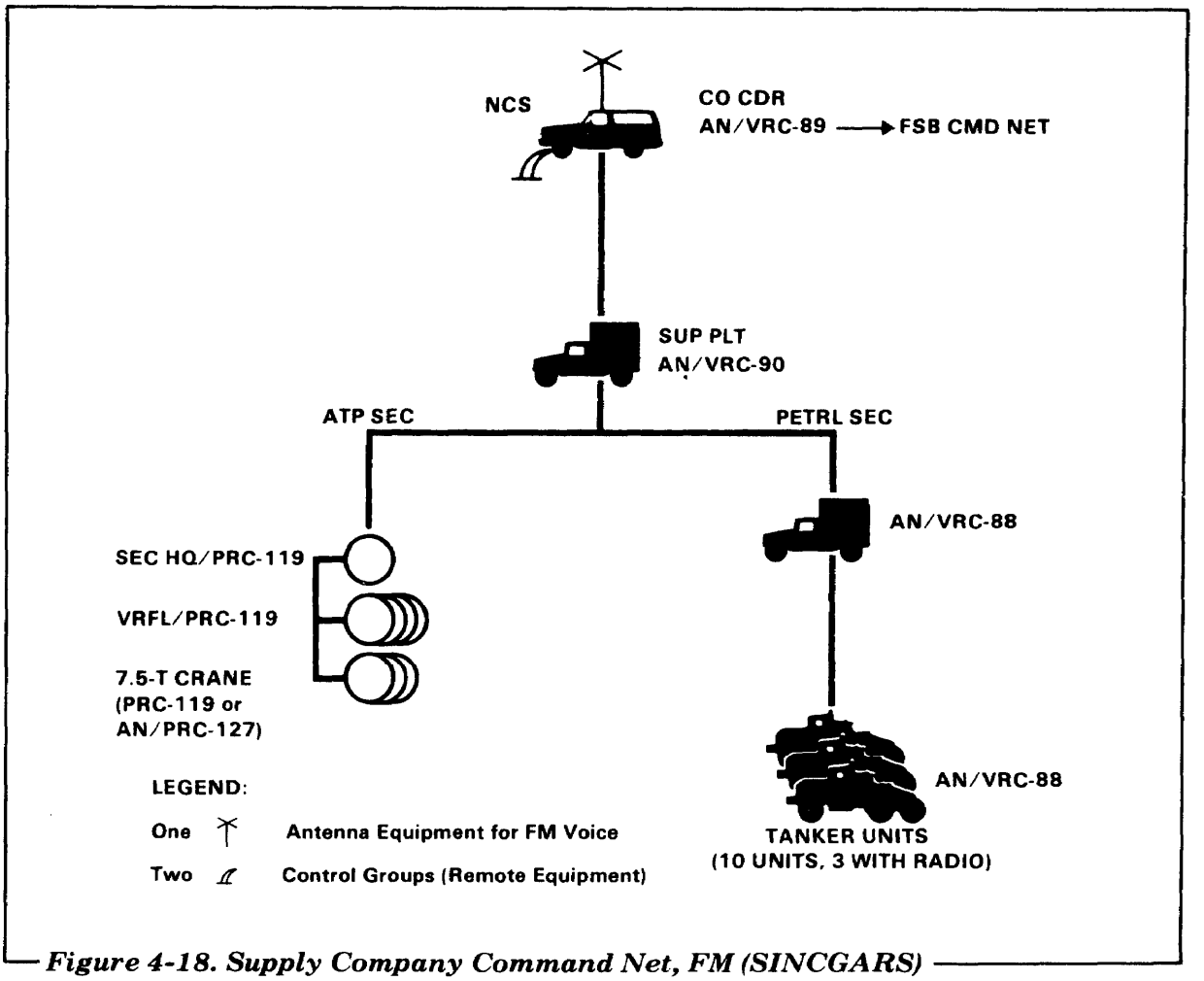


Figure 4-18. Supply Company Command Net, FM (SINCGARS)

MAINTENANCE COMPANY COMMAND NET

The maintenance company net (Figures 4-19 and 4-20) provides C2 for its maintenance elements which operate throughout the brigade area. Close coordination of customer radio frequencies is required by elements of this net to meet on customer nets for coordination purposes.

MEDICAL COMPANY COMMAND NET–FM

The medical company net (Figures 4-21 and 4-22) provides C2 for medical treatment and evacuation throughout the brigade sector. Dual net capability is provided at platoon and squad level for coordination with supported units and medical air evacuation.

MEDICAL COMPANY OPERATIONS NET–AM VOICE

The medical operations net (Figures 4-23 and 4-24) provides long-range voice capability to tie division medical elements into the overall corps medical treatment and evacuation system.

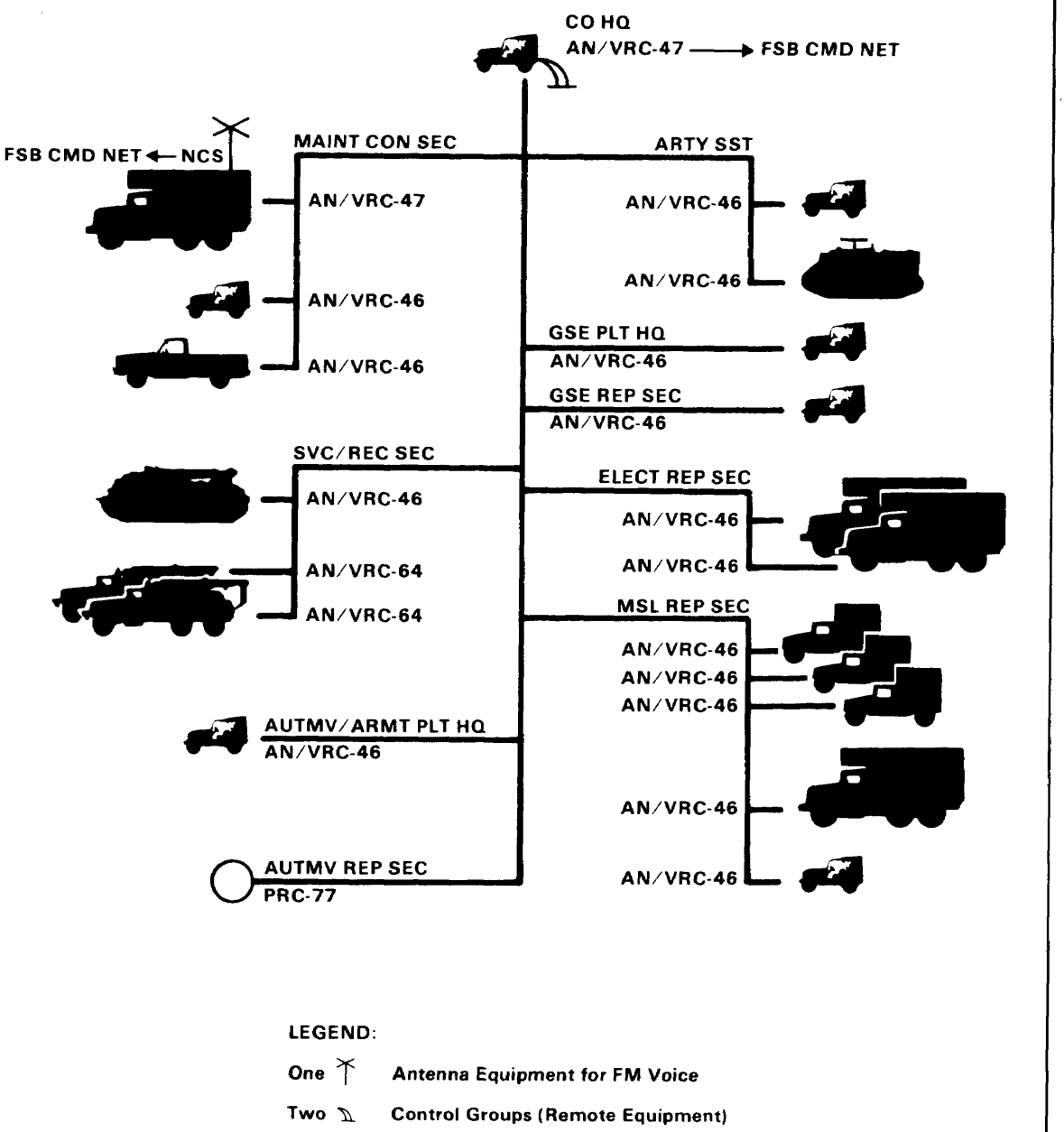


Figure 4-19. Maintenance Company Command Net, FM (AN/VRC-12 Series)

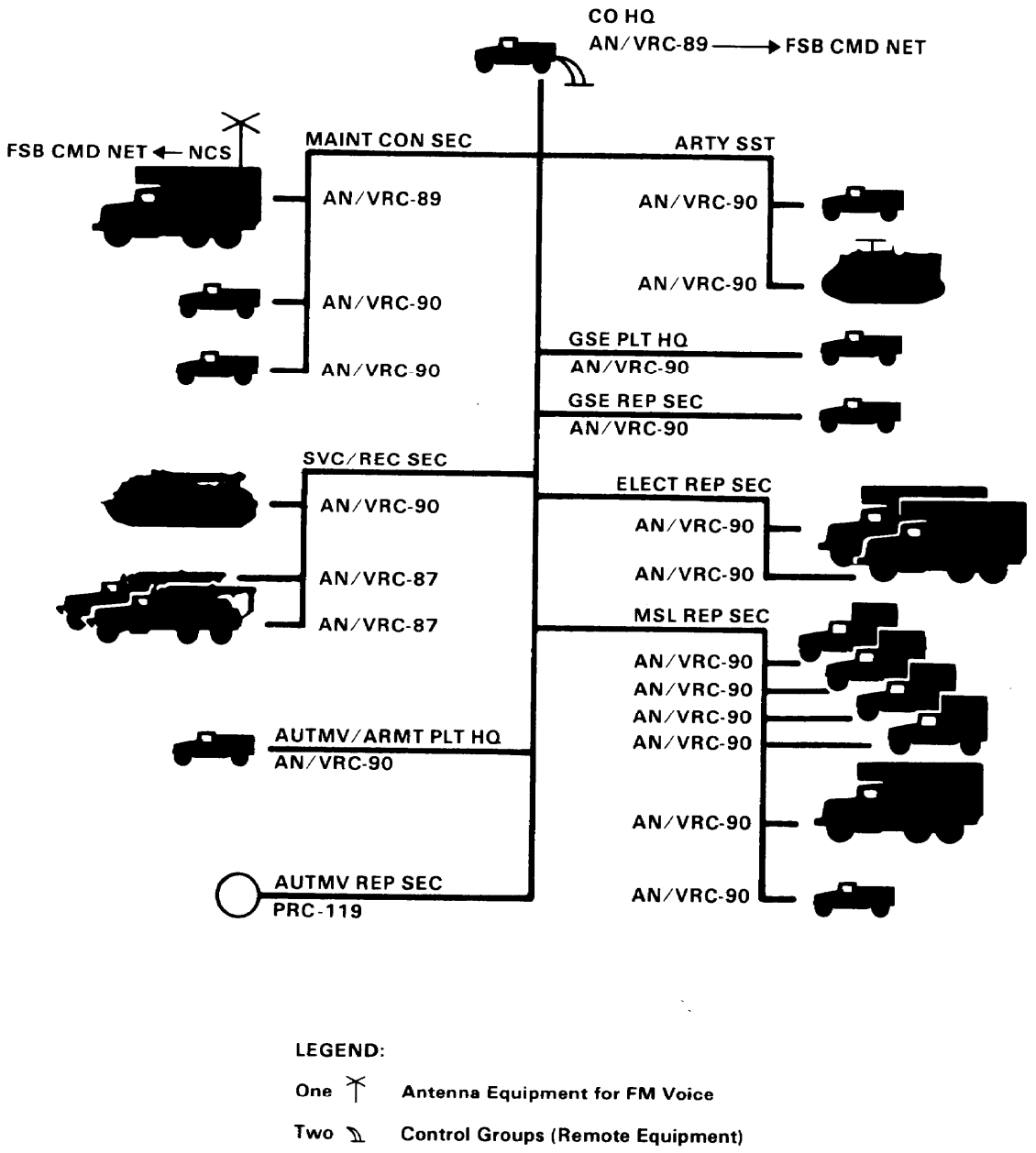


Figure 4-20. Maintenance Company Command Net, FM (SINCGARS)

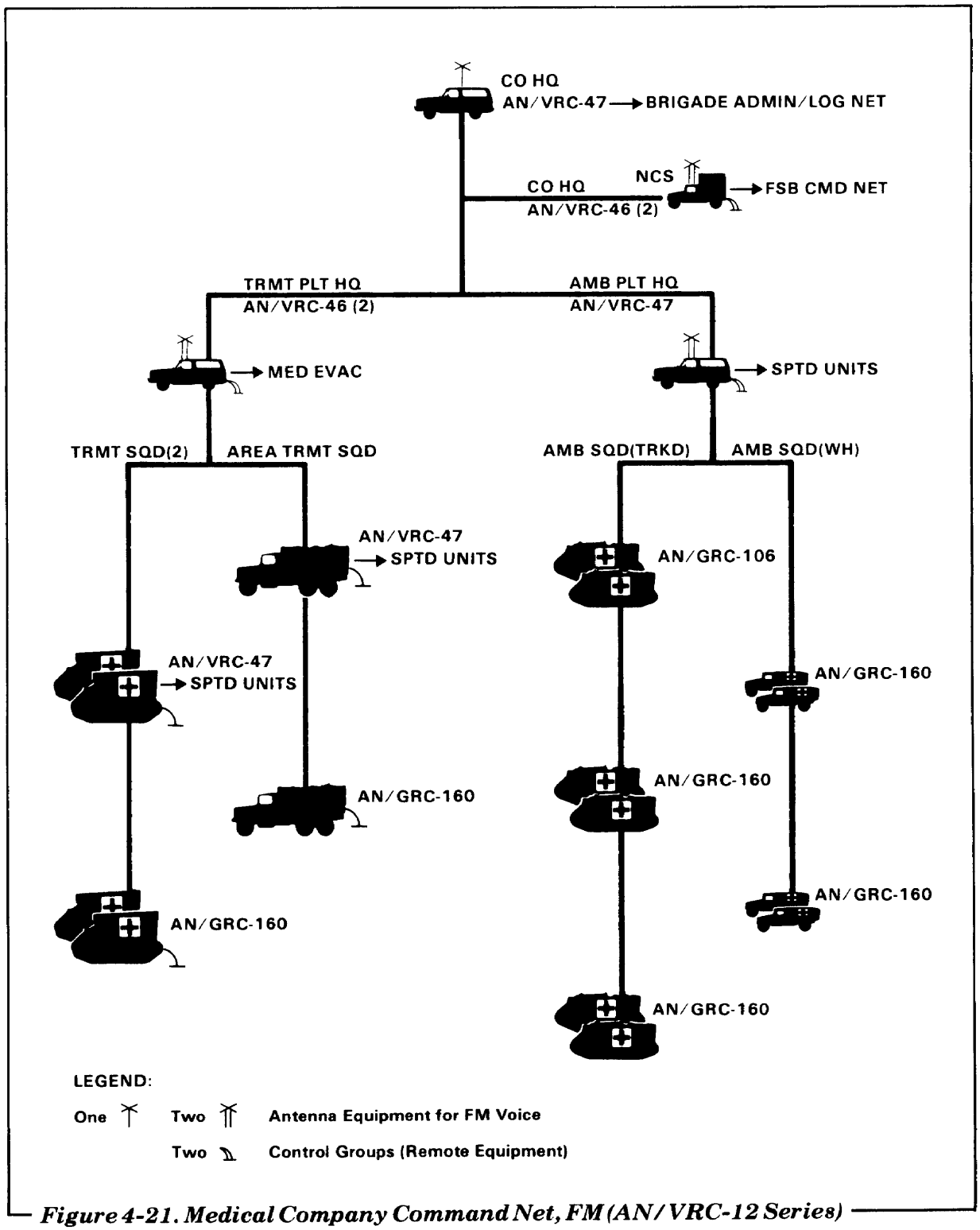


Figure 4-21. Medical Company Command Net, FM (AN/VRC-12 Series)

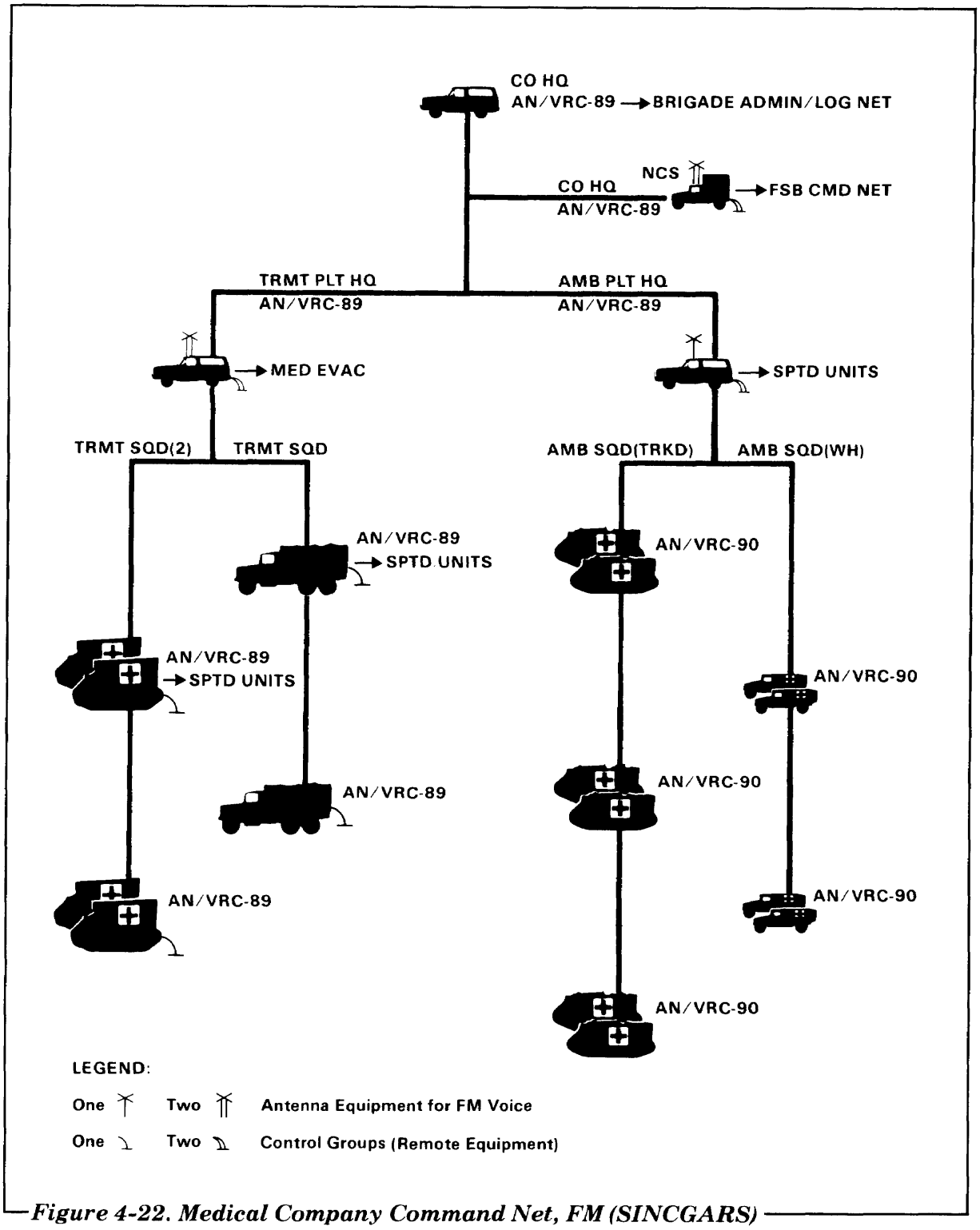


Figure 4-22. Medical Company Command Net, FM (SINCGARS)

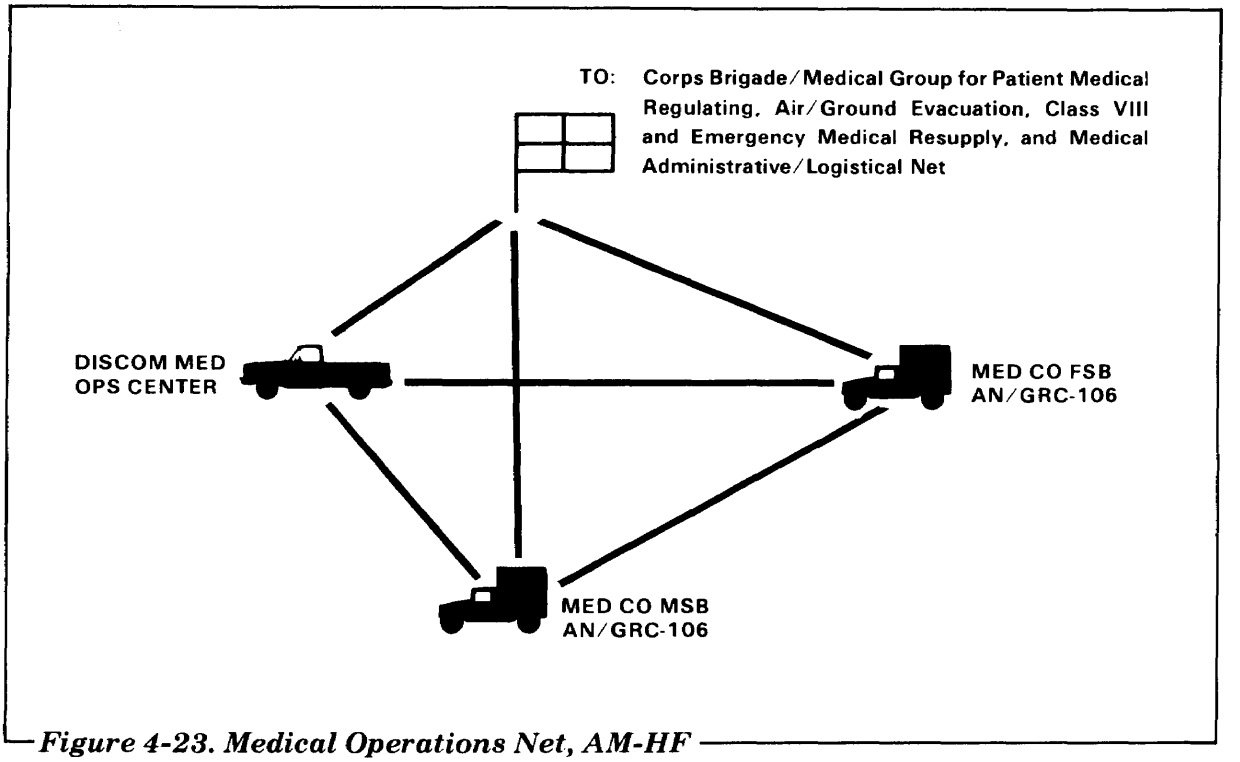


Figure 4-23. Medical Operations Net, AM-HF

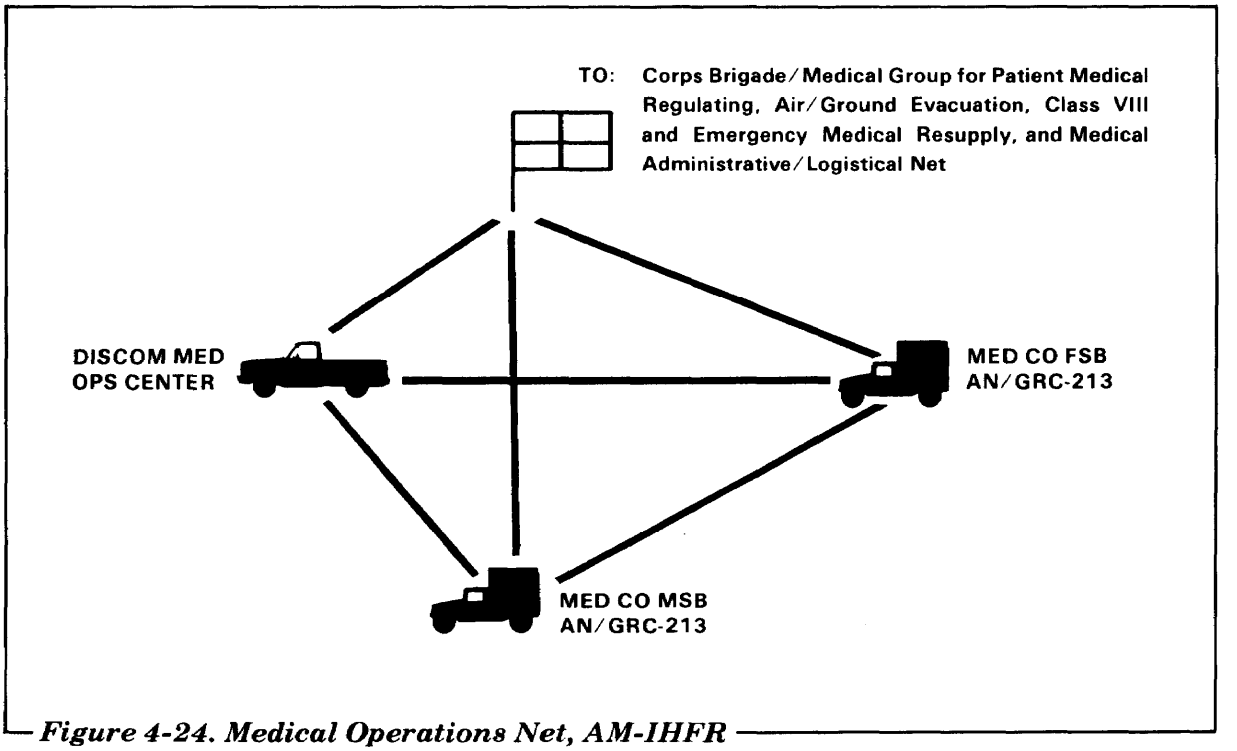


Figure 4-24. Medical Operations Net, AM-IHFR

SIGNAL SECURITY

As part of the overall operations security program, FSB elements must consistently practice signal security. A vital consideration is siting of transmitting antennas. Sites must enable communications while minimizing the enemy's ability to intercept and locate transmissions. Considerations include—

- Remote antennas away from CPs by at least 1 kilometer.
- Construct and use directional antennas.
- Use terrain features, such as hills, vegetation, and buildings, to mask transmissions.
- Disperse transmitters.

Other guidelines on signal security include the following:

- Maintain radio or radio listening silence, using radio only when absolutely necessary.
- Distribute codes on a need-to-know basis.
- Use only authorized call signs and brevity codes.
- Use wire and messengers whenever feasible.
- Use available secure voice/RATT devices.
- Maintain net discipline and control.
- Use authentication and encryption codes specified in the current SOI.
- Keep transmissions short (less than 20 seconds).
- Report all COMSEC discrepancies to the net control station.
- Use lowest transmitter power output consistent with good communications.
- Avoid significant surges in traffic on single-channel radio nets.

CHAPTER 5
BSA Security and Terrain Management

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RESPONSIBILITIES

The AirLand Battle will be fought throughout the depth of the battlefield. Operations in the rear include efforts to secure the force, neutralize or defeat enemy operationsin the rear, and secure freedom of action in the deep and close battles. The brigade commander is responsible for plans and operations throughout the brigade area of operations. He assigns tasks to subordinate and supporting commanders to accomplish all brigade missions. The brigade S3 includes detailed planning for the entire rear area as part of operational planning for offensive and defensive missions.

The FSB commander is responsible for BSA security and terrain management. His goals in this area include the following:

- Secure the BSA and facilities.
- Minimize enemy interference in C3.
- Minimize enemy interference in support operations.
- Ensure freedom of movement of friendly troops throughout the BSA. This will involve control of dislocated civilians which is coordinated with the division G5 through the DISCOM headquarters.
- Defeat Level I threats and respond appropriately to Level II and III threats as discussed in this chapter.
- Provide and coordinate area damage control.

In addition, the FSB must coordinate with the brigade S3 to ensure the BSA security plan is integrated into the plan for the entire rear area.

COMMAND AND CONTROL

The FSB commander is responsible for BSA security. As such he has command and control of all elements in the BSA for defense and positioning. Normally, the BSA is a base cluster with the FSB commander as the base cluster commander. The major elements in the BSA become unit bases. The senior individual in each base is the base commander. The FSB SOP will cover as many defense procedures as possible. Each base will be given specific responsibilities in the OPORD. Guidance for these responsibilities is given in this chapter.

In addition, all ground units entering the brigade area must report to the brigade rear CP and the FSB CP to coordinate routes, terrain, communications, and CSS. The rear CP will contact the main command post to confirm the operational aspects of the coordination.

The S2/S3 section of the FSB CPis the base cluster operations center. The FSB CP is colocated with the brigade rear CP within the BSA defensive perimeter. Alternate BCOCs should also be designated. Possibilities include the FSB company CPs and maneuver battalion field trains. In urban terrain, the FSB S2/S3 may have to establish subordinate base clusters and BCOCs within the BSA. One of these may be designated the alternate BCOC.

Each base will send a representative to the BCOC staff meetings. In addition, the BCOC will issue a situation report on a regular basis, twice daily if possible. The report will provide intelligence updates, reporting requirements, and impending BSA movement orders.

COMMUNICATIONS

Communications for BSA security will be conducted by wire, radio, signals, and personal contact. The primary means will be wire. Each base will be required to establish a wire linkup to the BCOC. The BCOC will operate a switchboard 24 hours a day. Other elements located in the BSA are responsible for laying wire from their CPs to the BCOC. The ADA and field artillery units in the BSA will have direct wire communications with the BCOC to provide early warning of enemy aircraft and to facilitate calls for fire. A sample wire net is shown in Figure 5-1.

Ideally, the FSB would also operate a separate rear operations radio net. However, availability of radios is not likely to permit this. Therefore, if wire communications are lost, units will monitor the FSB command net which will serve as the BCOC radio net. If communications by these means are lost, the tenant activities are responsible for sending a messenger to the BCOC to provide coordination.

In addition, units in the BSA cannot rely on wire and FM communications to relay alert status. Too much time would pass before every soldier received the message. The FSB should establish readily recognizable signals that are easy to initiate. For example, the warning for an NBC attack could be a pyrotechnic signal which could be relayed quickly with voice, hand and arm, or horn

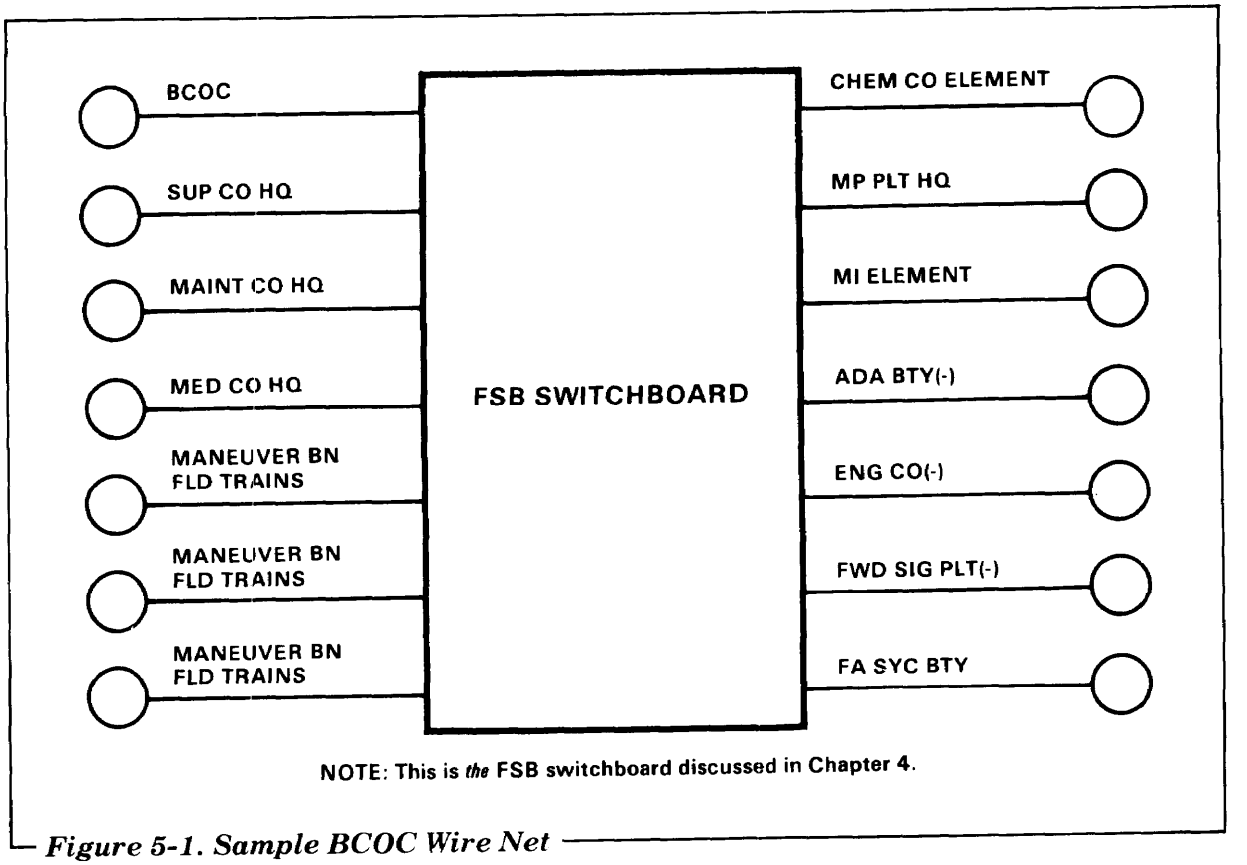


Figure 5-1. Sample BCOC Wire Net

signals. Similar signals should be specified in the SOP for air and ground attacks or to change frequencies. Detailed information and instructions would follow by radio, wire, or messenger. The all-clear signal would only be passed via command channels.

INTELLIGENCE

Like all other Army forces, the FSB must perform IPB. The FSB's interest is twofold. First, the sustainment planning considerations described in Chapter 2 are based on the FSB's knowledge of the enemy (for example, his projected use of chemical munitions affects the FSB's stockage of MOPP gear), the weather (fog may make aerial resupply impossible), and the terrain (lack of adequate road nets may mandate evacuation by air). Related to but distinct from the support implications of IPB are the rear operations considerations. For BSA security, the FSB commander, along with his staff, must analyze the terrain and weather and integrate this information with knowledge of the enemy. This enables the commander to identify probable target areas and activities. He can then predict probable courses of action to plan security operations.

TERRAIN

The concept of OCOKA is used to analyze terrain, OCOKA refers to Observation and fields of fire, Concealment and cover, Obstacles, Key terrain, and Avenues of approach. The FSB commander will rely heavily on information from the brigade S2

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for terrain analysis. The division is supported by a direct support terrain team which provides information to the G2 for IPB. The G2 passes it to the brigades and DISCOM HQ.

Line of sight is required in the BSA for radios, ground and air observers' vision, air defense target acquisition, and fields of fire for the BSA's direct fire weapons.

Concealment is protection from air and ground observation. Cover is protection from effects of fire. These considerations are closely related to observation and fields of fire. The FSB S2/S3 must determine what possibilities the terrain offers to both friendly and enemy forces. This analysis is vital to elements in the BSA in view of the limited weapons available and numerous personnel and items of equipment in the area. In built-up areas, BSA elements are likely to occupy buildings to maximize cover and concealment. Buildings significantly reduce heat signature. However, this technique is not effective in all areas of the world. Planners must take into account the soundness of buildings, availability of basements, and adequacy of the surrounding road net to accommodate traffic for CSS and self-defense operations.

Obstacles are natural and man-made features that stop, impede, or divert movement. Since one of the FSB's functions is to ensure freedom of movement for friendly forces in the rear, the FSB must be familiar with all existing obstacles and what the effects of removing, overcoming, or bypassing them would be. Weather effects on trafficability also act as obstacles.

Any feature that provides a tactical advantage is key terrain. Whether a particular feature is key or not varies with the tactical situation. However, features which may be key terrain features include bridges, fording sites, high ground, choke points, and road junctions. Not only must BSA elements optimize use of these features when available, but also they must recognize the enemy will frequently concentrate its efforts on these areas.

Avenues of approach are ground and air routes by which a force may reach an objective or key terrain feature. Considerations for avenues of approach in the rear are their capabilities to support movement of CS and CSS elements with their supported units and to allow rapid enemy movement into our rear. Commanders must avoid obvious armor and helicopter avenues of approach.

WEATHER

Weather affects mobility and the functioning of virtually all items of equipment, as well as the performance of personnel. Terrain and weather are considered concurrently. Again, the FSB depends on the G2/S2 channels to pass weather analysis information from the division weather team. The five aspects of weather that affect planning are temperature and humidity, precipitation, wind, clouds, and visibility.

Very high temperatures cause heat injuries and increased engine wear and failure. Very low temperatures increase cold weather injuries, damage to engines and cooling systems, lubrication problems, and fuel requirements. Cooler temperatures and humidity cause fog.

Precipitation affects mobility, visibility, and effectiveness of personnel and equipment. It also affects the quality of some stored material. Snow, even in small amounts, reduces the effectiveness of mines. FSB planners should consider precipitation of more than 0.1 inch per hour or 2 inches in 12 hours critical. Six inches of snow acccumulation or drifts higher than 2 feet will have severe effects on mobility.

Wind usually favors the upwind force by blowing dust, smoke, sand, rain, or snow on the downwind force. It affects employment of NBC munitions, smoke, and conventional weapons.

Clouds affect air operations. This includes logistics air missions, but also our own close air support, as well as the enemy's ability to conduct airborne or air assault operations in the BSA.

Though poor visibility limits employment of airborne forces, agents and special purpose force operations often rely on it to reduce the effectiveness of our rear area security. Poor visibility hinders control and reduces effectiveness of reconnaissance, surveillance, and target acquisition.

THREAT EVALUATION

Threat evaluation is a detailed study of the enemy forces. It considers their organization, tactical doctrine, equipment, and support systems. The FSB's interest for security purposes is in rear area threat evaluation. The FSB S2/S3 prepares a doctrinal template to reflect the enemy's air assault, airborne, operational maneuver group, and special purpose force employment doctrine. Other rear area threats (insurgents, guerrillas, terrorists, agents, and potential civil unrest) cannot be depicted in a doctrinal template. For these threats, an unconventional warfare situation map and population status overlay are prepared. The situation map shows probable operating areas, headquarters, encampments, and movement routes for unconventional forces. The rear area population status overlay shows areas with a high potential for civil unrest or with concentrations of enemy sympathizers. The overlay also shows where psychological operations would and would not be effective.

THREAT INTEGRATION

Once the threat evaluation is complete, this information is integrated with weather and terrain factors to determine how the threat is likely to operate in our rear areas. Again, the brigade S2 will evaluate the threat and advise the brigade S3. He will perform threat integration for the entire rear area; the FSB commander must ensure threat integration for the BSA is coordinated with the brigade. Due to the limited resources available to the FSB commander to defeat the threat, he must identify specific areas of interest. These may include—

- Landing zones and drop zones.
- Key road junctions.
- Forest paths.
- Small groups of individuals attempting to move through or evade detection in the BSA.
- Areas with insurgency sites.
- Guerrilla/insurgency sites.
- Terrorist operating or headquarters areas.

Target areas of interest are also identified along high-speed avenues of approach into the BSA.

Detailed information on IPB is in FM 34-10.

SOURCES OF INFORMATION

The FSB's responsibility for BSA security makes it imperative that the FSB CP and brigade staff maintain a close relationship. Intelligence information possessed by the brigade with implications for BSA security must be passed to the FSB S2/S3. In addition, he receives information from DISCOM S2 channels. However, intelligence gathering should not be restricted to these sources.

Local authorities, dislocated civilians, and local civilians are valuable intelligence sources. Information may also be obtained from base commanders within the BSA, military police, truckers, customers, elements of the MI battalion in the BSA, and any other elements moving into the area. In addition, information should flow laterally as well as vertically. For instance, while medical company personnel must pass information like task force casualty estimates to the FSB S2/S3, they should also notify other FSB companies simultaneously whenever possible.

BSA LAYOUT

The elements located in the BSA vary with a number of factors. The FSB commander and staff will coordinate with the brigade S4 to determine who will be in the BSA. The list below is a representative example of division elements that could be expected to locate in the BSA:

- FSB CP.
- Brigade rear CP.
- FSB supply company CP.
- Class I point.
- Water point.
- Class III point.
- Class II, IV, and VII point.
- Ammunition transfer point.
- Salvage collection point.
- GRREG collection point.
- FSB maintenance company CP.
- Maintenance shops.
- Class IX point.
- FSB medical company CP.
- Medical clearing station.
- Class VIII point.
- Smoke platoon.
- Decontamination platoon.
- Reconnaissance squad.
- Military police platoon.
- EPW collection point.
- Military intelligence team.
- ADA battery (-).
- Engineer company/companies (-).
- Forward signal platoon (-).
- Field artillery battalion field trains.
- Maneuver battalion task force field
- Aviation elements.

In addition to these division units, the BSA may include a number of corps elements, such as nondivision maintenance teams, CEB teams, the field trains for a corps artillery battalion, air or ground medical evacuation elements, armored cavalry squadron, detachment of the finance support unit, or nondivision engineer units. Information on these may also be available on 'he division and brigade OPORDs.

Some of the BSA tenants can be expected to always locate in the BSA, for example, the brigade rear CP and the FSB company headquarters. Others may move in and out of the BSA depending on METT-T. Examples may be the division military intelligence elements and the decontamination platoon. In addition, the maneuver battalion task force field trains may not always be located in the BSA.

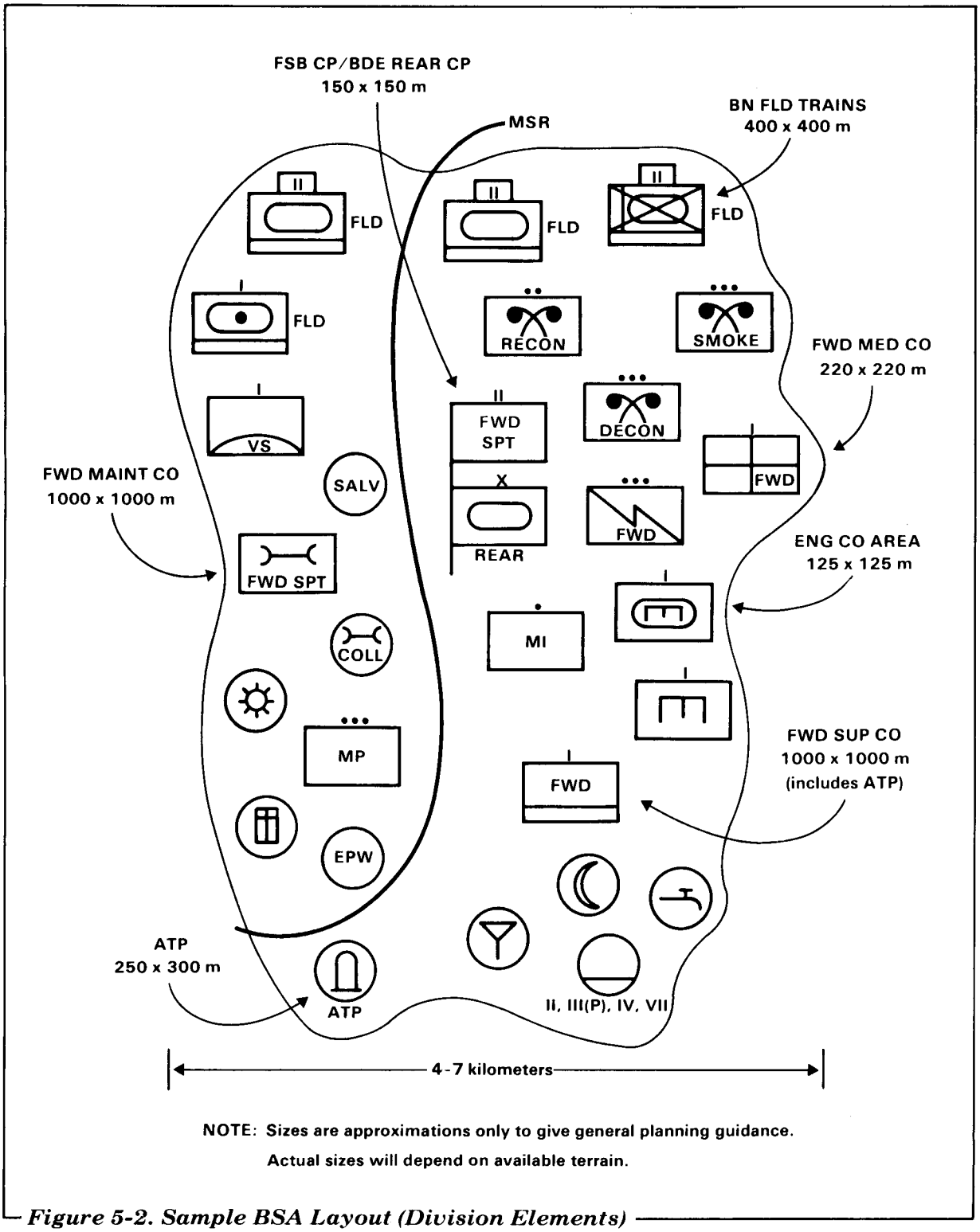
In some cases, trains may not be echeloned. In other cases, field trains may be located closer to the battalion troops than to the FSB elements, and it may not be feasible to integrate them into the BSA security plan. Sometimes terrain features may make such integration impractical. In short, although the field trains will normally locate in the BSA, they must not be expected to be there when support or tactical considerations make another location more favorable.

In all cases, the composition of BSA elements will not remain static. The FSB must be able to track and control changes. To accomplish this, all ground units entering the brigade area must send a representative to report to the brigade rear CP and FSB CP. They will coordinate movement routes, positioning for units locating in the BSA, communications, support requirements and procedures, and security responsibilities and arrangements. Guards at points of entry into the BSA will direct representatives of entering units to the rear CP/FSB CP location. Also, base commanders will notify the BCOC of all LOGPAC arrivals and departures. Movement of displaced civilians and local civilians must also be controlled.

Not only are changes in the elements located in the BSA occurring, but also changes are constantly taking place within the elements. MSTs in the UMCPs will vary in composition. Medical evacuation elements constantly move in and out of the BSA. Supply elements are involved in resupply efforts. Personnel available for defense actions may be extremely limited within certain bases. Base commanders must keep the BCOC informed of their situations.

Locations of elements within the BSA will vary depending on METT-T. Figure 5-2 presents one possible arrangement. Though the FSB commander and S2/S3 must use their best judgment in positioning units, some general guidelines to be considered include—

- Position the brigade rear CP/FSB CP near the center of the BSA perimeter for C2 and security reasons.
- Position field trains forward in the BSA near routes between supply points and combat trains.
- Ensure field trains and other bases locate their CPs near the rear of their bases, closer to the BCOC to enhance communications and protection of C2 facilities.
- Balance the advantages of dispersion (reduced destruction from a single enemy strike) with the disadvantages (C3 constraints and extended perimeter). In general, though specific situations may dictate otherwise, the BSA can be expected to occupy an area 4 to 7 kilometers in diameter.
- Make supply points accessible to both customers and resupply vehicles and helicopters.
- Keep class III points away from other supplies to prevent contamination. They should also be located at least 100 feet from water sources.
- Locate the ATP at least 180 meters from other supplies and 620 meters from the nearest inhabited tent.
- Position GRREG and salvage points near the MSR possibly near the ATP to maximize backhaul missions of vehicles used for ammunition supply.
- Locate the class I point near the water point whenever water sources allow.
- Locate the clearing station away from likely target areas (ATP, class III point,



NOTE: Sizes are approximations only to give general planning guidance. Actual sizes will depend on available terrain.

Figure 5-2. Sample BSA Layout (Division Elements)

bridges, road junctions) but near evacuation routes and an open area for landing air ambulances.

- Locate maintenance sites to be accessible to customers, including recovery/evacuation vehicles.
- Ensure maintenance shops, along with parking and equipment holding sites are on firm ground.
- Position the signal platoon and MP platoon headquarters near the FSB CP to enhance support and security.
- Position the ATP adjacent to the maintenance company site to allow the maintenance company, which has the most self-defense assets in the FSB, to provide protection for the austerely staffed ATP.
- Position the ATP near the rear of the BSA and near but off the MSR so that the large numbers of corps trailers bringing ammunition into the area do not clog up the MSR within the BSA. The ATP requires sufficient area to perform transload operations without interfering with BSA traffic.
- Position units with heaviest firepower, such as the maintenance company, along the most threatening avenues of approach.

COORDINATION

In addition to the C2 relationships discussed above, the FSB CP must ensure proper coordination is maintained with the elements discussed below. Due to the limited assets available to the BSA, the BCOC must coordinate all minefield, obstacles, and artillery fires within the BSA. One technique that may be used is to arrange in advance to have designated field artillery and ADA representatives (and perhaps the MP platoon leader) automatically report to the BCOC when the threat status reaches a predetermined level.

FIELD ARTILLERY SUPPORT

The BCOC will develop the fire planning required to implement the execution of fire support for the BSA. The FSB S2/S3 will coordinate fires with the BSA FSO designated by the field artillery battalion commander. Together, they will plan targets for the BSA defense and help establish preplanned engagement areas for artillery and close air support. These fires will be coordinated with the brigade fire support coordinator, through the service battery or directly from the BCOC to the main CP. Targets are placed in the TACFIRE systems for both brigade and division implementation. Artillery (and ADA) overlays must include displaced civilian camps, routes, and information on arts, monuments, and archives.

Calls for fire from the bases are made to the BCOC via field phones. If phones are not available, FM radio will be used. As previously mentioned, a direct line will link the BCOC and FA service battery CP. Calls will be made in accordance with procedures detailed in FM 6-30. An aerial fire support officer may be on call to adjust fires as necessary. TC 25-4-1 gives details on planning and conducting fire coordination exercises.

AIR DEFENSE ARTILLERY SUPPORT

The BSA must be protected from enemy air strikes. ADA assets likely to be available in the BSA are Stingers if the BSA is one of the main defensive priorities. The FSB S2/S3 will coordinate with the Stinger section chief

for BSA defensive fires. Assets are positioned to cover anticipated air avenues of approach. The FSB S2/S3 posts locations of the systems and air corridors covered on his sector sketch. The ADA base in the BSA will run a line to the BCOC. This will ensure early warning of all in-bound aircraft. In addition, although not located in the BSA, HAWK and Patriot units may be assigned sectors that encompass the BSA and support ADA fires within the BSA. The FSB S2/S3 will also coordinate with the brigade S3 through the rear CP to identify safe air corridors for logistics air missions and to ensure all ADA assets are aware of impending friendly air movements in and around the BSA. ADA operations are discussed in FM 44-3.

ENGINEER SUPPORT

When engineer assets are located in the BSA, they will be made available to the BCOC for survivability and countermobility operations. Therefore, the FSB S2/S3 must be prepared to take advantage of assets as they become available. Along with an engineer designated by the brigade engineer, he will plan barriers and minefield according to guidelines and principles presented in FMs 5-100 and 5-102.

MILITARY POLICE OPERATIONS

A direct support military police platoon is usually operating from the BSA. The battlefield missions performed by this platoon may include battlefield circulation control, area security, operation of the EPW point, and law enforcement.

Battlefield circulation control is performed along MSRs and in and around the BSA. MPs use traffic control points, mobile patrols, and temporary road signs to accomplish this mission. Coordination between MPs and the FSB CP is essential to ensure movement in the area is controlled. Displaced civilian control and coordination with the local government must be included in planning.

The area security mission of the MPs is vital to rear operations. MPs employed in the brigade rear provide a light, mobile force that can move, shoot, and communicate. Their mobility makes it possible for them to detect the threat as they aggressively patrol road nets and key terrain features throughout the rear area. Their organic communications enable them to advise the rear CP, base clusters, bases, and moving units of impending enemy activity. MPs may also be used for convoy security and to protect static positions as required. However, when used in this manner, missions which capitalize on MP mobility are degraded.

MPs conduct collection, evacuation, and internment operations to support their EPW mission. The EPW point holds EPWs captured by brigade units until they can be evacuated to the division central collection point. FM 19-40 covers EPW operations in detail.

Law and order operations are only performed when the brigade commander requires them and the tactical situation permits. This mission is usually the lowest priority during war.

The brigade commander sets priority of missions for the DSMP platoon. However, in some cases the brigade commander will give tasking authority to the FSB commander to support the area security mission and battlefield circulation control aspect of the terrain management mission. The FSB commander must use this asset to maximum advantage. Details on MP platoon operations are in FM 19-4.

BCOC OPERATIONS

The FSB commander is responsible for integrating base defense plans into a base cluster defense plan. As discussed, this requires development of a rear operations communications system and coordination with field artillery, engineer, ADA, and MP units. As part of the terrain management function, the FSB S2/S3 assigns a defensive position and a sector to each base in the BSA. Bases on likely avenues of enemy approach are given a smaller sector. The S2/S3 tries to ensure each base's sector of fire overlaps the adjacent base's sector. He does this by checking sector sketches provided by bases or personally coordinating with base commanders. Gaps are covered by planning for fires, obstacles, patrols, OPs, or sensors. The FSB S2/S3 must carefully coordinate this planning with each base to avoid having troops engage friendly forces.

The BSA defense plan must be integrated into the plan for the entire brigade rear. This requires the BCOC to coordinate with the brigade S3 for the overall plan. It must also coordinate directly with other BCOCs in the brigade rear to plan mutually supporting fires and to prevent firing upon each other.

The S2/S3 keeps a sketch of the defensive plan. It shows base sectors of fire, locations of mines and obstacles, planned indirect fire coverage, OPs, patrol routes, and positions of automatic and antiarmor weapons. These weapons will include those in the BSA for repair. If the firing system is operable, these weapons should be included in the BSA defensive scheme, and mechanics should work on them in their fighting positions. Whenever possible, units should occupy the same location within the BSA relative to the other units every time the BSA moves. They should build a habitual relationship with the units on all sides of them. This will expedite coordination of sectors of fire. Since night vision devices are likely to be scarce, illumination plans must also be included in the overall BSA security plan. Details on sector defense planning are in FM 19-4.

In addition, the BCOC must plan for a BCOC reaction force from assets in the FSB. This force will be called upon when a base's defenses cannot defeat the threat and MPs and combat forces from the brigade are not immediately available. As a minimum, the reaction force should include personnel equipped with machine guns, grenade launchers, rifles, FM radios, and vehicles. The FSB S2/S3 must carefully equip the reaction force. Removal of scarce assets such as machine guns from the defensive perimeter when the reaction force is assembled must be considered and integrated into the defense plan. During periods of increased readiness, the reaction force should be assembled for immediate response. It must be well rehearsed and able to react precisely and immediately. Rally points, battle positions, and detailed procedures must be planned and practiced in advance.

The BCOC must ensure that all base commanders understand the different threat levels and the associated actions. The brigade staff must also be aware that the FSB is neither staffed nor equipped to continue support operations at normal levels while responding to increased levels of threat. Support will be degraded. How much it is degraded will depend on the level of the threat.

Level I threats are those which can be defeated by base or base cluster self-defense measures. They normally involve the activities of agents, saboteurs, and terrorists. Typical actions the BCOC will require in such situations include manning OPs fully, increasing guards and spot-checking vehicles, tightening base security, alerting defensive perimeter personnel, and increasing protection of key facilities. The degradation of support will depend on the actions

directed by the individual BCOC in specific conditions. However, as a general planning guide, the FSB can estimate that the 75 percent of available assets will be engaged in support operations, while 25 percent defend.

Level II threats are those beyond base or base cluster self-defense capabilities. They can, however, be defeated by response forces, normally MPs with supporting fires. They normally involve—

- Diversionary and sabotage operations by unconventional forces.
- Raid, ambush, and reconnaissance operations by small combat units.
- Special or unconventional wartime missions.

The BCOC would likely require strictly controlled access to all areas, reinforced perimeter defense, OPs prepared to withdraw, and the reaction force alerted.

A tactical combat force is required to defeat a Level 111 threat. Level 111 threats normally involve-

- Heliborne operations.
- Airborne operations.
- Amphibious operations.
- Penetration by enemy forces from the main battle area.
- Ground force deliberate operations (for example, operational maneuver groups with linkup of smaller airborne and assault units).
- Infiltration operations.

OPs will be withdrawn, reaction forces committed, the brigade S3 notified, and support operations ceased. Such a threat is normally preceded by artillery or air strikes.

The BCOC determines the level of threat and issues prearranged alerts to all bases. The BCOC also determines the probability of an air attack and issues air defense warnings.

The BCOC should also have planned in advance emergency move procedures. If the FSB is under imminent danger from a Level 11 or III threat, the BCOC will call for an emergency move of key BSA assets. Key elements should be identified in advance and prepared to move to a predesignated site with minimum notice. The commander designates key FSB elements as required. These will likely include C2, ATP, class III, emergency medical treatment, and austere maintenance elements. Emergency destruction of equipment and supplies (excluding class VIII) is performed to avoid enemy capture. Priority items for destruction will probably include COMSEC items, fuel, ammunition, vehicles, communications equipment, and weapons. Additional information on emergency moves is in Appendix A.

Other duties of the BCOC are to identify primary and secondary entry points into the BSA and designating preplanned landing zones for brigade reaction forces to use when required. The BCOC will also conduct regular (preferably daily) meetings with base representatives to update the defensive plan.

BASE OPERATIONS

GENERAL

The elements in the BSA are organized into bases for self-defense. Normally, each FSB company and each maneuver and field artillery battalion field trains in the BSA will

constitute a base. Miscellaneous small teams will be assigned to a base by the BCOC. The base commander is responsible for preparing the base defense plan and coordinating with the BCOC. Each base must be capable of defending itself against a Level I threat and delaying a Level II threat until the reaction force arrives. If a base is faced with a Level II threat, it must take action to prevent critical supplies and equipment from falling into enemy hands, defend itself as long as possible, and avoid capture.

Base commanders are responsible for the following:

- Coordinate with the base on each side to plan mutually supporting fires and to avoid troops engaging each other. If a problem exists in that area, the base commander will notify the BCOC.

- Assign each individual a fighting position. Positions should provide overhead cover. Positions must also allow interlocking sectors of fire.

- Ensure proper individual fighting positions are prepared. Soldiers should use all available cover. Positions should provide frontal protection from direct fire while allowing fire to the front and oblique. Protection from indirect fire requires a depression or hole at least 1 1/2 feet deep. Details on fighting positions are in FM 5-103.

- Deploy crew-served weapons in fighting positions with primary and secondary sectors of fire. They cover the most likely enemy approaches. Instructions for preparing positions for each type of crew-served weapon are also in FM 5-103. The base commander must ensure each weapon has an adequate range card.

- Identify target reference points to be able to direct fire against approaching ground or air enemy forces.

- Deploy all weapon-carrying vehicles on the base perimeter. As discussed previously, this includes combat vehicles in the BSA for repair.

- Ensure vehicles are properly positioned. Natural cover and concealment are used as much as possible. Frontal parapets may be used with vehicles on the perimeter whenever possible.

- Setup observation posts and listening posts. The FSB cannot constantly occupy a full perimeter and perform its mission. Early warning is imperative. Therefore, OPs and LPs are critical. OPs must provide a good view of the sector, which ideally overlaps with the adjacent OP sectors. Both the OPs/LPs and routes to them must provide cover and concealment. They should not be in positions that attract attention (such as isolated groups of trees) or on the very peaks of hills where positions would be silhouetted. Further guidance on OPs may be found in FMs 19-4 and 17-98.

- Establish patrols when required.

- Enforce noise and light discipline.

- Ensure camouflage is used properly. Guidance can be found in FM 5-20.

- Plan and establish hasty obstacles.

- Create a base reaction force to respond immediately against a threat within the base. Ensure the force has covered and concealed routes to each sector on the perimeter.

- Ensure soldiers know alert signals and proper responses to artillery and air attacks. Since soldiers are not continuously occupying the perimeter, they must be well trained to quickly respond to early warnings.

- Prepare sector sketches and provide to the BCOC. These will be updated at regular BCOC meetings. Sketches will include major terrain features, weapon positions, and OP positions.

SUPPLY POINTS

Whenever engineer assets are available, fuel tankers and drums are protected by berms or deep-cut protective positions. Natural terrain concealment and camouflage nets are also used. Class I, II, and IV items are protected in deep-cut trenches if time allows, but construction of trenches for those items is a low priority. Traffic control must include measures to conceal movement at, to, and from supply points. At water points, control of spills and drainage is required to avoid standing pools of water which reflect light. As discussed in Appendix D, night resupply is used to maximize the concealment of darkness.

MAINTENANCE FACILITIES

In the base company area, individual positions are prepared near billeting areas and on the periphery of work stations. Simple cut-and-cover or other expedient shelters are constructed next to key shop facilities for quick protection from artillery and air attacks.

MEDICAL CLEARING STATION

The role of the medical company must be carefully considered by the FSB commander. There are three possibilities. First, the clearing station may be located near the center of the BSA to be protected by surrounding bases. This increases the size of the BSA without adding any defenders to man the perimeter. This also increases traffic movement in the middle of the BSA. A second option is to assign a sector of the BSA perimeter to the medical company. Medical personnel can carry individual small arms for their own defense and the defense of the wounded and sick in their charge against those not acting in accordance with the law of land warfare. However, the duty of medical personnel is to care for the sick, wounded, and injured. In addition, to questions on conformance with the Geneva Convention accord, the commander must realize the perimeter sector assigned to the medical company would have no crew-served weapons. The final option is to locate the clearing station away from the rest of the FSB. It is then essentially protected by the enemy's compliance with the Geneva Convention. In view of the medical company's mission to provide area support to units in the BSA and the constant coordination required with BSA elements, this option may not be feasible under most circumstances.

CHAPTER 6
Headquarters and Headquarters Detachment

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ORGANIZATION AND MISSION

The FSB headquarters and headquarters detachment consists of a battalion headquarters and a headquarters detachment. As shown in Figure 6-1, the battalion headquarters has five sections: command, S1/ personnel administration center, S2/S3, support operations, and S4. In addition, the HHD includes a unit ministry team.

The battalion headquarters performs the C2 functions and employs the C2 facilities discussed in Chapter 2. Generally, its mission includes—

- Command and control of organic and attached units.
- Command and control of all units in the BSA for security and terrain management.
- Planning, directing, and supervising support provided by the FSB to division units in the brigade area.
- Coordination of support to corps units in the brigade area.

. Providing information and advice on FSB support to the commander and staff of the supported brigade and the DISCOM.

- Planning, directing, and supervising the administration, training, and internal logistics support for units organic and attached to the battalion.

PERSONNEL AND SECTION FUNCTIONS

FSB COMMANDER

The FSB commander commands all units organic or attached to the battalion. He also has command and control of all elements in the BSA for security and terrain management. He provides subordinate elements with clear missions, taskings, and statement of his intent.

As discussed in Chapter 3, upon receipt of a mission, the commander gives planning

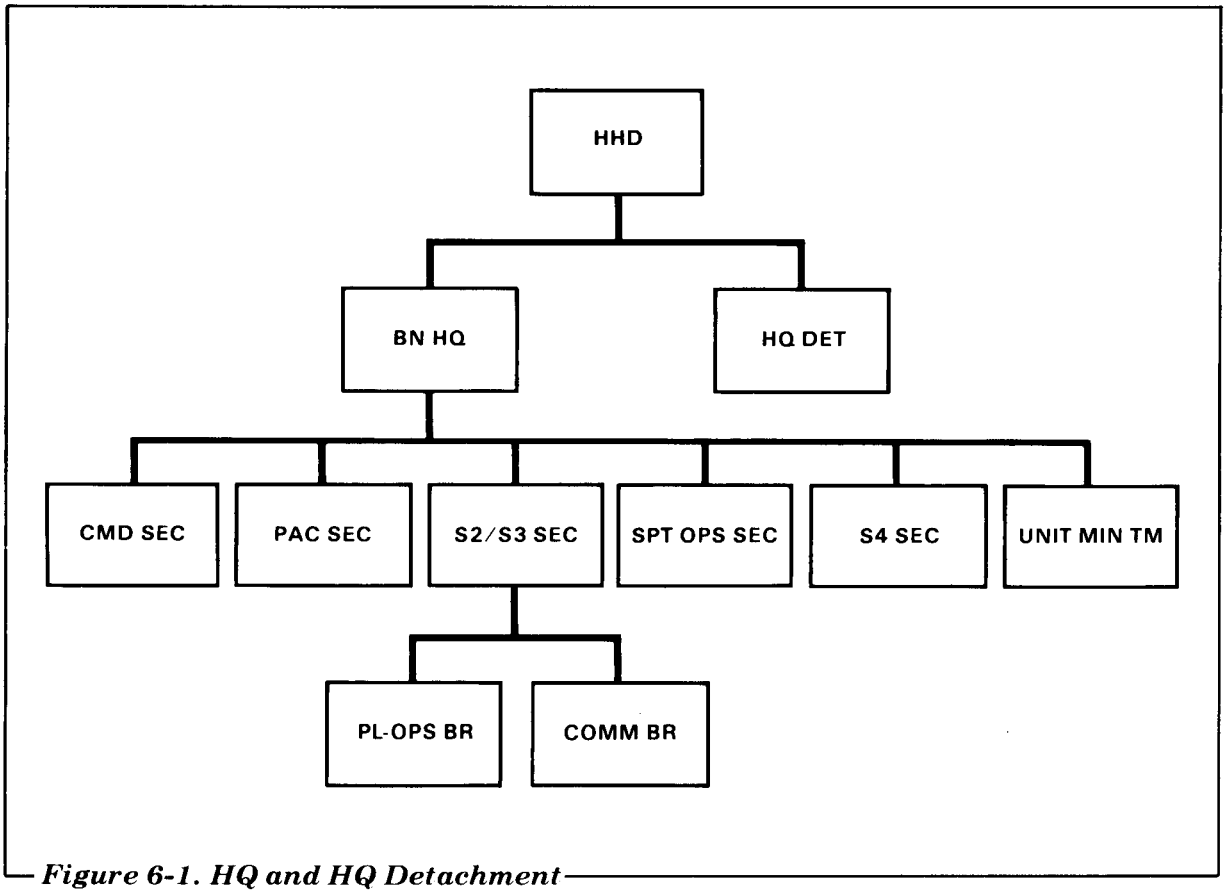


Figure 6-1. HQ and HQ Detachment

guidance to his staff. Once he receives the required information from his staff, he restates the mission in a clear, concise statement of tasks to be done and the purpose to be achieved. He gives the staff specific courses of action to pursue and directs the S2/S3 to issue the warning order to subordinate elements.

The commander with his staff supervises the activities of subordinate units. They make sure that decisions, directives, and instructions are implemented and that the commander's intent is being fulfilled. The commander issues FRAGOs when changes are required. The FSB commander and staff also advise the brigade commander on FSB support as required.

EXECUTIVE OFFICER

The XO is the principal assistant to the battalion commander. As second in command, he must understand both the support operations and the non-CSS functions of the battalion. He supervises the FSB staff and coordinates assigned missions with subordinate unit commanders. In accordance with commander directives, he formulates staff operating policies. He also oversees the maintenance of the master policy file and supervises CP operations.

PERSONNEL ADMINISTRATION CENTER

The battalion S1 is the staff officer for the commander on all matters concerning human resources. He advises the FSB commander on administrative and personnel

matters. He has primary staff responsibility for coordinating personnel service support. This includes personnel, administrative, finance, religious, medical, public affairs, and legal support. The S1 develops the administration SOP for the battalion and with the S4 prepares the administration/ logistics portion of the battalion tactical SOP. He participates in the OPORD process and develops administrative annex materials. He ensures personnel service support is fully coordinated with other staff elements. He pays particular attention to areas where close coordination is vital to the PAC mission. These areas include GRREG, transportation, and medical support. The S1 also functions as the FSB headquarters detachment commander.

The S1 is assisted by and directs the activities of the PAC section. This section consists of personnel services soldiers as well as a legal specialist and clerk typist. The S1 establishes the PAC area. Typically, the PAC colocates with the S4 section near the FSB CP. This allows cross-training of personnel and makes continuous operations easier. Guidance on PAC layouts is in TC 12-17. The S1 must also make sure PAC personnel understand their functions and internal PAC procedures. Primary PAC responsibilities focus on strength accounting, casualty reporting, and replacement operations. Other responsibilities include matters dealing with—

- Mail.
- Awards and decorations.
- Soldier pay.
- Military justice.
- EPWs and stragglers.
- Publications and forms.
- Hometown news releases.
- Distribution center operations.
- Preparation of soldiers for overseas movement.

The S1 coordinates preparation for overseas movement with the DISCOM S1, FSB company commanders, CSM, and other battalion staff officers. Medical records must be current, family care plans developed, identification cards and tags available, and security clearances checked. A thorough POM checklist is presented at Appendix Y of TC 12-17.

The PAC prepares the FSB personnel estimate. It projects personnel losses and replacement requirements based on the tactical situation. From the DISCOM S1, it gets the DISCOM personnel estimate which includes replacement projections. On the basis of this information, the S1 coordinates with the FSB commander who sets replacement priorities for the battalion. The PAC also provides the medical company with projected FSB casualties for evacuation planning.

The PAC maintains and processes personnel information through data input to the TACCS. Information received from subordinate and supported units in the form of hasty strength reports, casualty feeder reports, and battle roster updates form the basis for input to TACCS. This information updates the personnel summary and personnel requirement report as well as other SIDPERS input. The PAC prepares a task force personnel summary when subordinate units are task organized. The PAC sends strength reports to the DISCOM and provides the casualty feeder reports to the supporting personnel service company.

In support of the FSB personnel function, the S1 also monitors GRREG activities and reconciles casualty reports with GRREG records. He also coordinates requirements

with the S4 for GRREG items for FSB personnel. He also ensures proper next of kin notification procedures are followed.

Other functions of the PAC in support of the FSB include—

- Coordinate with the S2/S3, S4, and MP platoon leader on the location of EPW collection points.
- Process personnel replacements.
- Project numbers of EPWs and civilian internees.
- Determine total transportation requirements for losses, replacements, and EPWs, and submit transportation request to the S4.
- Provide administrative service, if tactical situation permits.
- Keep abreast of the tactical situation and be prepared to assume the role of the CP either in an emergency or during a BSA jump.
- Coordinate through the DISCOM S1 to obtain finance services support from the servicing finance support unit.
- Determine requirements for mail distribution.
- Coordinate and supervise postal operations.
- Coordinate morale welfare and recreation.
- Coordinate with the chaplain for religious services.
- Coordinate with the medical company commander and FSB S2/S3 to develop a combat lifesaver program for FSB personnel.
- Coordinate civil-military operations and law and order activities within the FSB. Considerations include ensuring that civilian activities do not interfere with FSB operations, the FSB commander understands cultural implications, and the FSB fulfills legal obligations to the local population.
- Function as FSB public affairs officer when appointed by the commander.
- Coordinate with the medical clearing station for return to duty of FSB personnel.

S2/S3 SECTION

The S2/S3 is the operations, intelligence, security, and training officer. He is responsible for internal FSB operations. The S2/S3 advises and assists the FSB commander in planning, coordinating, and supervising the communications, operations, training, security, and intelligence functions of the battalion. He informs the FSB commander on all IPB information. The S2/S3 supervises the FSB functions that are not classified as logistics or medical. However, his role and that of the support operations officer require that they maintain constant contact. The S2/S3 is responsible for writing and reviewing the battalion tactical SOP. The S2/S3 section consists of two branches—plans and operations branch and communications branch. Employment of the S2/S3 section is discussed in Chapter 2. Plans must be in place to displace the CP without interruption of S2/S3 activities.

Plans-Operations Branch

The plans-operations branch monitors the tactical operations of the FSB, makes recommendations to the commander, publishes orders, and supervises implementation of plans and orders. It maintains the current friendly and enemy situations. It obtains maps and prepares overlays. As discussed in Chapter 5, it positions units within the BSA

and plans BSA security which includes planning the equipment and personnel for the base cluster reaction force. Also, in coordination with the MP platoon leader, it develops and implements the traffic circulation plan for the BSA. The branch ensures the BSA security plan is integrated into the overall brigade rear operations plan. Guidance appears in FMs 55-30 and 19-4.

The NBC specialist in the branch monitors and assists in the employment of NBC teams. He receives, coordinates, analyzes, and evaluates NBC activity data. He develops response procedures for NBC defense and makes recommendations to the commander on MOPP levels. He also prepares NBC reports 1 through 6. More information on NBC operations is in Appendix B.

The branch also plans and coordinates tactical movements. It conducts route reconnaissance, supervises tactical road marches, receives closing reports, and supervises appropriate staff activities during movement. FSB movement is discussed in Appendix A.

The S2/S3 also establishes an S2 operations cell. It employs the IPB techniques detailed in Chapter 5. It also develops procedures for handling and using or disposing of enemy equipment and documents. It supervises the handling of enemy defectors and materiel, and monitors EPW collection point activities for the FSB. It also is responsible for obtaining classified maps required by FSB units.

Finally, this branch is responsible for the preparation of the following documents:

- Movement orders.
- Intelligence annex to orders.
- Daily intelligence summary for subordinate units.
- Operations estimates.
- Intelligence estimates updates.
- Paragraphs 2 and 3 of the FSB OPORD/ OPLAN.
- Essential elements of information for inclusion into the OPORD.

Communications Branch

This branch supervises COMSEC and CCI activities. It also installs, operates, and maintains communications equipment. This entails the establishment and operation of the net control station for the FSB net. It ensures communications links with higher, adjacent, subordinate, and supported units. The branch plans and implements backup means of communications and ensures radio communications exist during a move between the start point and release point, and along the route of march. It also develops and implements a BSA security communications system. FSB communications are addressed in Chapter 4.

SUPPORT OPERATIONS SECTION

The support operations officer coordinates and provides technical supervision for the FSB's CSS mission. This mission includes DS supply, DS maintenance, health service support, and coordination of transportation and field services. In this capacity, the support operations officer advises the commander on requirements versus available assets. Requirements are determined in coordination with the brigade S4, the FSB S2/S3, and the logistics representatives for the other supported units. He provides input to the brigade S4 on the brigade logistics estimate and service support annex. Input for the annex is provided by the FSB support operations officer in the form of an external service support annex. The service support annex of the sample OPLAN in Appendix F

may be used as a sample for the external service support annex developed by the support operations officer. The support operations officer must ensure support remains at a level consistent with the type of tactical operation being conducted as discussed in Chapter 2. He plans and monitors support operations and makes necessary adjustments to ensure support requirements are met; for example, supported unit basic loads are replenished. He tracks available assets through the FSB companies and the brigade S4 and other supported units. He also keeps the DISCOM support operations branch abreast of the logistics and medical situation in the brigade area and requests backup support when requirements exceed capabilities. He coordinates additional support with the DISCOM support operations branch whether it comes from the MSB or corps. He recommends support priorities and ensures logistics SOPS are up-to-date and followed. He also coordinates with the FSB S2/S3 on the location of all support points within the BSA and ensures supported units are aware of the locations and time schedules for support operations. He prepares and distributes the external service support SOP which provides guidance to supported units on procedures involved in receiving support. He may become involved in coordinating host nation support with the G5 through the DISCOM headquarters. The support operations officer directs the activities of the support operations section.

The section has several specific functions in the area of supply and services. It coordinates supply distribution and services provision with the DISCOM as well as the brigade and other supported units. It monitors daily battle loss reports to anticipate requirements. Requirements that exceed FSB capabilities are coordinated with the DISCOM support operations branch. It also assesses the type of resupply operations required. If airlift or airdrop is required in the BSA, it requests and coordinates the support as discussed in Chapter 7. The section monitors basic loads of maneuver battalions in coordination with the brigade S4 and makes distribution adjustments as required. The section coordinates with the brigade S4 and DAO representative on priority of class V supply and on locations of any ammunition prepositioned to support specific tactical operations. It monitors the CSR and basic loads of supported units. Field service support is requested through the DISCOM support operations branch. The section coordinates with the supply company and brigade S4 on locations and operations of field service augmentations. The section monitors activities in the brigade for compliance with the brigade service support annex.

In the maintenance area, the section recommends the allocation of resources in coordination with the maintenance company and supported units. This includes coordination of MST operations. It forecasts and monitors the work load for all equipment by types of equipment and devises the plans and policies for QSS, reparable exchange, and class IX operations. It monitors shop production and job status reports. It also monitors and reviews the ASL. It coordinates critical parts status with the DMMC. For unserviceable items, it generates disposition instructions on the basis of division and DISCOM commander guidance. Instructions include evacuation, cannibalization, and controlled exchange policies. With the brigade S4, it reviews backlogs on critical weapon systems. Additional support required is requested from the DISCOM support operations branch to maintain prescribed operational levels.

The section also has a role in transportation. It coordinates and monitors the movement of replenishment stocks and services for the FSB. It also coordinates backhaul of

equipment and supplies with the movements control officer and DMMC. Delivery priorities are coordinated with the brigade S4. When transportation requirements exceed the FSB's capability, it coordinates support with the movements control officer. It also anticipates and recommends MSRs to the movements control officer.

For health service support, the support operations section, assisted by the brigade surgeon/medical company commander, provides input to the service support annex on medical evacuation and hospitalization. Input covers class VIII supply, helicopter landing sites, priority of medical effort, and evacuation procedures. On the basis of projected WIA losses, the section plans treatment and evacuation. Plans are coordinated with supported units and the medical operations center in the DISCOM. The section monitors medical evacuation and treatment operations to ensure brigade needs are being met. It also monitors the level of medical assets available. If additional resources are required, it requests them through the DISCOM medical operations center.

The section performs several functions in addition to those support operations discussed above. These include—

- Coordinate support during moves. It notifies the brigade S4 and other supported units of new supply, maintenance, and medical points and operating times. It must also coordinate with the FSB S2/S3 on shuttle operations.
- Establish the section area after each move. Chapter 3 has details on the layout.
- Coordinate with the FSB S2/S3 on the NBC threat to assess the impact on all support operations and to develop an NBC contingency plan which includes stocking of NBC equipment and supplies.
- Ensure section personnel assigned to the reaction and CP defense forces are identified and know their responsibilities.

S4 SECTION

The FSB S4 provides technical supervision and assistance for unit-level support within the battalion. He is responsible for preparing the logistics estimate and making recommendations to the commander on internal logistics activities. He also writes, in coordination with the S1, the service support annex to the FSB OPORD/OPLAN. He supervises personnel in the S4 section.

The S4 section supervises and monitors FSB company supply activities. It coordinates with them on locations of internal supply and services activities. It processes requests for class II, III, IV, V, and VII items to replenish basic loads of all FSB elements. It requests and issues all required CTA 50-900 items within the FSB. It monitors requests that FSB elements submit to the maintenance company for class IX items. The section also monitors the status for all battalion elements in the areas of class I, III, and V items and operational readiness of equipment. It prepares the class III forecast for the FSB and submits it to the support operations section. The section develops the battalion feeding plan and disseminates it among feeding and feeder elements.

The battalion maintenance technician coordinates FSB maintenance operations. He consolidates FSB unit maintenance reports. He provides the commander and other staff sections with equipment status reports for planning purposes. He also supervises controlled substitution in accordance with the commander's priorities. He monitors FSB PLLs and coordinates recovery of FSB equipment.

The S4 section coordinates with the S1 on unit strength and replacement data to project logistics requirements. Together they also ensure FSB replacements are issued all authorized equipment. The S4 also coordinates movement plans with the S2/S3 and monitors field feeding and sanitation activities within the FSB. He consolidates transportation requirements for FSB units and passes them to the support operations section. The S4 coordinates through the DISCOM S4 to obtain payment support for local procurement and imprest fund operations from the servicing corps finance support unit.

S4 section supply personnel also function as the FSB headquarters detachment armorer and supply sergeant.

HEADQUARTERS DETACHMENT

The headquarters detachment is responsible for billeting, discipline, security, training, and administration of personnel assigned to the HHD. The S1 serves as the detachment commander, and all positions in the detachment other than food service personnel are additional duty assignments for personnel in the battalion headquarters.

Functions of the detachment consist of the following:

- Ensure load plans are maintained.
- Provide food service support for the FSB (less medical company) and selected other units in the BSA. (Note: This function and assets to perform it have been transferred from the supply company.)
- Perform route reconnaissance.
- Organize unit for movement and issue movement orders to HHD personnel.
- Request additional transportation.
- Coordinate with the S2/S3 on the quartering party.
- Provide C2 of HHD in response to air or ground attack.
- Identify elements of and plan use of base defense forces for CP security.
- Establish communications with LP/OPs.
- Determine placement of NBC assets in the headquarters area.
- Ensure HHD logistics support is provided.

UNIT MINISTRY TEAM

The unit ministry team provides religious support. The UMT consists of the chaplain and chaplain assistant. The team provides religious support forward to the smallest groups and teams in accordance with the doctrine detailed in FM 16-5.

The commander is responsible for the religious program in his unit. The UMT will implement the command religious program by providing religious support to ensure the free exercise of religion. Religious support consists of rites, sacraments, ordinances, services, and pastoral care.

The UMT provides input to the personnel estimate and provides a religious support annex to the OPORD. Additional UMT functions are—

- To advise the commander on the role of indigenous religions in the area of operations.
- To identify and provide pastoral care to battle fatigue casualties.
- To advise the commander on morals and morale as affected by religion.

CHAPTER 7

Supply Company

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ORGANIZATION AND MISSION

The supply company supports the arming system through its class V operations, the fueling system through class III operations, and the manning task through provision of rations, clothing, and individual equipment. Specifically, the company provides receipt, storage, and issue of class I, II, III, IV, and VII items. It also conducts class V transloading operations at its ammunition transfer point and operates a salvage point. The company is organized as shown in Figure 7-1. The company consists of a company headquarters and a supply platoon.

The company performs the following functions:

- Receive and issue class I, II, packaged III, IV (limited), and VII supplies, as well as unclassified maps. It also provides limited storage for these items. ASL stocks are stored by the MSB supply and service company. The company does not receive, store, or issue classified maps, aircraft, airdrop equipment, COMSEC, or construction materiel.
- Receive, store, and issue bulk petroleum using organic fuel transporters.
- Transload class V supplies from corps transportation assets to unit vehicles.
- Operate a salvage point for all supplies except COMSEC supplies, toxic agents, aircraft, ammunition, explosives, and medical items.
- Provide unit maintenance for organic vehicles and equipment as well as those of the HHD.

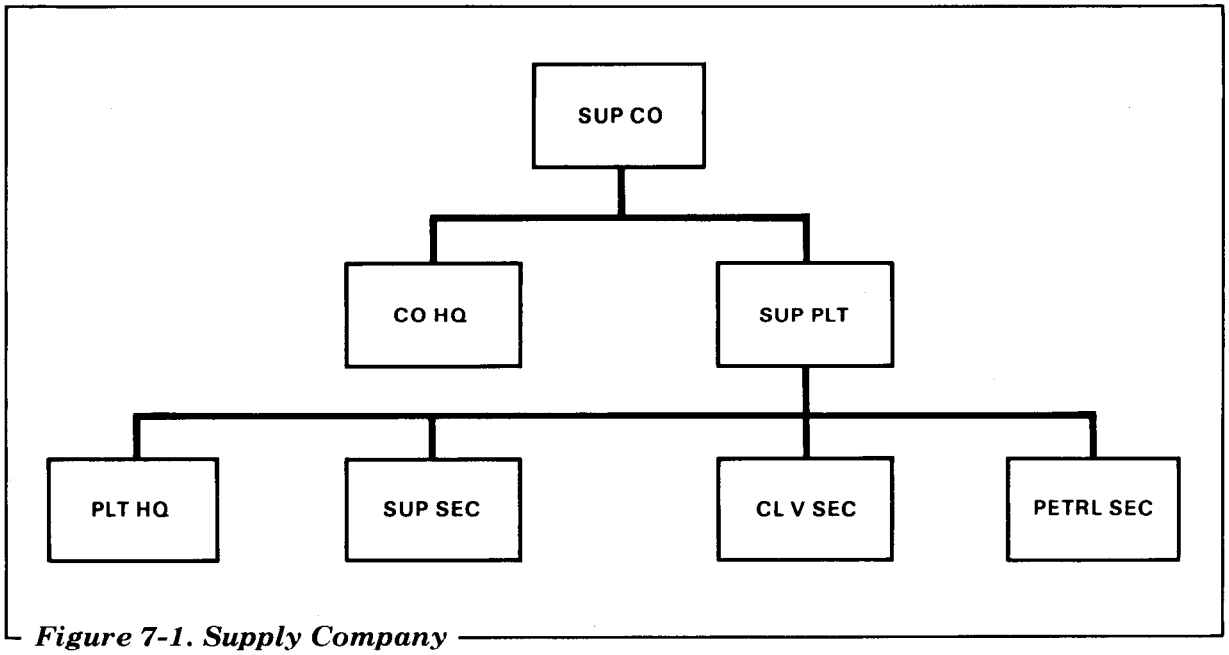


Figure 7-1. Supply Company

PRINCIPLES

The FSB must be 100 percent mobile with organic equipment. To enhance mobility, the quantity and variety of supplies the supply company can have on hand at any given time are limited. As a result, the supply company and its supporting supply activities put a number of supply principles to work to cut down on the response time between initial request and subsequent issue to the brigade.

PUSH SYSTEM

A push system is the initial go-to-war supply system in an undeveloped theater. Preplanned packages of selected supplies are sent forward to replenish expended supplies in anticipation of requirements of supported units. Initial quantities are based on strength data and historical demand. When the theater stabilizes, the supply system becomes a push system to the BSA for critical supplies based on personnel strengths and forecasted requirements. Other supplies are provided through a pull system based on actual demand. Supplies may still be pushed at the battalion and brigade level, especially during high intensity combat operations to heavily engaged units. Such units may be unable to ask for supplies because of gaps in the chain of command or intensive jamming on a fluid battlefield. Supplies may also be pushed to support a deep operation.

THROUGHPUT DISTRIBUTION

Throughput distribution bypasses one or more echelons in the supply system to minimize handling and speed delivery forward. Supplies are often throughput to the FSB from the corps and, in the case of class IV barrier materials and some class VII major end items, may be throughput directly to the user in the forward area. When most of the load is for a specific unit, the transporter may deliver directly to the requesting unit.

SUPPLY POINT AND UNIT DISTRIBUTION

In an effort to tailor supply distribution, the supply company uses a combination of

supply point distribution and unit distribution to support the brigade. When supply point distribution is used, unit representatives come to the supply points in the BSA to pick up their supplies. Maneuver battalion task forces with field trains in the BSA have their organic unit supply, fuel, and ammunition trucks assemble in the field trains along with repaired equipment, personnel replacements, and other assets. There they form a LOGPAC which goes forward to provide support to forward deployed elements. (LOGPAC operations are detailed in FM 71-2.) The supply company tries to cut down on the distances the forward units must travel by positioning supplies as far forward as possible. In order to provide a quick turnaround for forward units, the supply company also staggers the unit pickup times and sets up to provide a smooth traffic flow through the supply areas.

Due to limited transportation assets in the FSB, supply point distribution is normal for most classes of supply. Unit distribution by corps assets is used to deliver barrier materials to emplacement sites. Other classes of supply may be delivered using unit distribution when the tactical situation permits and transportation assets are available. One example is the forward refueling technique described later in this chapter. Emergency resupply using unit distribution may be accomplished via motor or air transport. Aerial resupply is discussed later in this chapter.

CAPTURED AND FOUND SUPPLIES

Another way to speed supplies to users is to take advantage of captured and found materiel. Fuels can be used as soon as they have been tested. (Note: Two pieces of equipment have been developed to enhance capability to use captured fuel. A captured fuels test kit in a single plastic housing can be used to determine fuel usability. A lightweight, quickly deployable electric pump has been designed to accompany tactical vehicles.) Barrier and construction materials can be used immediately. Captured subsistence can be used to feed EPWs and civilian populations after it has been inspected by veterinary personnel and declared fit for consumption. Found US subsistence may be consumed by US troops after veterinary approval. Captured and found medical supplies may be used to treat EPWs and civilians.

Captured vehicles and equipment are normally reported through intelligence channels and turned in to maintenance collection points. Other equipment may be turned in to the salvage point. There it is identified, classified, and reported through the FSB S2/S3 to the DMMC. The S2/S3 will provide disposition instructions on the basis of DMMC guidance.

Other specific considerations for all units in the brigade include:

- Reporting all enemy materiel captured or found through intelligence channels.
- Considering all enemy materiel booby-trapped. Access to materiel should be limited until the area is determined to be clear.
- Reporting toxic agents to NBC elements in the S2/S3 section.
- Reporting medical materiel to the supporting medical element.
- Having explosives examined by EOD personnel.

SECTION FUNCTIONS

COMPANY HEADQUARTERS

The company headquarters maintains command and control over the supply company. Headquarters personnel provide unit-level administrative and supply support, NBC operations training and assistance to the company, and graves registration training to the brigade elements. Unit supply operations are discussed in FM 10-14, and unit-level GRREG information is provided in FM 10-63-1.

Maintenance personnel in the company headquarters provide vehicle recovery and unit maintenance for all vehicles and equipment organic to the FSB HHD and to the supply company, except communications-electronics equipment. Unit maintenance operations are described in FM 43-5.

SUPPLY PLATOON

The supply platoon consists of a platoon headquarters, a supply section, a class V section, and a petroleum section. Headquarters personnel supervise, direct, and coordinate platoon operations. The TACCS device to run SARSS-1 is located in this platoon, headquarters.

The supply section provides class I, II, III (packaged), IV, and VII and unclassified map supply support. It maintains prescribed reserves of supplies and equipment for the brigade and operates a salvage collection point for designated supplies. The class V section operates one ATP in the BSA to transload class V supplies from corps transportation to supported unit vehicles. The petroleum section provides bulk class III to all division units and designated nondivisional units in the brigade area.

When augmented, the MSB S&S company may provide graves registration and CEB support to the brigade elements. If these elements are employed in the brigade area, they may be attached to or colocated with the FSB supply platoon. When necessary, the MSB S&S company may also attach water equipment and personnel to the FSB supply company.

SUPPLY OPERATIONS

PLANNING

The supply company commander along with the support operations section must anticipate supply requirements throughout the brigade area and manage limited resources to provide support as responsively as possible. Requirements are based on—

- Tactical plans.
- Environment and terrain.
- Demand data and previous experience.
- Troop strength.
- Equipment densities.
- Time and distance factors.

Supply planners track the tactical situation as well as casualties and equipment destroyed or in repair. This allows them to take necessary actions (such as requesting additional transportation or critical supplies) without having to wait for unit requests. It also enables them to reorganize supply elements or to request backup support to meet the most critical requirements. This may involve shifting assets from one supply point to another (for example, from the class 11/111 (packaged) /IV/VII point to the ATP) to meet surge requirements or receiving assets from the MSB, the COSCOM, or another FSB to overcome critical shortfalls.

Planners must also coordinate with the DMMC to ensure all necessary steps have been taken to supply items which are used either sparingly or not at all during peacetime. The division chemical officer will provide planning assistance through G4 channels for chemical items. Items to consider include—

- Chemical filters.
- Human remains pouches and other GRREG supplies.
- Cargo sling sets.
- Batteries.
- MOPP gear.
- Class VI.
- Wire.
- Fog oil.
- Chemical decontaminants.

Procedures must also be worked out for command-regulated items. Expensive, highly technical, or scarce items are often designated in the OPORD as command regulated. Command approval is required before these items can be issued. However, this does not necessarily mean commanders must approve each individual request. Division commanders may authorize the DMMC to release items on the basis of support priorities specified in the OPORD. The commander may place additional limitations on issue of items if he desires. This will often include setting quantities of critical items authorized to be issued to each unit in accordance with the support priorities. If requests from a unit exceed its authorized quantity, the unit would have to go through command channels to get its authorization changed. In any case, the support operations section and supply company should ensure procedures are established in advance.

Planners must also consider supply element layouts within the context of the FSB S2/S3 plan as discussed in Chapter 5. The supply company is located in the BSA near land lines of communication. The supply platoon's sections normally operate at separate sites near the MSR. To provide continuous command and control and liaison with the FSB commander, the company headquarters is set up at the edge of the company area closest to the FSB CP.

The supply platoon headquarters is established in an area central to the supply sections. Section sites should be reasonably close to the MSR, accessible to supported units and resupply vehicles. Each site should be large enough to disperse operations, yet not so large that internal security becomes a problem. The sites should have good roads, an adequate number of areas with level ground and good drainage, and, when possible, the natural potential to provide cover and concealment.

Positioning considerations are listed in Chapter 5. Others include the following:

- The salvage point should be set up near the MSR to minimize the distance supported units must drive trucks being used for backhaul.
- The sites for the class III section and the ATP must not be next to one another in order to prevent a fire or explosion from destroying both sites.
- The site for the class III section should not have any low-lying areas where fumes could collect. It also should be far enough away from the other sections to prevent contamination of supplies in the event of a fuel spill.

Layout plans should show receipt, storage, and issue areas for each section; entrance and exit control points; traffic patterns and

customer parking areas; areas where man-made camouflage will be used; communications equipment and wires; and fighting positions.

CLASS I

Class I supply operations are kept as simple as possible because the supply section must be able to move quickly. There is little equipment, limited stockage, and only a little paperwork. When possible, receipt, ration breakdown, and issue are combined so that supplies are handled only once.

Class I is a scheduled supply based on the supported troop strength and the Army wartime feeding plan. Initially, units in the brigade area eat the MREs in their unit basic loads. These are replenished as soon as supply lines are established. As soon as possible, at the direction of the theater commander, T rations are introduced and then B rations. (The final transition to A rations in the BSA is made only if the theater has matured to the point that refrigerated carriers can be moved forward; the FSB does not have the organic capability to handle A rations.) Regardless of the implementation status of the feeding plan, the brigade commander may decide that the brigade will subsist entirely on MREs during a specific operation.

The supported units do not request rations. Instead, class I flows are based on personnel strength reports. The flow of personnel strength data as it pertains to class I supply is shown in Figure 7-2. The class I supply branch at the DMMC converts personnel strength data to stock numbers and quantities of rations to be pushed to the FSB. These are based on the field feeding ration mix or the tactical commander's instructions. It anticipates the increased use of MREs during an offense or deep operation. The single-item requisitions are sent to the COSCOM MMC. The DMMC branch then prepares and sends a consolidated issue document for each FSB to the MSB. Normally, corps transport assets move rations to the MSB class I point. Class I personnel in the MSB break bulk rations according to the issue documents. The MSB TMT company transports the supplies (along with the issue document and other transportation and shipping documents) to the BSA class I point. In emergencies, when corps transport is overwhelmed, MSB TMT company assets may pick up at corps supply points and deliver to the BSA.

Personnel at the BSA class I point unload the shipment. They inspect it for type, number, and condition before signing for it. At the same time, the shipment is broken down for issue to supported units based on their strength data. Class I personnel prepare copies of the unit issue document.

When supply point distribution is used, supported units use organic transportation to pick up class I supplies. The supported brigade S4 and other supported unit logistics planners, the FSB support operations officer, and the supply company commander coordinate a schedule for pickup of issues. When units arrive to pick up their rations, they check in at a control point. Class I personnel ensure that the unit is an authorized customer and the unit representatives are authorized to draw rations. There are three basic methods of issue:

- *Truck to truck.* Supplies are transferred directly from the MSB TMT vehicle to the supported unit vehicle. This is the preferred method because it saves time, labor, and handling; keeps supplies under cover; and increases mobility. However, it ties up the vehicle from the MSB. Also, unless the arrival of supported unit vehicles is timed perfectly, it could cause traffic congestion.

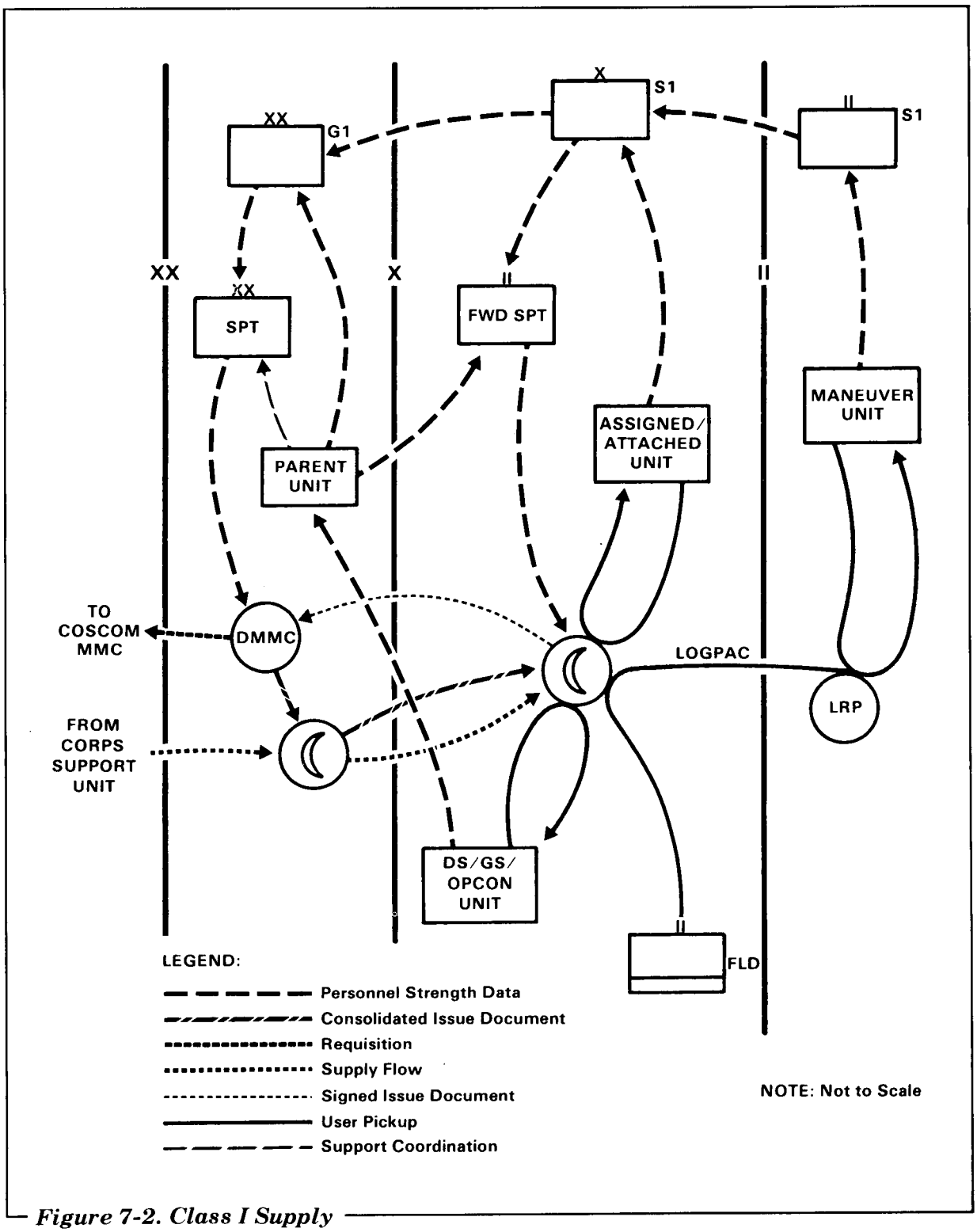


Figure 7-2. Class I Supply

- *Unit pile.* All the items for a supported unit are put in one marked pile on dunnage. The entire pile is put on the supported unit's vehicle when it arrives. This method is the best for control. It is used when class I personnel have time to sort supplies.

- *Item pile.* Like items are put in separate piles on dunnage. As supported units pass each pile, unit personnel load the correct quantity into their vehicle under the supervision of class I personnel. As a result, the supported unit personnel spend more time at the supply point than they would with the other two methods. This method is used when class I personnel do not have the time to sort supplies.

Due to the scarcity of class I point assets, unit distribution is rarely possible in the brigade area. When unit distribution is used, supply section vehicles rendezvous with supported unit vehicles at prearranged grid coordinates.

Signed issue documents are sent to the DMMC along with the transportation and shipping documents used to receive supplies from the MSB. The class I point does not keep copies of issue documents.

CLASS VI

Class VI items are furnished without cost to the soldier through class I channels when units have been operating under combat conditions for more than 15 days without AAFES support or access to civilian markets. In early, highly mobile, or intense conflicts, there is little leisure time and little need for class VI items. Class VI items are therefore restricted to items required for the minimum personal hygiene, comfort, and welfare of the soldier. Initial requirements are filled with bulk class VI supplies. Interim supplies are obtained from AAFES stocks until RSSPs, packaged to meet the requirements of 100 persons for one day, become available. The RSSPs are requisitioned based on personnel strength data. They are issued in the same manner class I supplies are issued. More information on class VI items can be found in AR 30-7 and FM 10-27.

WATER

The FSB supply company has no organic water supply capability. The brigade depends on the MSB S&S company for water purification and distribution. The MSB water section is capable of operating up to five water points. Upon request, the MSB attaches enough water equipment and personnel to the FSB to establish a water point if a water source is available in the vicinity of the BSA.

The water point team purifies and stores potable water. The MSB may attach 3,000-gallon semitrailer-mounted fabric tanks for emergency distribution. The MSB also has forward area water point supply systems to provide additional delivery help when required. The water point is colocated with the FSB's class I point whenever possible. This allows supported units to pick up water and class I supplies at the same time. When a water point moves, it dumps any water it cannot move or issue, and it moves its equipment with assets organic to the water section.

More information on the operation of a water point can be found in FMs 10-52 and 63-21.

CLASSES II, III (PACKAGED), IV, AND VII

Class II

Class 11 supply operations are limited to critical items since clothing and individual equipment are bulky and impede FSB mobility. Many class 11 items are not considered critical and are not normally stocked.

Items that are normally stocked are class II minimum essential combat ASL items. These are based on demand experience and the priorities of the tactical commander. These items normally include high demand mechanics' tools and protective items such as MOPP gear, boots, and helmets. Class II items may be packaged in lots designed to support a specific number of troops to speed receipt and issue. Intense combat and sustained operations in an NBC environment will increase the demand for class 11 items. As soon as tactical intentions are known arrangements should be made for scheduled resupply of required protective overgarments and other class II NBC-related items and equipment.

Soldiers returning to duty from medical facilities in the brigade area may be re-equipped by the supply company or, if appropriate, the gaining unit's support element. If the gaining unit has support elements operating in the vicinity of the medical facility (for example, a field trains in the BSA with the division clearing station), SOP may require the unit to bring required personal equipment when it picks up personnel returning to duty. If the gaining unit does not have elements operating near the division clearing station, medical personnel may be required by SOP to pick up clothing and essential protective gear at the supply point to provide minimum protection before a soldier is returned to duty. The medical facility cannot, however, issue individual weapons.

Packaged Class III

Packaged class III supplies are requested and distributed like class II and IV items. Items include fuel in 5-, 55-, and 500-gallon containers; packaged products such as lubricants, greases, hydraulic fluids; solvents in containers of 55 gallons or less; and cylinders of liquid and compressed gases. To maintain mobility, stockage is restricted to limited high demand items.

In terms of volume, fog oil requirements are likely to be the most significant class III packaged product. Large quantities of fog oil are required for smoke operations. Requirements are affected by the duration of smoke operations, weather conditions, terrain and environment, and time available. Distribution of fog oil from the BSA forward to the smoke generator locations has been a problem in heavy divisions. The smoke platoon has no transportation assets dedicated to resupply of fog oil. The FSB lacks the capability to provide unit distribution. The short-term solution is to use one of the chemical company decontamination squads to transport fog oil. When required, the squad will fill its TPU and load its truck with drums at the class III point to move fog oil. The long-term solution under development is to replace fog oil with diesel with an additive at first and JP-8 later.

The receipt, storage, and issue of packaged petroleum products and fuels are described in FM 10-69.

C1ass IV

Class IV supplies consist of construction and barrier materials. Because of the bulk of these materials and the limited transportation assets and mobility requirements of the FSB, the supply company handles little class IV materiel. It handles no construction materials. Barrier materials (including class V barrier materials) are transported by corps assets as close to the emplacement site as possible. This requires that grid coordinates, unit designations, and POCs be provided by the unit along with the supply request. In addition, the convoy commander must coordinate with receiving unit's field trains before moving to the emplacement site. This ensures the situation and requirement have not changed since the request was made. The

supply company does have the capability to handle limited quantities of survivability items class IV (A). These are items that can be emplaced by any unit. They include such common items as sandbags and concertina wire. Requests for survivability items are processed the same as class 11 items. Requirements for countermobility items (class IV (E)) are consolidated by the brigade engineer and passed to the brigade S4. He passes the requirement to the FSB to enter it in the supply system. These items are controlled through a controlled supply rate for the brigade.

The GS supply company in the corps will prepackage generic barrier packages like the one developed for the LID. (See Table 7-l). These packages can be requested by single NSNs.

Table 7-1. Light Barrier Preconfigured Unit Load (NSN 5660-01-224-8542)

NSN	Nomenclature	Quantity	Unit of Issue
5660-00-251-4482	Barbed Wire	1	Spool
5660-00-921-5516	Barbed Tape	20	Roll
5660-00-270-1587	Post, Fence	54	Each
5660-00-270-1589	Post, Fence	4	Each
8415-00-926-1674	Gloves, Barbed Tape, Wire Handlers	3	Pair
5120-00-926-7117	Mallet, Wooden	1	Each
8430-00-823-7451	Pin, Tent, 12-inch	133	Each

The corps engineer may have packages modified for METT-T. Requirements for these items will be heaviest during preparation for defense. Action should be taken to increase the flow of these materials as soon as the intention to defend is known. Along with other planning factors, detailed planning data on materiel and manpower requirements for countermobility and survivability are given in Chapter 1 of FM 101-10-1/2.

Class VII

Class VII items are often command-controlled because of their cost and importance to combat. The demand for these items depends on the intensity of battle. Replacement is based on combat losses reported through command channels to the division G3 and G4. This permits the commander to remain apprised of the operational status of subordinate commands. He can then direct the distribution of items to tactical units most critical to the success of the mission. Weapon systems, such as tanks, are intensely managed by WSRO. If the item is a WSRO-controlled weapon system, linkup of the item with its crew may occur in the BSA depending on the system and the factors of METT-T. In such cases, the support operations section coordinates with the brigade S1. More information on WSRO is in FMs 63-2-2 and 63-22.

Requests for class VII supplies follow the same flow as class H, packaged III, and IV supplies. Since class VII items are delivered to the FSB on an on-call, marked-for, and ship-to basis, there is no stockage of class VII

items at the FSB. The supply section sends requests to the DMMC. It also maintains a class VII yard. Items which are not throughput to the requesting units are stored or parked there until the units pick them up. Any combat vehicles awaiting pickup are integrated into the BSA defense whenever possible.

Request and Supply Flows

Supported units submit requests for class II, III (packaged), IV, and VII supplies to the supply section. If the supplies are on hand, they are issued (unless the request is for a command-controlled item), and the DMMC is notified of the issues. (If the item is command regulated, approval is required before issue.) Requests for items not on hand are consolidated and sent to the DMMC. The DMMC searches the stock asset records of the MSB S&S company. If the supplies are on hand, the DMMC sends an MRO to the MSB S&S company so the company can issue the supplies to the FSB supply company. The MSB TMT company transports the supplies from the MSB to the FSB supply point. If the supplies are not on hand at the, MSB, the DMMC requisitions the supplies from the COSCOM MMC. If the item is critical and available at another FSB and support priorities warrant, the MMC will notify the support operations branch. The branch will direct cross-leveling from the one FSB to the other. The flow of class II, packaged III, IV, and VII supplies is shown in Figure 7-3.

When items arrive, receiving personnel verify quantities, condition, item description, and markings of items received against shipping documents. Supplies are processed by priority designation. Items coded for a specific unit are put directly into the unit's vehicle using the truck-to-truck method whenever possible or put in a unit pile or parked in the class VII yard until pickup. Remaining items are put in item piles, parked in the class VII yard, or placed into storage in locations assigned by the DMMC or the supply company headquarters based on the established stock locator system.

Supply point distribution is normally used to issue class II, packaged III, IV, and VII supplies to supported units. Unit distribution is used to distribute supplies when the tactical situation permits and transportation assets are available. In some cases, when the tactical situation permits and transload or emplacement sites are near the BSA, ATP MHE maybe used to assist in handling class IV supply. In all cases, signed issue documents are sent to the DMMC along with the transportation and shipping documents.

Additional information on class II, IV, and VII items is in FM 10-27. Information on supply of packaged class III is in FM 10-69.

MAPS

Unclassified maps are stored at the MSB S&S company. The FSB supply section receives maps from the MSB S&S company. It provides supply point distribution to supported units according to established tables of allowances or to fill special requirements. Classified maps are handled through the brigade S2 section. They are not stored at the FSB.

BULK FUELS

Bulk fuels are not formally requested. The S4 of the supported brigade in coordination with the FSB support operations section submits a forecast for bulk fuel requirements of all division units in the brigade area to the DMMC. Forecasts are based on future tactical operations. The FSB petroleum section submits a daily status report on quantities received, issued, and on hand to the DMMC. If METT-T prohibits forecasting, standard prearranged shipments may be sent on a regular basis to the FSB. These would continue until the brigade S4 requests a change.

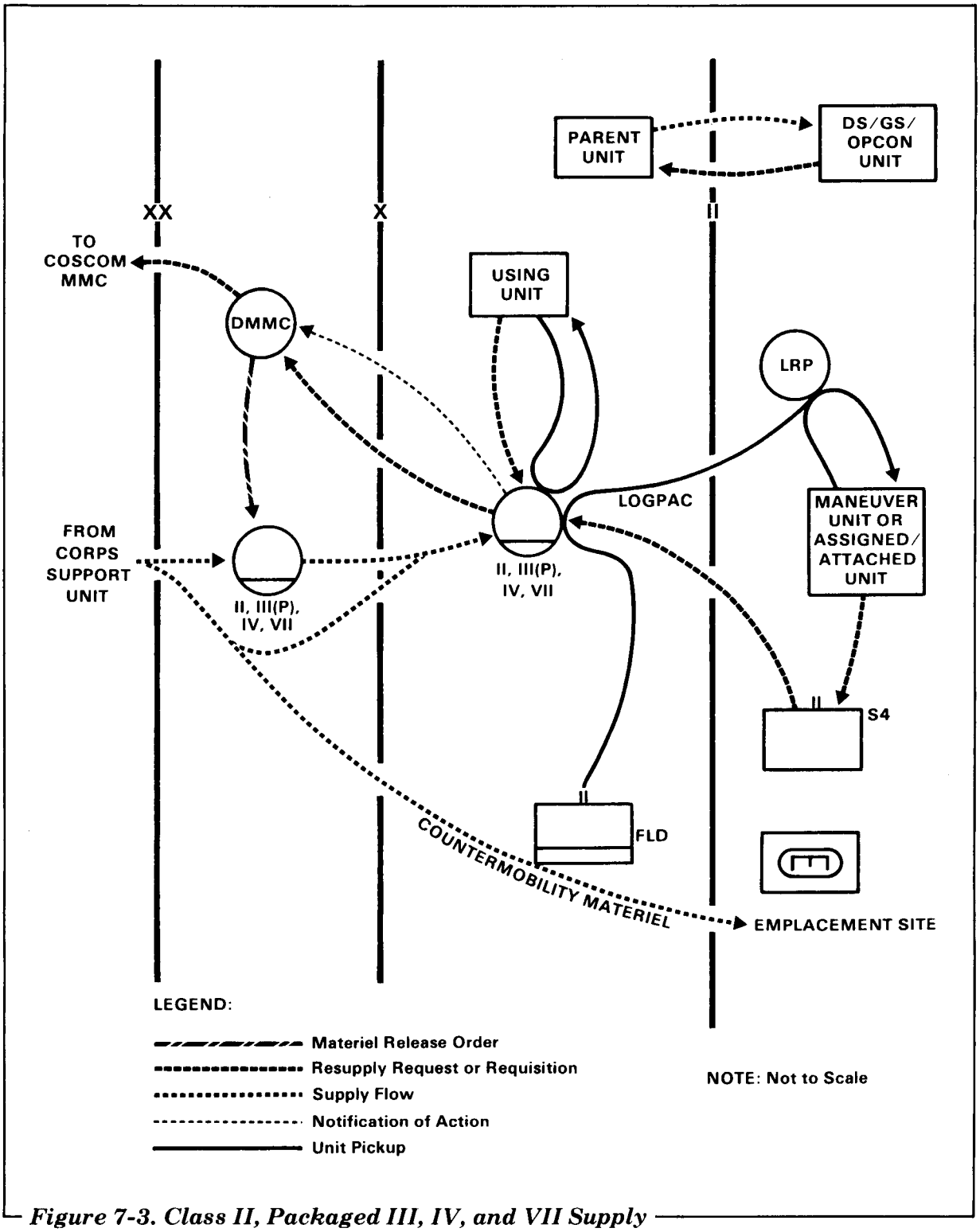


Figure 7-3. Class II, Packaged III, IV, and VII Supply

In any case, the DMMC uses the forecasts and status reports to compute bulk class 111 requirements for the division. The DMMC forwards the requirements to the COSCOM MMC. The COSCOM MMC coordinates the delivery of bulk fuel to the division according to the class 111 distribution plan. The flow of class III bulk fuels is depicted in Figure 7-4.

The FSB receives its bulk fuel directly from the corps and from the MSB. Deliveries are coordinated with the supply company commander through the FSB support operations officer. Upon delivery, the fuel is transferred from the corps or MSB tank semitrailers into the FSB's 5,000-gallon tankers. Fuel transfer operations are described in detail in FM 10-71. Truck tractor drivers may also drop off a full semitrailer at the FSB and pick up an empty one. Such trailer transfers save time but make it harder to keep track of the trailers. Therefore, it is important that schedules are coordinated to ensure empty FSB tankers are on hand when resupply tankers arrive. Receipt documents are signed for the amount and type of fuel received. Quantities received are posted to the stockage record and used to update the daily status report. Receipts are also abstracted daily to the monthly abstract of issues.

Fuel is provided to supported units for the most part using supply point distribution. A schedule for issue of bulk fuel to the division units in the brigade area at the FSB class III point is coordinated between the supported brigade S4, the FSB support operations officer, and the FSB supply company commander. Supported units pick up fuel in their organic refueling vehicles, and authorized unit representatives sign for quantities received. Issue documents are used to provide input to the daily status report. They are abstracted daily to the monthly abstract of issues.

The FSB petroleum section also operates a mobile filling station to provide retail service along the MSR in the BSA. It consists of a cargo truck mounted with a tank-and-pump unit whose two 600-gallon tanks are filled with diesel fuel. The truck tows a trailer with another 600-gallon tank filled with MOGAS. Fuel is dispensed directly to vehicles using the MSR, and local units can fill up their gas cans there. These smaller direct issues are signed for by the receiver on a form used to keep track of daily issues.

The FSB supply company may also move fuel forward to a tactical refueling point to ensure combat vehicles deploy to the battle with full fuel tanks. One technique which has worked in the field involves the use of FSB tankers in combination with maneuver battalion HEMTTs or TPUs. One tanker deploys with two TPUs or HEMTTs to form a refueling module that can service four combat vehicles at a time. Up to six modules can be setup together to service a task-organized company team, if sufficient tankers are available and the tactical situation permits. Refuel sites can be setup on MSRs either in a single site which can service up to 24 vehicles at a time (Figure 7-5) or in a split-site configuration to stagger march elements and reduce traffic congestion. The maneuver battalion, which is familiar with the area, is responsible for site selection and security. The battalion S4 coordinates with the FSB support operations section on where and when the refueling operation will be and how much fuel is required. In some cases, MSB or corps tankers could move to the site to top off the FSB's retail tankers. The primary benefit of this technique is speed. It takes 5 minutes for the FSB tanker driver and assistant driver to deploy one section of a 50-foot hoseline to the T-valve, start the pony engine, and be prepared to pump into the TPUs or HEMTTs. The other advantage of this system is that the FSB can support it with no

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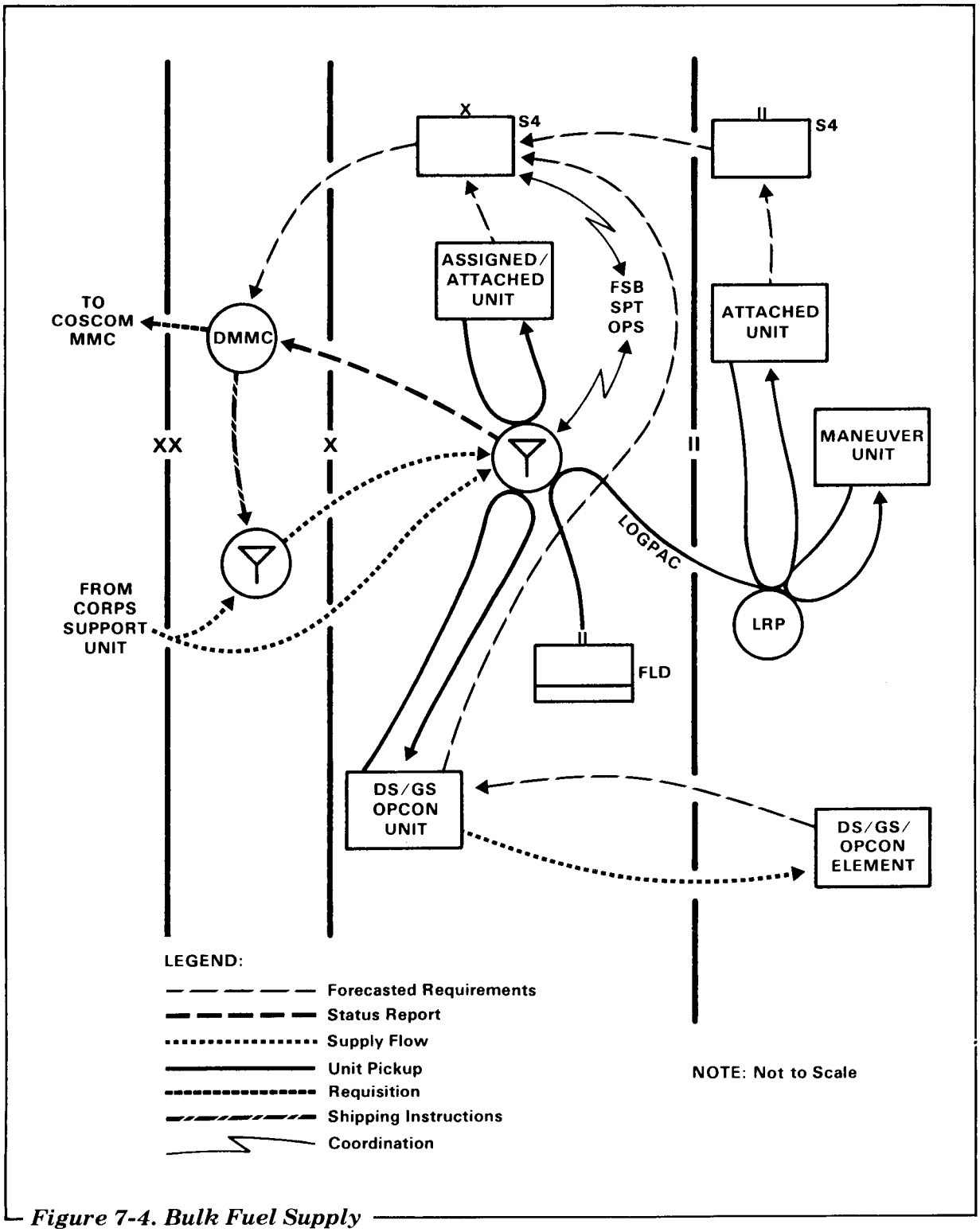
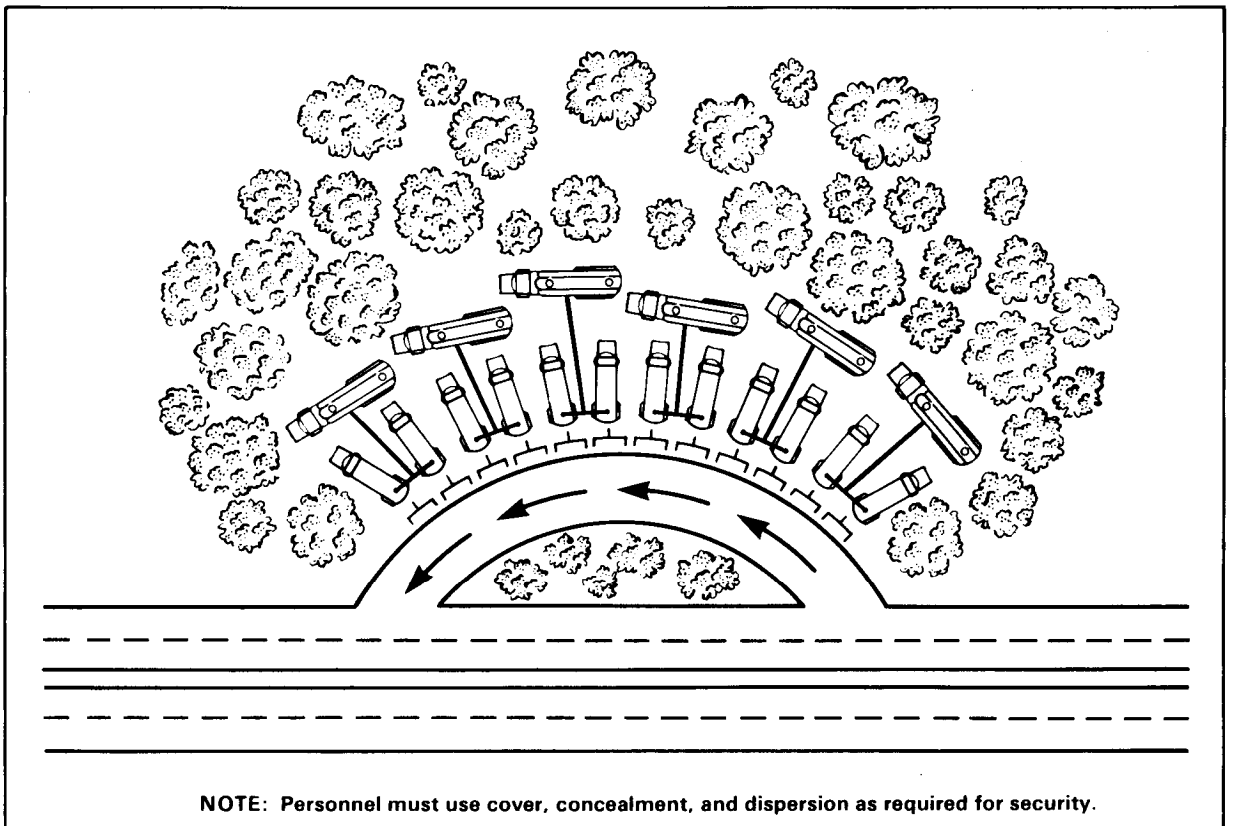


Figure 7-4. Bulk Fuel Supply



NOTE: Personnel must use cover, concealment, and dispersion as required for security.

Figure 7-5. Tactical Refueling Point

additional equipment authorizations. The T-valve, gate-control valve ends, and additional hoses can be obtained through the class IX system. (Note: Future equipment authorizations for the FSB supply company will include refuel-on-the-move equipment which will allow the retail fueling of individual vehicles.)

Due to mobility considerations, the FSB petroleum section has no collapsible fuel tanks. If storage requirements cannot be met with its tankers, a request is made through the DISCOM support operations branch for MSB or, if necessary, corps support. Corps elements may set up, maintain, and issue from bags in the BSA. Such an arrangement is most feasible in the offense. Not only are fuel requirements highest in the offense, but also there is not as much danger that the BSA will have to move quickly rearward, which would be difficult with filled bags on the ground.

Aviation units either in direct support or assigned or attached to the supported brigade are responsible for refueling their own aircraft. Forecasted requirements are developed by the aviation brigade and submitted to the DMMC. When a FARP is to be resupplied from the BSA, the aviation brigade S4, the MSB support operations section and S&S company, and the FSB support operations section and supply company will coordinate the operation. Typically, the MSB S&S company will position its jet fuel assets at the FSB class III point to meet this temporary requirement. (Once JP-8 is available, the MSB will not have designated JP-4 tankers.) The aviation units provide the

personnel, equipment, and initial supply of fuel for the FARP. MSB jet fuel assets located at the BSA class III point may also provide fuel to any aircraft in an emergency or as directed by higher headquarters.

CLASS V

The class V section operates one ATP in the BSA to provide support on an area basis to division and corps units in support of the division as directed by the division commander. Class V is based on a continuous refill system. Each battalion S4 transmits ammunition requirements for organic and attached units through the brigade S4 to the DAO representative at the BSA. Division units not assigned or attached to the brigade will coordinate directly with the DAO representative at the ATP. The DAO ensures that requirements do not exceed the CSR.

As much as possible, ammunition transloaded at the ATP is in combat configured loads. CCLs are predetermined ammunition packs based on mission requirements. CCLs make up 90 to 95 percent of the major user requirements. Requirements are expressed in the type and number of CCLs and any additional single-line items needed. The quantity required of each type of CCL and single-line item requisitions are forwarded by the DAO through the COSCOM MMC to the CSA or the ASP. The CSA reconfigures containerized and breakbulk ammunition into CCLs and ships them via corps ground and air transportation to the ASP and ATP. Non-CCL items are shipped to the ASP.

The ATP receives 75 percent of its ammunition directly from the CSA. CSA shipments to ATPs will primarily be for field artillery and engineer units. Their consumption can usually be predicted far enough in advance to fit the 12-hour or longer ground resupply cycle from CSA to forward ATP. The remaining 25 percent is received from the ASP. Of that 25 percent, approximately 60 percent is in the form of CCLS and 40 percent is single-line items. Resupply from the ASP can be accomplished in 2 to 6 hours by ground and 1 hour or less by air. On their first trip to a newly established ATP, corps drivers unhook and leave loaded semitrailers. When they replenish the ATP, they leave loaded semitrailers and take empty ones back to the corps. The ATP is typically resupplied by corps transportation assets four times a day. The flow of class V supplies to the FSB is depicted in Figure 7-6.

When class V supplies arrive at the ATP, the DAO representative inspects and inventories the shipment. The DAO representative signs for the shipment. He assigns a location in the ATP where the trailer is stationed to await the arrival of the receiving unit. Trailers should be 50 to 100 feet apart depending on the terrain. He ensures a copy of the shipping document is returned to the CSA and that receipt documents are forwarded to the DMMC. If a discrepancy exists on a document, the DAO representative adjusts the document and informs the DAO.

The brigade S4 coordinates with the FSB support operations officer and the supply company commander to establish a schedule for issue of class V supplies. When supported units show up at the ATP, they submit requests for ammunition completed and authenticated by the battalion S4. The DAO representative at the ATP validates all requests before requests are filled. Either ATP MHE or MHE on board supported unit vehicles is used to transload the ammunition from the corps transportation assets to unit vehicles. Signed receipt documents are forwarded to the DMMC. Supported units reorganize or, if necessary, reconfigure the ammunition they pick up at the ATP for further delivery forward to rearm points.

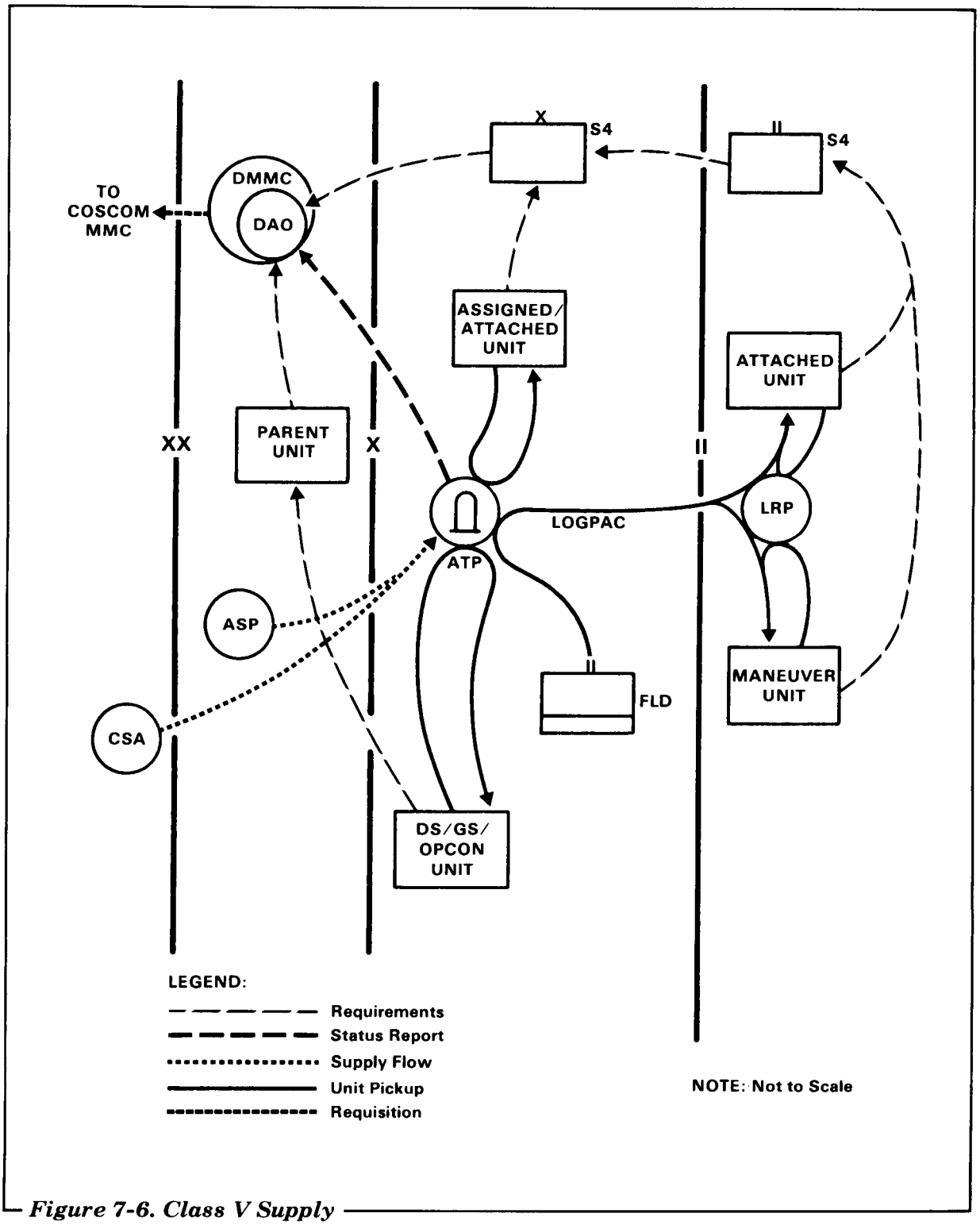


Figure 7-6. Class V Supply

Request time will be reduced through automated systems currently under development. The Standard Army Ammunition System is the automated system for the ammunition node (SAAS 4) and the management system (SAAS 1/3). SAAS 4 is addressed in DA Pamphlet 710-2-2. These systems will enhance responsiveness at echelons above division. Another system, SAAS-DAO, will eventually assist the DAO in management of the division's ammunition. It will provide a predictive ammunition resupply system based on data flows from tactical automated systems, manual reports, and division staff input. FM 9-6 has additional details on class V supply.

AERIAL RESUPPLY

Air resupply missions are categorized as preplanned or emergency. Preplanned missions make up the routine air transport service that is operated in support of preplanned or programmed requirements. Emergency air movements are initiated by requirements that cannot be determined in advance.

The movement control officer coordinates movement of supplies with the MSB and the FSB support operations section. If the movement control officer determines that air resupply is appropriate, he passes a request through the DTO to the G3. The G3 allocates helicopters on the basis of all aviation tasks by balancing combat, CS, and CSS requirements. The G4 must make sure the CSS role for helicopters is developed and considered concurrently with the tactical mission. The priorities for helicopter resupply should be addressed in the OPORD and used by the movement control officer.

Emergency requests are passed through supply channels the same as routine requests. However, they are also passed simultaneously through command channels from the user to the G3. The G3 approves emergency requests and tasks the aviation brigade to perform the mission. At the same time, the G4 coordinates with the DISCOM support operations branch so it can task the appropriate supply activity (the MSB S&S or FSB supply company) to prepare the shipment. A liaison officer from the AB coordinates with the movement control officer and the requesting unit. Prerigged loads of standard resupply packages may reduce response time for emergency air resupply. More details on requests for aerial resupply are in FMs 55-2 and 100-27.

Regardless of whether the mission is preplanned or emergency, if it cannot be performed by division helicopters for any reason, the request goes from the division TOC to the corps TOC. It is also coordinated with the tactical airlift liaison officer.

Selection and control of pickup and landing zones are extremely important. Pickup zone selection and control are the responsibilities of the supported unit, the unit which requests the mission, which may be the FSB supply company. The receiving unit, which is having the cargo delivered to it, is responsible for landing zone selection and control. As a general rule, pickup and landing zones must provide for 30 meters separation between utility aircraft and 40 meters between cargo aircraft. It must have no obstructions such as tree stumps, bushes, or man-made objects that could damage the helicopter rotor systems or the load itself. The number of aircraft that will be using it at one time must be considered along with its use after dark. If night resupply is scheduled, a larger area is normally needed. The surface condition should be solid enough to prevent a helicopter or load from bogging down. Blowing dust, sand, gravel, or loose debris can cause damage to people as well as equipment or aircraft. If the site has a slope of 15 degrees or more, a helicopter cannot land

on it. Also, when carrying an external load, a helicopter cannot rise straight up or come straight down. The avenue of approach and departure should be over the lowest obstacle in the direction of the prevailing winds. Helicopters can operate in a crosswind or tailwind of up to 15 knots.

The supported unit, which is normally the supply company, is also responsible for rigging and loading the cargo at the pickup point. This responsibility includes providing all equipment needed to rig cargo for sling-load operations. (Details on sling-loading are in FM 55-450- 1.) Receiving units are responsible—

- Providing trained ground crews to guide the aircraft in and unload\ derig the load.
- Providing ground security.
- Establishing radio communications with the helicopter and informing the aircrew of enemy activities.
- Marking the loading zone.
- Coordinating with the sending unit for the control and return of the rigging equipment.
- Preparing, coordinating, and inspecting backhaul loads and having them ready for hookup or loading when the aircraft arrives.

FIELD SERVICE OPERATIONS

GRAVES REGISTRATION

All commanders are responsible for unit-level graves registration. It is not provided for the brigade by FSB personnel. The FSB has one GRREG-trained soldier in the headquarters of the supply company. He is available to train brigade personnel in unit graves registration responsibilities in the handling of remains and their personal effects. Unit responsibilities include the initial search, recovery, initial identification, and evacuation of their deceased personnel to the nearest GRREG collection point. This point will normally be in the BSA. Unit GRREG responsibilities are detailed in FM 10-63-1.

The FSB does not include assets designed to operate a GRREG collection point. When the MSB S&S company is augmented with a GRREG platoon, it sends a team to setup a collection point in each BSA. In the initial stages of hostilities before the MSB receives the augmentation platoon, personnel will have to be pulled from other duties to operate a collection point. The decision on whom to pull will be made by the FSB CP and brigade rear CP. The GRREG NCO is norm-ally assigned the duties as chief of the GRREG collection point until the GRREG section arrives. The GRREG point receives remains from supported units, continues the identification process initiated by the unit, and arranges for evacuation to the DSA collection point. GRREG point personnel ensure the personnel recovering the remains have completed a DD Form 567 for each remains. The collection point maintains a record of remains processed.

The section chief requests required supplies through the supply section. Supplies include human remains pouches, personal effects bags, disinfectants, litters, surgical gloves and masks, fingerprint kits, and dental charts.

Once remains are identified to the extent possible and registered, they are evacuated to the DSA point as a backhaul mission by

vehicles bringing supplies (except class I) to the BSA. For morale purposes, remains should always be covered and screened from sight.

All remains found in a contaminated area should be handled as if contaminated. NBC tags should be attached to contaminated remains. If NBC tags are not available, a tag with a large "C" written on it is attached to each contaminated remains. Personnel handling contaminated remains must maintain an adequate level of individual protection. Contaminated remains are kept separate from uncontaminated remains. Due to the possibility of mass fatalities in an NBC attack, normal GRREG methods may not be feasible. Contaminated remains will not be evacuated unless they can be thoroughly decontaminated and checked by NBC personnel. In extreme cases, mass burials may be required. Requests are made through command channels. Permission for mass burials comes from the joint central GRREG officer in the theater after approval from the theater commander.

FMs 10-63 and FM 10-63-1 contain more information on graves registration operations. Details on the MSB's grave registration platoon is in FM 42-7.

SALVAGE

The supply section of the FSB supply company also operates the brigade salvage collection point. It is often located near the maintenance collection point. It receives all salvage materiel for which maintenance units do not have maintenance responsibility except for toxic agents, radioactive materials, aircraft, ammunition and explosives, COMSEC, and medical supplies.

Units in the brigade sector are responsible for bringing salvage materiel to the salvage point. When the salvage point receives materiel, it ensures the item and condition on the turn-in document are accurate. Technical publications may be used to identify items if available. Salvage personnel classify items as serviceable or unserviceable. If they cannot determine an item's identity or serviceability, maintenance personnel may perform a technical inspection. Items are segregated in the holding area as serviceable, reparable, or scrap. Serviceable items are protected from the elements as much as possible.

The DMMC should ensure general guidance on disposition has been issued. The salvage point, in turn, reports on the status of items to the DMMC. Foreign or captured materials are reported to the FSB S2/S3 for disposition instructions.

Normally, reparable items are sent to the maintenance base shop and serviceable clothing and canvas items to the laundry and renovation platoon of the COSCOM. Unrepairable items and scrap are evacuated through salvage channels to a property disposal unit.

CLOTHING EXCHANGE AND BATH

Clothing exchange and bath service is provided on an area basis throughout the division by the MSB S&S company when it is augmented with a CEB platoon. The platoon includes three sections, each of which can operate a CEB point. The location of the three points depends on METT-T. If circumstances permit, a point may be moved as far forward as a BSA.

CEB points provide showers from portable bath units, delousing service, and exchange of soiled clothing for laundered clothing. CEB operations are also integral to decontamination. The FSB support operations section coordinates with the supported brigade S4 to schedule CEB. As a planning

factor, CEB operations should be scheduled for once each week. Supported units coordinate with the brigade S4 for CEB and provide soldiers to guard valuables and assist with clothing exchange. More information on clothing exchange and bath operations can be found in FM 10-280. Information on the MSB's CEB platoon is in FM 63-21.

CONSIDERATIONS FOR VARYING TACTICAL SITUATIONS

OFFENSE

The supply goal of the FSB preparing for an offensive operation is to ensure brigade elements begin with their basic loads of all classes of supplies to sustain the attack. It is equally important to have the FSB elements topped off and positioned far enough forward to enable them to quickly resupply the brigade once basic loads are depleted. The two most critical supply categories will be class III and V. In cases where full loads are not expected to be sufficient to sustain the battle, the supply company commander, with the support operations officer, may coordinate for additional stockage at predesignated areas. POL stockage points will require MSB or corps assets. FSB elements must remain prepared to move quickly as the brigade moves forward.

Predetermined emergency resupply packages of ammunition, POL, and in arid and tropical environments, water may be developed by the FSB in coordination with the brigade and task force S4s. Emergency procedures should also be identified in advance. These may involve the supply company automatically requisitioning emergency packages or the supported elements using radios to request them. Emergency aerial resupply should be used whenever possible in these conditions.

Frequent movement will be critical in the offense. Supply assets must be prepared to move with the brigade. Supported elements do not have the assets to travel extensive distances to the rear to pick up supplies. Careful coordination will be required to minimize the stress on MSB and corps assets caused by these frequently moving forward supply points.

As mentioned in Chapter 2, other supply considerations in the offense are reliance on MREs, use of captured and found supplies, and increased requirements for obstacle-breaching and bridging materiel.

DEFENSE

Stockpiling of supplies may be required in defensive operations. Successive defensive positions should be coordinated with brigade planners. These positions will be used to stockpile critical supplies. Plans should be made to destroy stockpiles if necessary. Though class 111 usage may be lower than during an attack (depending on the nature of the defense), class V use is likely to be higher, especially in the static defense. In a static defense, requirements for barrier materials will also be high in the preparation stage.

RETROGRADE

Supply company elements begin to move to the rear before combat units. This minimizes interference with maneuver. It also allows them to set up supply points along the route of withdrawal. Noncritical items will be identified by the supply company along with the support operations section. These may include class I, II, IV, VI, and VII items. Any forward stocks of these items should be withdrawn immediately. Replenishments of these items should not be delivered forward. Supplies (except class VIII) which cannot be evacuated should be destroyed.

CHAPTER 8

Maintenance Company

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ORGANIZATION AND MISSION

The maintenance company is a critical component in fixing the force. To counter a potential superiority in weapon systems fielded, the brigade must be able to make the most of each system it has. The maintenance company provides direct support maintenance and common repair parts service to supported units in the brigade area. The company is organized as shown in Figure 8-1. The organization varies with the structure of the supported force. The company consists of a base structure with a company headquarters, maintenance control section, service/recovery section, class IX support section, automotive/armament platoon (which includes an artillery system support team), and ground support equipment platoon. In addition, the company includes a variable number of system support teams. Each team is designed to support a tank or mechanized infantry battalion. The company receives one team for each maneuver battalion assigned to the brigade. As discussed later in this chapter, these teams form the bases for MSTs normally sent to work out of the maneuver trains areas.

The company performs the following functions:

- Provide DS maintenance to supported elements in the brigade area. This includes repair of communications, engineer, power generation, quartermaster, chemical, and utilities equipment. It also includes repair of artillery, missiles, small arms, tank turrets, track and wheel vehicles, and field artillery systems.
- Provide limited backup recovery assistance to supported units when required.
- Provide technical assistance to supported units that provide unit maintenance within the brigade.
- Provide technical supervision of supply of PLL items for supported units.

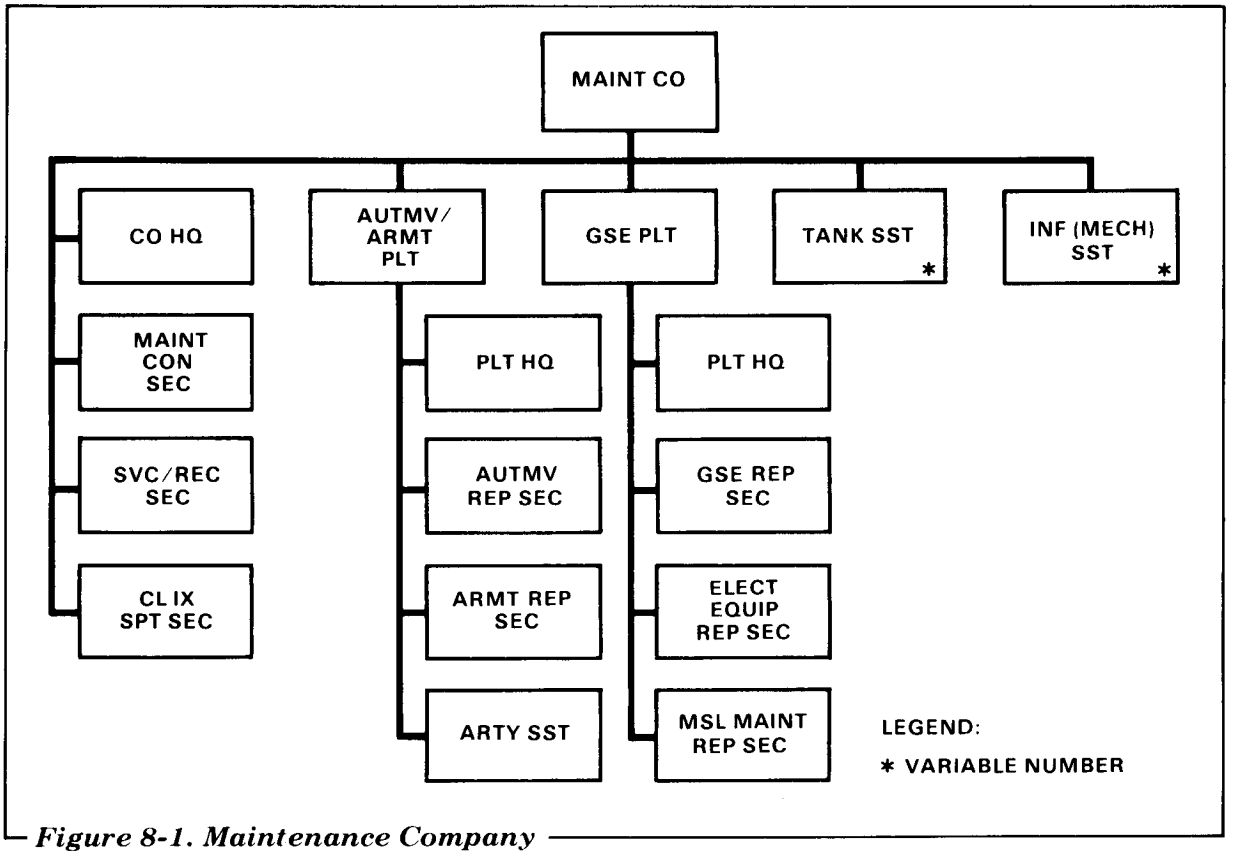


Figure 8-1. Maintenance Company

- Maintain an ASL to support the items stocked in combat PLLs of supported units. (The DMMC will also include other repair parts for which a significant demand is expected on the ASL.) The class IX manager in the DMMC determines the ASL for the FSB.
- Provide reparable exchange service for selected common repair parts.

PRINCIPLES

FORWARD SUPPORT

The overriding goal in FSB maintenance operations is to provide forward support to return combat systems to the battle as soon as possible. Repairing equipment forward reduces transportation requirements and time. It maximizes the availability of equipment to the user. The FSB maintenance company has been given the capability to perform the mission operations well forward. Whenever possible, equipment is repaired on site. However, this is not always possible and practical. The tactical situation, extent of damage, or availability of people, parts, or tools may make recovery or evacuation more desirable.

REPAIR TIMELINES

The decision on whether to repair or recover to a maintenance site must be made on a case-by-case basis. As a tool to help

make this decision, timelines may be established. Sample timelines are shown in Table 8-1. If the time to repair an item once all repairers, tools, and repair parts are on hand exceeds the specified time, recovery or evacuation should be considered. Timelines may be set by SOP or by logistics or combat commanders for specific operations. All personnel—users, maintainers, and maintenance managers—must always bear in mind that these timelines must be flexible. If they are not accomplishing their purpose, which is to maximize equipment available to the user, they must be changed.

Table 8-1. Maintenance timelines

LOCATION	HOURS
On site	2
UMCP	6
BSA	24
DSA	36

CENTRALIZED CONTROL

The maintenance company commander with assistance from the maintenance control officer has control over all operations for which they are responsible even though support assets may be decentralized. They must be aware of the total DS maintenance work load across the brigade area as well as the available assets and their locations. When the situation changes, the maintenance control officer shifts resources to minimize backlogs. When combat units reorganize into task forces for specific missions, maintenance resources must be reorganized.

BATTLE DAMAGE ASSESSMENT AND REPAIR

BDAR techniques expedite return of a damaged piece of equipment to the current battle. Battle damage assessment is used to determine the extent of damage to equipment. Equipment is classified according to the type of repair required, and plans are made for repair of each item. Priorities for repair of battle damaged items are usually–

- Most essential to immediate mission.
- Reparable in the least time.
- Reparable but not in time for immediate mission.

Battle damage repair involves use of emergency repair techniques to return a system to a full or partial mission capability. BDR is normally used only in combat at the direction of the commander. It includes—

- Shortcuts in parts removal or installation.
- Modifying components from other items.
- Using parts from a noncritical function elsewhere on an item to restore a critical function.
- Bypassing noncritical components to restore basic function capability.
- Cannibalization.
- Making parts from kits or available materials.
- Using substitute fuels, fluids, or lubricants.

Armored and fuel systems are primary candidates for BDR in combat. When the mission is over, standard maintenance procedures are used to repair the item.

CONTROLLED EXCHANGE

Controlled exchange involves the removal of serviceable parts, components, and assemblies from unserviceable, economically reparable equipment. It is done in strict compliance with the division commander's published guidance. The goal is to restore a system to mission capable status.

CANNIBALIZATION

Cannibalization is the authorized removal of serviceable parts, components, and assemblies from uneconomically reparable equipment. During combat, cannibalization may be a valuable source of critical repair parts. Commanders should designate the conditions, items, and level of repair for cannibalization. Cannibalization operations are controlled by the designated commander.

RECOVERY AND EVACUATION

Items that cannot be repaired on site must be recovered to the appropriate maintenance site. Recovery is the process of retrieving or freeing immobile, inoperative, or abandoned materiel and returning it to operation or to a place where it can be repaired, evacuated, or otherwise disposed of. Self-recovery and like-vehicle recovery should be used whenever possible. When this is not possible, the right vehicle should be used. Wreckers are used for wheel vehicles, but they may also be used for light track vehicles. When recovery requirements for a supported unit exceed its capability, the FSB maintenance control officer will provide assistance. When all recovery capability is exceeded, the unit commander may have to designate priorities for recovery. Usually combat vehicles are recovered before tactical vehicles.

Evacuation is a coordinated effort between maintenance and transportation elements. It involves moving an item from a collection point to another logistics activity for repair, cannibalization, or other disposition. HETs for heavy equipment evacuation (and other missions) are located in the MSB for centralized control. Whenever possible, units locate UMCPs close to MSRs to allow HETs to pick up unserviceable equipment there. The maintenance company, with assistance from supported units, identifies equipment for evacuation. It includes unserviceable items beyond the FSB's repair capability, unserviceable assemblies, and abandoned items. Recovery and evacuation principles are covered in depth in FMs 20-22 and 43-5.

SECTION FUNCTIONS

COMPANY HEADQUARTERS

The company headquarters provides command and control for accomplishment of the company's mission. It provides unit-level administrative, supply, and maintenance support to elements of the company. Unit supply operations are discussed in FM 10-14 and unit maintenance in FM 43-5. FM 10-63-1 covers unit GRREG responsibilities. C3 considerations for the headquarters are covered in Chapters 3 and 4. A particular concern for the maintenance company headquarters is C3 for MSTs operating at UMCPs and other maintenance teams performing onsite repairs. As discussed below, the company normally retains command and control of these teams and must ensure that it maintains communications with them at all times.

MAINTENANCE CONTROL SECTION

The maintenance control officer is the main assistant to the company commander for DS maintenance support. With the other members of his section, he provides the control, coordination, and overall supervision of the maintenance shops, MCPs, and MSTs. The section performs job ordering and equipment accountability. It is also responsible for quality control. Maintenance management is supported by SAMS software run on the TACCS device in this section.

The section includes an inspection element which is responsible to the maintenance company commander for quality assurance, technical inspections, and quality control for all DS maintenance functions. The inspectors

also serve as the nucleus for BDA teams. These teams may go to UMCPs or on-site locations to make determinations on repair and evacuation.

The maintenance control officer also dispatches MSTs to provide forward support. Assigned SSTs are integrated into the maintenance company under the control of the maintenance control officer. He creates MSTs tailored to support task-organized maneuver forces.

SERVICE/RECOVERY SECTION

The recovery supervisor advises the maintenance control officer on recovery and other services provided by the section. Support provided by the section includes—

- Welding.
- Metal body repair.
- Heavy lift capability for shop operations.
- Recovery of organic equipment.
- Limited recovery assistance to supported units.
- Limited evacuation.

CLASS IX SUPPORT SECTION

This section provides class IX supply support. It receives customer requests, does an initial edit, and fills requests from on-hand stocks or passes a requisition for an item not on hand to the DMMC. The section also provides—

- Technical assistance to supported units.
- Receipt, storage, and issue of ASL and NSL items.
- Preservation and packaging. This function includes repair of containers to protect stocks from damage during storage and shipment.

The TACCS device to run SARSS-1 for class IX is located in this section.

AUTOMOTIVE/ARMAMENT PLATOON

In addition to the headquarters, this platoon consists of two sections and an SST—the automotive repair section, armament repair section, and an artillery system support team.

The automotive repair section repairs transmissions, engines, electronics items, hydraulics, and steering controls on track vehicles. It also works on the engines, power trains, and chassis components of wheel vehicles. The armament repair section performs the following repairs:

- Tank turret—turret; cupola; loading, firing, and recoil mechanisms.
- Fire control system—laser rangefinders, electronic ballistic computers, tank thermal sights.
- Fire Control instrument—binoculars, telescopes, aiming circles, rangefinders.
- Artillery—self-propelled weapons, including firing and breech mechanisms.
- Small arms—rifles, mortars, pistols, machine guns.

The artillery SST is designed to provide DS maintenance to a division direct support artillery battalion. It repairs automotive, artillery, power generation, fire control and communications equipment.

The bulk of the two sections normally work out of the base shop. However, the maintenance control officer may include elements of the platoon in MSTs or designate assets to operate at an MCP or to perform on-site repairs or technical assistance. The artillery SST may be tailored and work out of the

artillery battalion UMCP, although the company retains command and control of the team.

GROUND SUPPORT EQUIPMENT PLATOON

This platoon consists of a headquarters, GSE repair section, electronics repair section, and missile repair section. As with the sections of the automotive/armament platoon, elements may operate in the base shop, at an MCP, on site, or as part of an MST.

The GSE repair section performs DS maintenance on power generators, construction equipment, air conditioner units, refrigeration equipment, heaters, utility packs, water purification units, and chemical equipment. The electronics repair section repairs radio receivers and transmitters, teletypewriters, facsimile machines, switchboards, and special electronic devices such as infrared weapon sights, searchlights, and mine detectors. The missile repair section performs limited DS maintenance on TOW and Dragon missile systems, trainers, night sights, battery chargers, and systems peculiar test equipment.

SYSTEMS SUPPORT TEAMS

The tank and mechanized infantry SSTs perform the same types of repair, though capabilities differ to match equipment densities of the associated battalions. These teams provide the core for the MSTs typically sent to operate out of battalion task force UMCPs.

OPERATIONS

PLANNING

Maintenance planning in the FSB anticipates personnel, equipment, and repair parts requirements and matches them against available resources. The goal is to manage limited resources to return the maximum number of critical items to the battle. Planners must recognize limitations in armor protection, mobility, and communications which influence the company's capabilities. Planning considerations include—

- Tactical situation.
- Time and distance factors.
- Backup support responsibilities.
- Command support priorities.
- Critical weapon systems and repair parts.
- Proposed MCP locations.
- Maintenance timelines.
- Work load across the brigade area.
- Cannibalization and controlled exchange policies.

On the basis of these considerations, the maintenance control officer assists the company commander in planning support along with the FSB support operations officer. Together they must determine which maintenance assets will operate at the BSA base shop, MCPs, UMCPs, and on-site locations. This determination is a continuing process, not a one-time decision. Task organizing of tactical units and changes in the number and types of CS and CSS units in the brigade area require changes in maintenance configuration.

When combat battalion task forces are cross-attached to another unit (usually another brigade), the associated MST (with a slice of assets from the MSB) is typically attached to the supporting maintenance element (the FSB or FAST maintenance company). When a supported CS or CSS unit

is deployed outside the brigade area, a share of the maintenance company will also likely accompany the unit. This will be coordinated with the DISCOM support operations branch through the FSB support operations section.

One of the key planning processes for the maintenance company is formation of maintenance support teams. Teams to provide DS maintenance to maneuver battalions must be task organized in most cases. This is because the tank and mechanized infantry system support teams consist of assets to support pure armored or mechanized infantry battalions, while the brigade rarely fights pure battalions. The brigade commander normally task organizes maneuver battalions to perform the assigned mission. This requires the maintenance company commander to create tailored MSTs.

The FSB maintenance company is assigned SSTs on the basis of the battalions assigned to the brigade. The company receives one tank SST for each armored battalion and one mechanized infantry SST for each mechanized infantry battalion. The teams assigned to the company along with the platoons organic to the company contain the pool of assets available to the company commander to form MSTs. Normally, the SST is the core for forming an MST. However, the MST should only have the number and types of repairers and equipment required to support the particular battalion task force. Remaining SST assets not required to support that task force maybe used to augment base company capabilities. If an SST does not have all of a specific capability required to support the task force, additional assets to form the MST may come from the base company or another SST.

The following is one example of how MSTs may be formed to support an armored brigade with two armored battalions and one mechanized infantry battalion. To perform the mission in this example, the brigade commander has decided to task organize his battalion task forces as follows:

- One mechanized infantry balanced task force with the infantry battalion HHC, two tank companies, two rifle companies, and the antiarmor company.
- Two armored heavy task forces with three tank companies and one rifle company in each task force.

To support these task forces, the maintenance company commander would have the assets of two tank SSTs and one mechanized infantry SST in addition to the base company. SST personnel are shown in Table 8-2.

Table 8-2. Personnel in L-edition TOE system support teams

	Tank SST	Mechanized Infantry SST
29E C-E Radio Rep	1	2
41C Fire Con Inst Rep	2	0
29N Telephone Cen Ofc Rep	0	1
45B Small Arms Rep	1	1
45G Fire Con Sys Rep	1	0
45K Tank Turret Rep	9	1
52D Pwr Gen Eq Rep	1	1
63H Trkd Veh Rep	17	10
63J QM/Cml Eq Rep	1	1
63W Wh Veh Rep	4	4
Total personnel	37	21

The teams also include associated TMDE, tools, vehicles, and other required equipment. TOES are subject to change. The assets available to the commander may differ, but the principles employed in this example remain the same.

In this case, the maintenance company commander could choose to task organize the MSTs as shown in Figure 8-2. In addition, each team would have a set of vehicles from one of the SSTs. The team would also get the tools and equipment associated with the types of repairers in the team.

In this example, each tank SST was reduced from 37 to 32 personnel, while the mechanized infantry SST was increased from 21 to 31 to support the addition of tanks to the task force. The commander decided in this case that support could be provided using only the assets of the SSTs without taking any from the base company.

Two other common task force structures and sample MST personnel numbers are shown in Table 8-3.

The commander must keep in mind that these examples represent only one possible set of MSTs. In forming the optimal MSTs for his situation, the commander must consider a variety of factors to include:

- Tactical situation.
- Supported task force repair capabilities.
- Repair assets available to the maintenance company.
- Length of LOCs.
- Recovery and evacuation capabilities.
- Specialized tool and test set requirements and availability.
- Time constraints.
- Parts availability.
- Risk assessment.
- Mobility requirements.
- communications.
- Security requirements.

One point to emphasize is that the SST serves as the core for an MST. Its structure should be retained as much as possible. Moving personnel from one team to another should be minimized. In particular, team leaders should remain with the core of their associated SSTs. Further, each team should habitually support the same base battalion. This allows a team leader to develop a working relationship with one battalion HHC. Keeping the same core of an SST also leads to strong command and control lines within the MST.

Commanders must plan other aspects of MST use besides the composition of the team. The commander, normally through the maintenance control officer, must coordinate with the brigade S4 and task force S4s and BMOs for employment of the teams. One detail they must work out is how the team will receive its required support, including administrative, unit logistics, and class IX support. If the team is expected to be at the UMCP for an extended time, the maintenance control section should coordinate with brigade and battalion S4s to have the supported task force feed the team and provide class 111 and V and limited class 11 and IV support. The maintenance control section must also ensure production and quality control responsibilities are specified. Usually the maintenance control officer has work order control and the team chief is responsible for quality control.

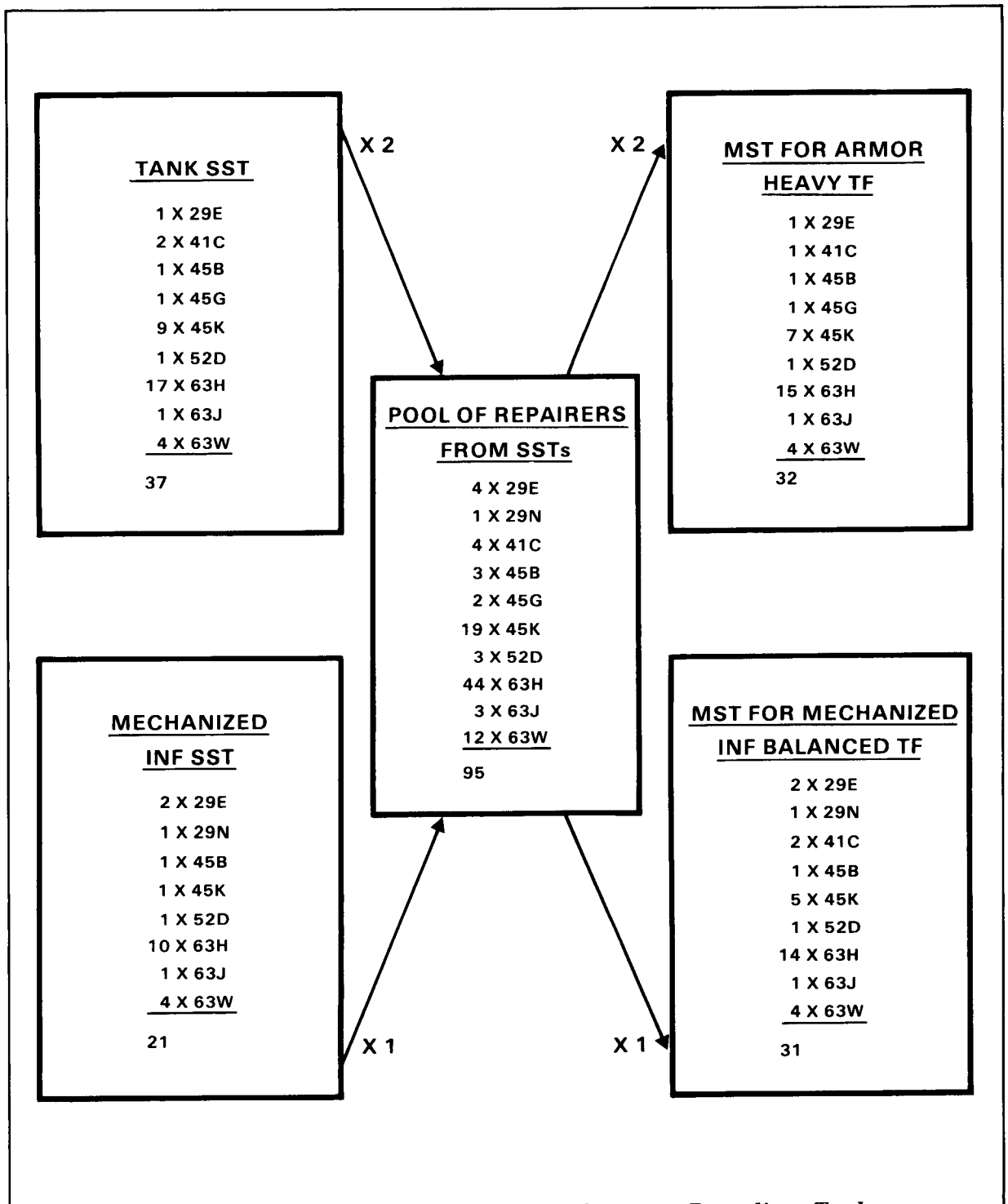


Figure 8-2. Sample Formation of MSTs to Support Battalion Task Forces in an Armored Brigade

Table 8-3. Sample MSTs to support representative battalion task forces

Mechanized Heavy Task Force	Sample MST
Mech Inf Bn HHC	2 x 29E
1 Tank Co	1 x 41C
3 Rifle Co	1 x 45B
Anti-Armor Co	4 x 45K
	1 x 52D
	14 x 63H
	1 x 63J
	3 x 63W
	27

Armor Balanced Task Force	Sample MST
Tank Bn HHC	1 x 29E
2 Tank Co	1 x 41C
2 Rifle Co	1 x 45B
	1 x 45G
	5 x 45K
	1 x 52D
	14 x 63H
	1 x 63J
	3 x 63W
	28

BASE SHOP OPERATIONS

The base shop in the BSA consists of maintenance company elements not employed at MCPs, UMCPs, or task force field trains. The shop is responsible for receipt, inspection, control, repair, and coordination of evacuation of equipment received from supported units.

The shop must be laid out to allow free flow of work and to minimize the required movement of repair parts, tools, and equipment. In addition to considering the positioning tenets listed in Chapter 5, the company commander should, whenever possible, try to lay out the shop so that—

- Supply storage areas are accessible to trucks.
- The service section provides easy access from all shop locations.
- Electronics and instrument repair can be done in a dust-free area.

- Vehicles may be dispersed near maintenance areas but located to facilitate control and security.
- The control and inspection elements are near the area entrance.
- The supply storage and RX areas are near the entrance to keep traffic out of the work area.

Figure 8-3 shows a sample base shop layout in a field environment. The same principles apply to shops in a built-up area. For example, the control, inspection, and supply activities should be near the entrance to the shop area, and elements with related or complementary functions should be near each other. Where buildings are sound and road systems adequate, use of buildings is preferred. They may provide better work areas and concealment.

Shop procedures will be outlined in the maintenance internal SOP which should be based on guidance in DA Pam 738-750. An external SOP for use by supported units should also adhere to those guidelines.

The management activities vary depending on the system available in the division. TAMMS is a manual system described in DA Pam 738-750. The MRM system provides management reports for the company commander and MCS. Some of the source data input for this system is automated. Policies are prescribed in TM 38-L09-11. SAMS-1 replaces MRM and all associated source data automation systems. It also provides a daily interface with SARSS-1. SAMS-1 procedures are in AISM 18-L21-AHN-BUR-EM.

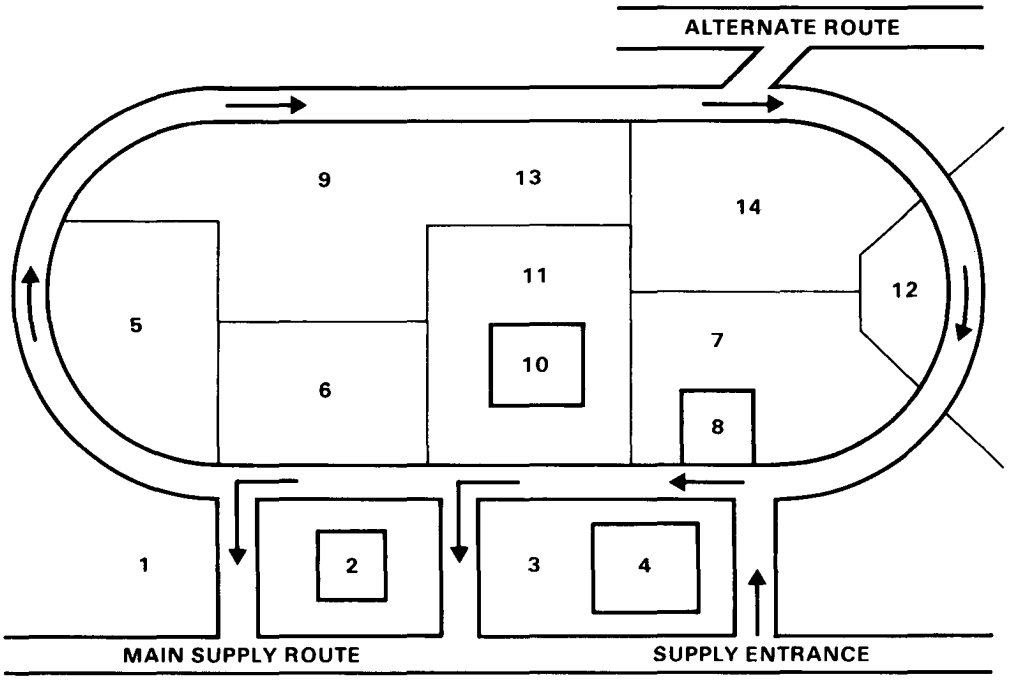
MAINTENANCE COLLECTION POINTS

MCPs operated by the maintenance company receive unserviceable equipment from supported units. The company can operate up to two MCPs. One is at the base shop. A forward moving tactical situation may make another point forward of the BSA advisable to reduce recovery distances. At the MCPs, maintenance company personnel assigned by the maintenance control officer perform large scale BDA. Controlled exchange and cannibalization may be used to maximize operational systems. Contaminated equipment must be segregated within the MCP. When supported units cannot recover equipment to an MCP, they should be instructed to recover items as close as possible to an MSR to await maintenance support. Security must be provided by or arranged for by the unit, and accurate location information must be provided to the MCS.

US equipment found by units in the brigade area will also be turned in to the MCP. There, maintenance personnel inspect it and make decisions on whether to repair or evacuate. The DMMC provides the disposition instructions. It may direct that the item be turned in to a supply unit or evacuated to a corps facility.

MAINTENANCE SUPPORT TEAMS

MST operations present the company commander, maintenance control officer, and MST leader and members with the same challenges faced by any other small unit in a tactical environment. Besides performing the technical mission, the team must have the mobility to get to the repair site and move with the supported unit. It must also be protected on the way to and from the site and while at the repair site. The team must be proficient in self-protection techniques during a move as discussed in Appendix A. Once it arrives at the UMCP, the team will tie into the defense plan under the control of the BMO. All elements involved in the operation must be aware that the team is a group of repairers with limited self-defense assets, and time spent in defense activities reduces maintenance mission time.



1. PARKING AREA (REPAIRED ITEMS READY FOR RETURN TO USER)
2. INSPECTION POINT
3. SUPPLY PARKING
4. REPARABLE EXCHANGE
5. MAINTENANCE CONTROL SECTION
6. PARKING AREA (INSPECTION AND AWAITING SHOP)
7. STORAGE SECTION
8. SUPPLY OFFICE
9. AUTOMOTIVE/ARMAMENT PLATOON
10. COMPANY COMMAND POST
11. COMPANY HEADQUARTERS
12. GROUND SUPPORT EQUIPMENT PLATOON
13. SERVICE AND RECOVERY SECTION
14. PARKING AND STORAGE AREA FOR ITEMS TO BE EVACUATED

NOTE: Cover, concealment, and dispersion must be used.

Figure 8-3. Sample Base Shop Layout

For operations other than self-defense, command and control of the teams is retained by the company commander. However, control may be threatened by changes in the tactical or maintenance situation or communications limitations. Therefore, SOPS must exist and MSTs must be prepared to conduct independent operations when required. Though the company retains control of the team in most cases, while it perates in the UMCP, the BMO normally sets priorities for the equipment to be repaired.

MSTs require adequate communications capability to assist in security, report the DS

maintenance situation to the MCS, and request additional support or repair parts from the base shop. Whenever MST organic radio capability is inadequate, additional support may be available from the supported unit. MSTs also carry a limited amount of repair parts with them. Parts carried are based on past experience and work load.

The maintenance company SOP should spell out MST procedures in detail to preclude having to develop them for each mission. SOPS should cover organization of teams for recurring situations, command relationships, assignment of work order numbers, hand receipting and repair parts procedures, and recovery and evacuation guidelines.

ON-SITE OPERATIONS

When unit maintenance resources are inadequate, MSTs or other maintenance teams formed from the maintenance company may be sent to perform on-site repairs. Many of the considerations are the same as those identified for MSTs working out of an UMCP. They include mobility, security, adequacy of tools and parts, and communications. Procedures for requests for such support must be spelled out in SOPS and available to all units supported by the FSB. Requests should include the following information:

- Identification of unit and equipment.
- Location (grid coordinates).
- Nature and extent of damage.
- Repair parts required.
- Security and NBC considerations.
- Recommended route of approach.
- Pickup points for unit guides, if required.

Once the team arrives at the site, the team chief makes a BDA and decides whether to repair on site or recover to an MCP. Maintenance timelines and the tactical situation are primary determinants. If on-site repair is feasible, the team repairs the item and returns it to the user. If recovery is required, short-tracking or other expedient self-recovery and like-vehicle recovery is considered before a recovery vehicle is committed.

REPAIR PARTS SUPPLY

The class IX support section of the maintenance company receives, stores, and issues repair parts. The section may maintain a quick supply store for customers to get low-dollar, high-demand, consumable parts (light bulbs, wiper blades, common bolts) without formal requests. RX of selected reparable is handled as a simple exchange of an unserviceable for a serviceable item.

All requests are edited and filled when parts are available. The section also notifies the DMMC of the issue. If the part is not available, the section passes a requisition to the DMMC. The DMMC updates required records. If the item is available in the MSB class IX section, the DMMC passes an MRO to the MSB which provides the item to the FSB. [f the MSB does not have the item, the DMMC passes a requisition to the COSCOM MMC. The DMMC also specifies the items and quantities of class IX items to be located in the brigade area. This decision is based on the PLLs of supported units and the mobility requirements. To ensure that FSBs meet mobility requirements, stock age in the maintenance company is restricted. Stockage parameters for forward direct support units are listed in AR 710-2. The remaining stocks of the ASL are maintained in the DSA. Critical items are transported by air whenever possible.

The flows of class IX requests and stocks is shown in Figure 8-4. The aerial resupply discussion in Chapter 7 also applies to class IX.

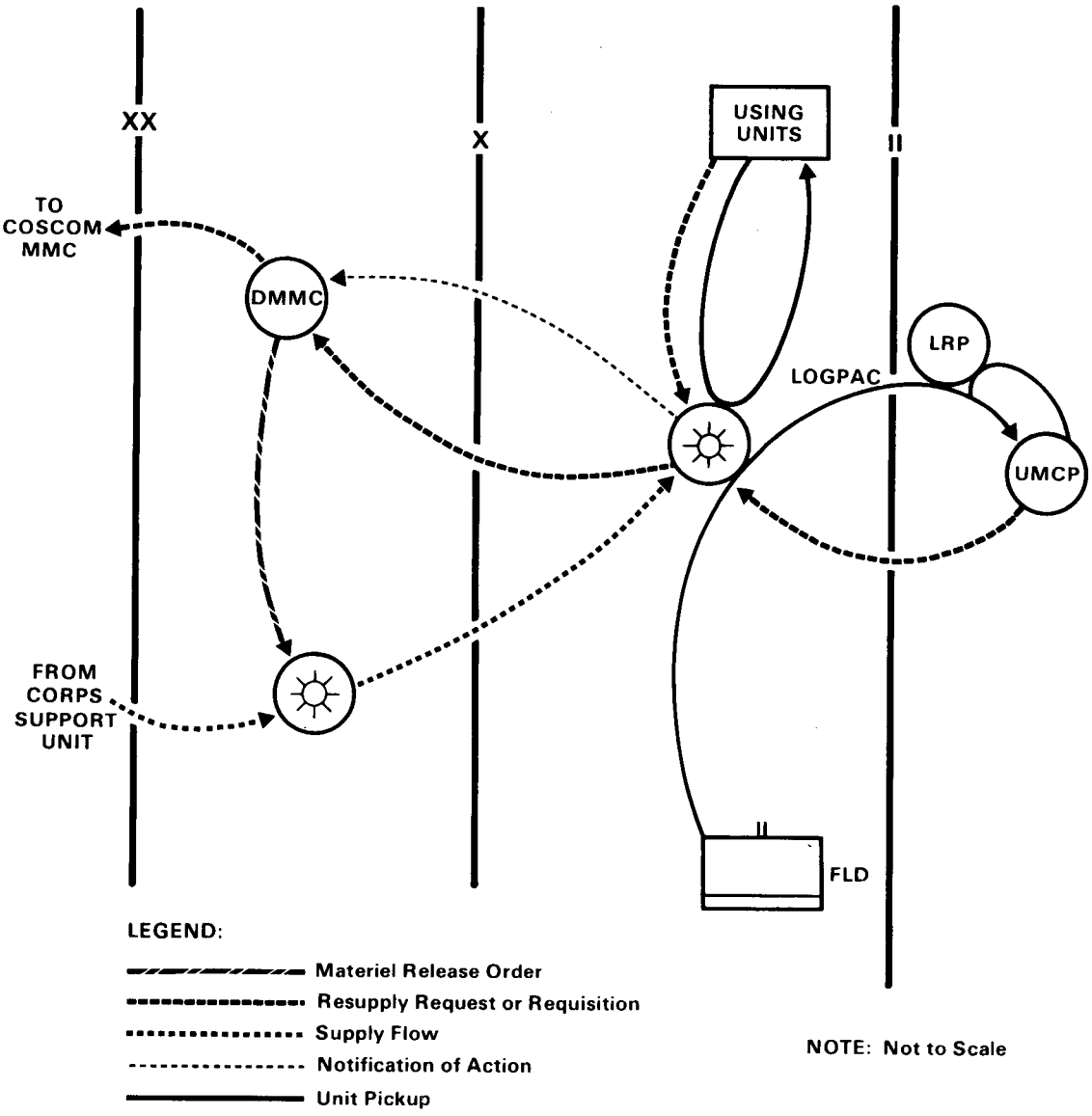


Figure 8-4. Class IX Supply

CONSIDERATIONS FOR VARYING TACTICAL SITUATIONS

OFFENSE

Before an offensive operation, equipment is inspected and required maintenance is performed. Shortages are eliminated whenever possible and reserve stocks are set up. On the basis of the operation, geography, terrain, and weather, stockage of certain items is increased. For example, in many offensive operations, MSTs going forward would increase stock age of small, high-usage RX items such as automotive subassemblies and fire control instruments.

As the tempo increases and distances lengthen, maintenance support is moved forward. However, such forward deployment must take into account MST vulnerability, possible enemy counterattacks, and maneuver element requirements for space and roads. Maintenance elements may require security assistance if they have to bypass pockets of enemy activity. Continuous movement forward may also require the commander to adjust the maintenance timelines. As lines continue to lengthen, expedient maintenance techniques as listed below may be required:

- Having procedures to allow MSTs to draw from ASL or RX stock items expected to be required in large quantities.
- Increasing emphasis on cannibalization and controlled exchange.
- Setting up MCPs between UMCPs and the base shop.
- Increasing emphasis on evacuation, with repair in forward areas limited to component replacement, adjustments, and servicing.
- Using air transportation to move MSTs and repair parts.
- Attaching MSTs to maneuver units.

DEFENSE

Typically, supported units are not as widespread as in offensive operations. Therefore, the maintenance company assets can usually be more centralized.

In a static defense, movement is less frequent. Therefore, more time is available for maintenance operations. Timelines for forward repair may be increased and reserves of critical items may be built up consistent with mobility requirements and capabilities. Inspections and technical assistance are emphasized.

A dynamic defense has many of the same maintenance implications as an offensive operation. For instance, maintenance sites will have to move frequently and vehicle maintenance requirements will rise.

RETROGRADE

Maintenance company assets begin to move to the rear before combat elements. Movement is done by echelon with maintenance points leapfrogging each other so that continuous support may be maintained. Maintenance operations concentrate on weapon systems and other items required to support the retrograde. Other equipment is evacuated to future planned support areas before opposing forces can overtake it. Priority of support is determined by the commander but is usually given to units that have completed the move and are preparing new positions.

CHAPTER 9

Medical Company

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ORGANIZATION AND MISSION

The forward support medical company plays a vital role in the manning task by providing division- and unit-level health service support to all units operating in the supported brigade area on an area basis. As shown in Figure 9-1, the company consists of a company headquarters, treatment platoon, and ambulance platoon.

The company performs the following functions:

- Treatment of patients with minor diseases and illnesses, triage of mass casualties, initial resuscitation and stabilization, advanced trauma management, and preparation for further evacuation of patients incapable of returning to duty.
- Ground evacuation for patients from battalion aid stations and designated collection points.
- Emergency dental care.
- Emergency medical resupply to units in the brigade area.
- Medical laboratory and radiology services commensurate with division-level treatment.
- Outpatient consultation services for patients referred from unit-level MTFs.
- Patient holding for up to 40 patients able to return to duty within 72 hours.
- Coordination with the UMT for required religious support.

PRINCIPLES

MODULAR MEDICAL SUPPORT SYSTEM

The modular medical system standardizes all medical treatment subunits within the division. Modules are duplicated at different levels of health care to allow the medical

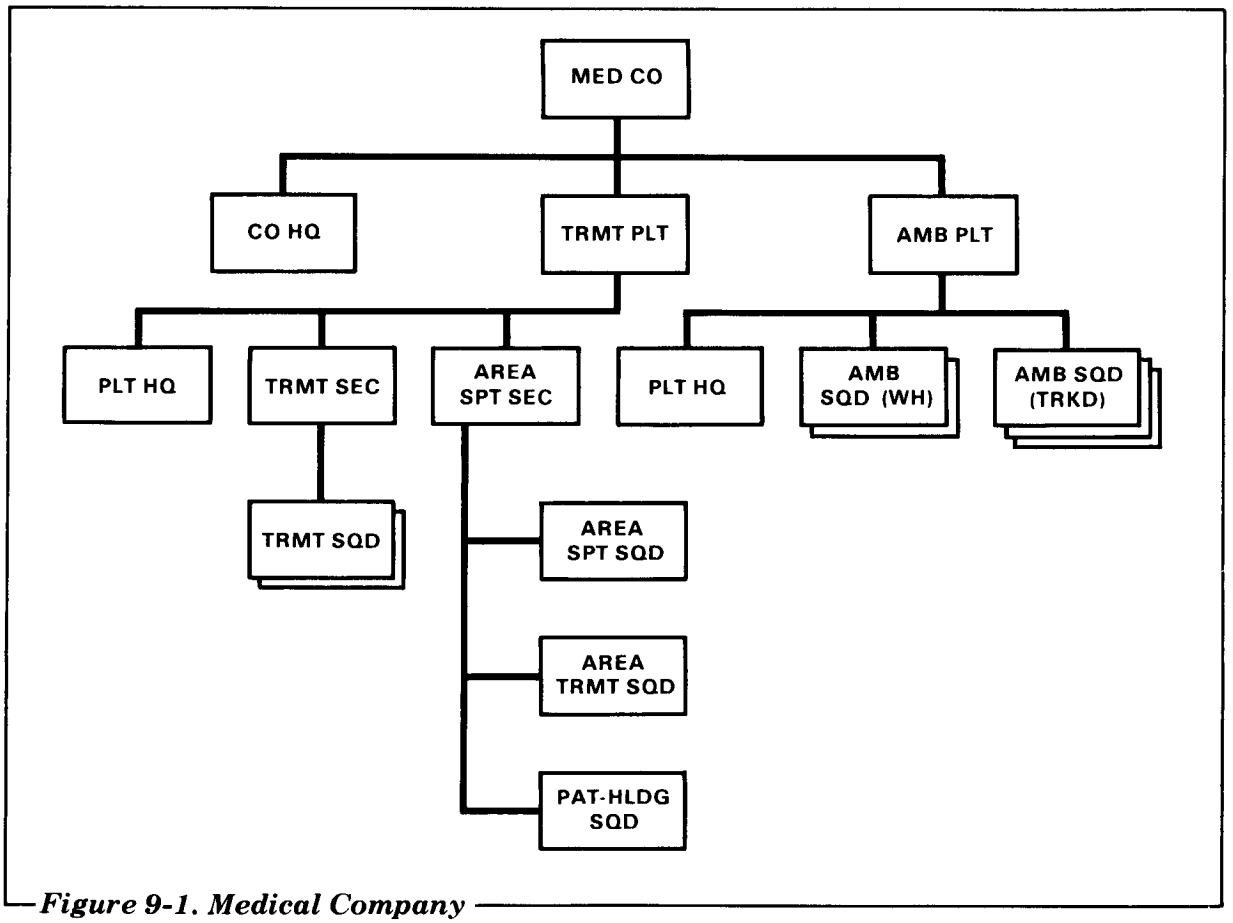


Figure 9-1. Medical Company

managers to rapidly tailor, augment, or reinforce medical units where the need is most critical. So if the FSB medical company cannot handle the work load in the brigade sector, additional modules may be sent forward from the MSB or corps. The system is oriented to patient acquisition, emergency medical treatment, initial resuscitation, patient holding, returning soldiers to duty, and patient evacuation. The five modules are—

- *Combat medic.* The combat medic is the first person in the health services support chain who makes medically substantiated decisions based on formal training. The combat medic is organic to medical platoons and sections of combat and combat support battalions. Medics provide support to the platoons and companies of the battalions.
- *Ambulance squad.* This squad, which can split into two teams, evacuates patients and provides care en route.
- *Treatment squad.* This squad provides ATM to battlefield casualties. ATM is emergency care designed to resuscitate and stabilize patients for evacuation or to treat and return to duty. Squads are organic to medical platoons of maneuver battalions and to FSB medical companies. When not engaged in ATM, these squads provide routine sick call on an area basis.
- *Area support squad.* The area support squad provides emergency dental care

and basic medical laboratory and X-ray diagnostic support. The squad is colocated with a treatment team and patient-holding squad. The three form an area support section. This section provides medical support on an area basis.

- *Patient-holding squad.* This squad can hold and provide minimal care for up to 40 patients who will return to duty within 72 hours. The squad is organic to the FSB and MSB medical companies.

TREATMENT PHASES

Only four phases of medical treatment are normally performed in the brigade area. These four—self-aid/buddy -aid, advanced first aid, EMT, and ATM—are collectively referred to as far forward medical care. This care maximizes return to duty of soldiers at the lowest possible level. It also provides stabilization and care for injured soldiers not expected to return to duty and allows for their rapid evacuation.

- Self-aid/buddy-aid is the lifesaving care given to an ill, injured, or wounded person by a nonmedical soldier. All soldiers are expected to know the lifesaving measures discussed in FM *21-11*.

- Advanced first aid is performed by the combat lifesaver. The combat lifesaver is a member of a combat, CS, or CSS unit who is not a medic but has received medical training beyond basic first aid. This function is an additional duty for the soldier.

- Emergency medical treatment involves medically substantiated decisions based on medical MOS-specific training. It is provided by the combat medic or EMT NCO. It includes emergency lifesaving measures, management of the airway, control of bleeding, and administration of intravenous fluids and medicinal drugs.

- ATM requires a higher degree of medical skill and judgment. It is performed at both the unit and division level by physicians assisted by physician assistants and EMT NCOs. ATM involves use of intravenous fluids and antibiotics, preservation of the airway by insertion of a breathing tube, and the application of more secure splints and bandages. This phase also involves laboratory and X-ray capabilities; a wide range of drugs, equipment, supplies, and intravenous fluids (including expander blood products); and a patient-holding capability.

FORWARD SUPPORT AND MASS CASUALTY MANAGEMENT

Early medical intervention and sorting, and continuing evaluation of patients are necessary to minimize mortality and morbidity. Forward medical support is critical to meet this need. Forward support is provided by medical company treatment elements working at battalion aid stations, reinforcing treatment capabilities before expected casualty-generating operations. It includes the positioning of tracked ambulances with battalion combat trains to maintain contact with the BAS during movement. Also, it involves establishing predetermined ambulance exchange points to reduce ambulance turnaround time and fuel consumption of tracked ambulances.

In mass casualty situations, the principle behind medical management changes from treating the worst cases first to providing the greatest good to the greatest number. At no time is the abandonment of a single patient contemplated. The categorization and scope of treatment are based on clinically sound criteria on what can be done to save the lives

of as many casualties as possible. As each patient moves from one treatment station to another (battalion aid station to division clearing station), his condition is continually evaluated. Once medical assets are no longer overwhelmed by the number of casualties, treating the worst first again becomes the overriding principle.

CENTRALIZED CONTROL

Control of the medical company assets is retained by the medical company commander. Medical resources are limited. Therefore, the medical company commander must be able to employ medical elements to respond to the brigade commander's plans in a timely manner.

SECTION FUNCTIONS

COMPANY HEADQUARTERS

The company headquarters provides command and control for the company and other medical units that may be attached. It provides unit-level administration, general supply, and NBC operations and communications support. It also provides supply point distribution of class VIII items for the brigade. Unit supply operations are discussed in FM 10-14, unit maintenance in FM 43-5, and unit GRREG functions in FM 10-63-1. Unit biomedical maintenance is provided by the division medical supply office of the MSB medical company. C3 considerations for the headquarters are covered in Chapters 3 and 4. The headquarters may be organized into command, supply, operations and communications, dining facility, and maintenance elements.

The medical company commander also serves as the brigade surgeon. As such, he must keep the brigade commander informed on the medical aspects of brigade operations and the health of the command. He should regularly attend brigade staff meetings to provide this input and to obtain information to facilitate medical planning. Specific duties in this area include—

- Assure implementation of the health service section of the division SOP.
- Determine the allocation of medical resources within the brigade.
- Supervise technical training of medical personnel and the combat lifesaver program in the brigade area.
- Determine procedures, techniques, and limitations in the conduct of routine medical care, EMT, and ATM.
- Monitor and coordinate requests for aeromedical evacuation from supported units.
- Ensure implementation of automated medical systems.
- Inform the division surgeon on the brigade's medical support situation.
- Monitor the health of the command and advise the commander on measures to counter disease and injury threats.
- Assume operational control of augmentation medical units when directed.
- Exercise technical supervision of subordinate battalion surgeons.
- Advise physician's assistants of artillery and engineer battalions as required.
- Assume technical supervision of physician assistants organic to subordinate units in the absence of their assigned physicians.

- Provide the medical estimate and medical threat input for inclusion in the commander's estimate.

TREATMENT PLATOON

The treatment platoon operates the division clearing station in the BSA and provides assets to reinforce supported unit medical elements. Platoon elements receive, triage, treat, and determine disposition of patients. The platoon consists of a platoon headquarters, an area support section, and a treatment section.

The platoon headquarters is the command and control element of the platoon. It determines and directs the disposition of patients and coordinates their further evacuation with the ambulance platoon.

The area support section operates the division clearing station. It consists of an area support treatment squad, an area support squad, and a patient-holding squad. These elements operate as a single medical unit and are not normally used to reinforce or reconstitute other units. The area support treatment squad is the base treatment element of the clearing station. The squad consists of two teams which provide troop clinic services, trauma treatment, and tailgate medical support. When the clearing station moves, one of the treatment teams along with elements of the holding squad serves as a jump element. They set up the new clearing station while remaining elements close out operations at the old site. The area support squad consists of the dental and diagnostic support elements of the clearing station. The patient-holding squad operates a 40-bed facility for patients awaiting evacuation and patients expected to be returned to duty within 72 hours. A temporary surgical capability can be given the clearing station by augmenting the area support section with a surgical detachment from corps assets.

The treatment section consists of two treatment squads. Each squad employs treatment vehicles with medical equipment sets—two trauma sets and two general sick call sets. These squads provide troop clinic services, trauma treatment, and tailgate medical support. This section is oriented toward augmenting or reinforcing supported units medical elements and alleviating mass casualty situations. Each squad may be split into two treatment teams.

AMBULANCE PLATOON

The ambulance platoon performs ground evacuation from battalion aid stations and designated collection points to the BSA clearing station. The platoon has a platoon headquarters and five ambulance squads. The headquarters provides command and control and plans for the employment of the platoon. It coordinates support with the medical platoons of the supported maneuver battalions, plans ambulance routes, and establishes AXPs for ground and air ambulances as required. Each squad splits into two ambulance teams and provides evacuation from forward areas.

OPERATIONS

PLANNING

Planning for medical operations within the brigade area is done by the medical company commander/brigade surgeon and support operations section of the FSB in coordination with the medical operations center. In addition, the company XO (the field medical assistant) is the principal assistant to the company commander on the tactical employment of the company assets. A sample medical company layout is shown in

Figure 9-2. The basic considerations which influence the employment of medical assets within the brigade are—

- The brigade commander's plan.
- The anticipated patient load.
- Expected areas of casualty density.
- Medical treatment and evacuation resources available.

Medical planners use these factors to forecast the anticipated evacuation requirements in the main battle area and adjacent sectors. Having a single manager of health service support in an area of operations, enables shifting scarce medical resources. The medical company commander must also ensure that the medical annex of the OPLAN includes—

- Procedures to handle and treat chemical casualties and provision for chemical protective shelter systems and decontamination augmentation.
- Provision for surgical augmentation.

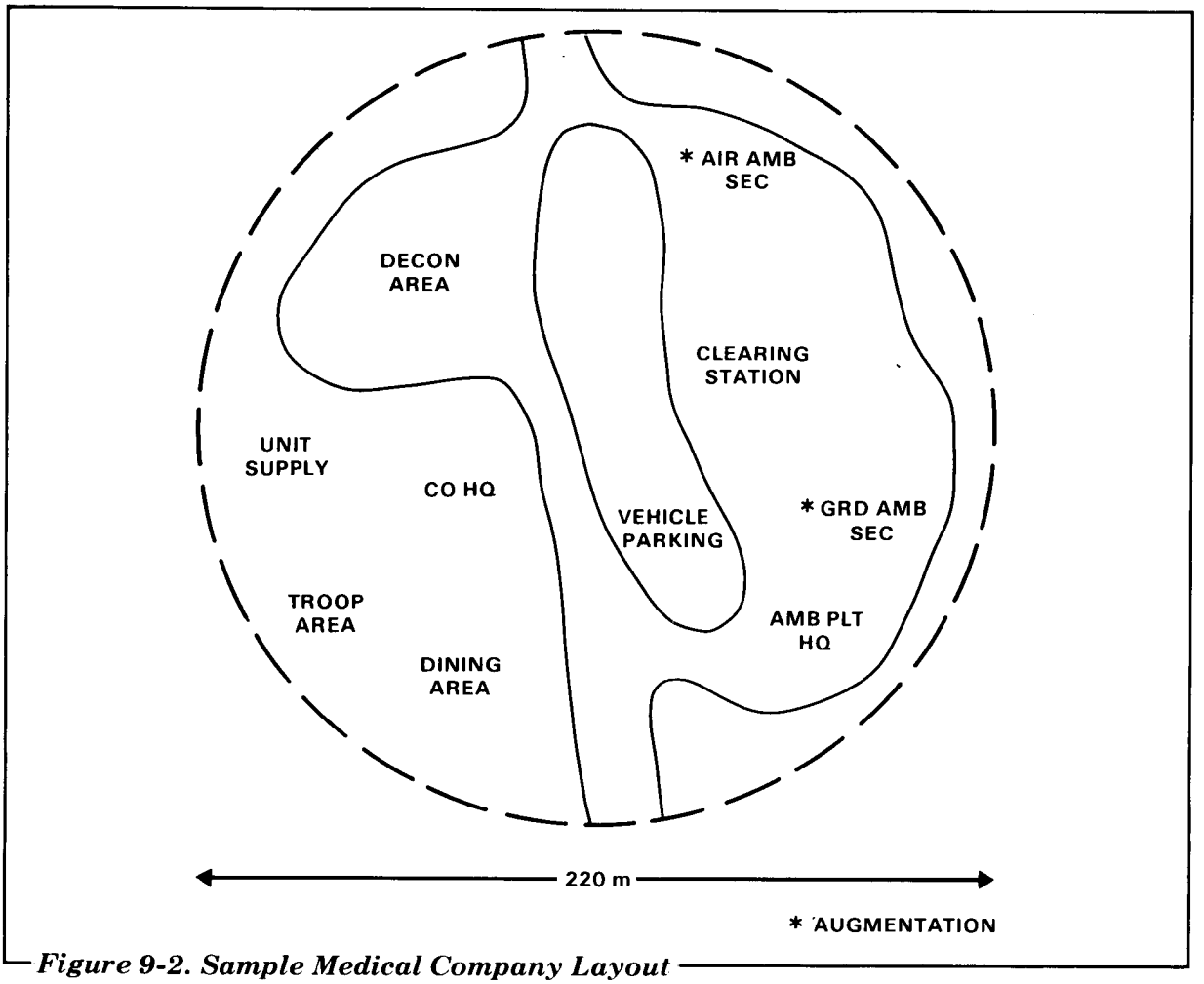


Figure 9-2. Sample Medical Company Layout

- Provision for A2C2 for supporting air ambulances and for road clearances and MSR priorities for ground ambulances.
- Augmentation of medical support assets for contingency operations, This may include ground and air evacuation assets, modular trauma treatment squads/teams, and combat stress control augmentation.
- Provision for medical representation on casualty damage assessment elements.

Mass casualty situations arise when the number of casualties exceeds the capabilities of supporting medical treatment and evacuation elements. Mass casualties in the main battle area can be expected in close operations. Large numbers of casualties are likely in mid- and high-intensity conflicts, particularly among brigade-size forces employed against an enemy with high-yielding weapon systems. The medical planner must establish and thoroughly coordinate medical contingency plans for the handling of mass casualty work loads. Other battlefield operating systems must be synchronized to alleviate the situation. Planning should include—

- Immediate deployment of available treatment and evacuation elements in direct support of the affected force for triage and evacuation.
- On-call designated MSB medical assets to reinforce the forward medical company so it can continue to support forces not affected.
- On-call available corps medical assets to be provided to stabilize the situation.
- Division and brigade SOPS for the use of nonmedical vehicles and aircraft to alleviate Level II medical evacuation backlog.

In mass casualty situations, nonmedical personnel will have to perform first aid, rescue operations, and other medical tasks. Effective self-aid/buddy-aid will be critical.

Several Geneva Conventions affect medical operations in the brigade sector. Sick, injured, and wounded prisoners are treated and evacuated through normal channels. However, they are physically segregated from US and allied patients. EPW patients are evacuated from the combat zone as soon as possible. Only those who run a greater health risk by being evacuated may be temporarily kept in the combat zone. Civilians wounded or sick as a result of military operations are treated and transferred to civil facilities when required. Properly identified personnel performing medical duties in medical units are protected under the Geneva Convention. Details are in DA Pamphlet 27-1 and FM 27-10.

The medical company, in coordination with the medical operations center and the FSB S2/S3, must also develop a combat lifesaver program for FSB personnel. Training is most critical for elements which will be deployed separately such as MSTs, contact teams, and truck drivers. However, the program should cover all elements of the FSB.

CLEARING STATION OPERATIONS

The division clearing station in the BSA is principally operated by the medical company treatment platoon. In addition, a team from the MSB medical company preventive medicine section and a behavioral science NCO from the MSB company mental health section may augment the capability of the BSA clearing station. Also operating at the clearing station are any elements of the

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FSMC treatment section not deployed forward. During static situations, ambulance teams may also be stationed at the clearing station and provide routine sick call runs and emergency standby support to units operating in and around the BSA.

The clearing station maintains its integrity at all times. Considerations for positioning this MTF within the BSA are given in Chapter 5. Figure 9-3 shows a sample clearing station layout in a field environment.

The functions performed at the clearing station are those discussed for the area support section of the treatment platoon. Seriously ill or wounded patients arriving at the station are given necessary treatment and stabilized for movement. Patients with minor injuries and illnesses are treated within the capability of the attending medical and dental officers. These patients are held for continued treatment or observation for up to 72 hours; evacuated to the appropriate MTF for further treatment, evaluation, or disposition; or treated and immediately returned to duty. Resupply of personal equipment for return-to-duty soldiers is addressed in Chapter 7. Other functions of the clearing station include—

- providing consultation and clinical laboratory and X-ray diagnostics for unit physicians and physician assistants.
- Recording all patients seen or treated at the clearing station and notifying the brigade S1.
- Verifying the information contained on the field medical card of all patients received at the MTF.
- Monitoring casualties when necessary for radiological contamination before medical treatment. Details are in FM 8-9 and TM 8-215.
- Ensuring NBC casualties are properly handled according to the guidance in Appendix B.

In addition to providing division-level support for units in the brigade area, the clearing station provides unit-level support to units in the BSA. This is provided on an area basis. After an attack on the BSA, a treatment team of the treatment section and an ambulance team may be OPCON to the BCOC as part of the area damage control element. Units are responsible for collecting casualties, providing first aid, and getting casualties to a medical facility. However, if the BSA is badly hit, the area is secure, and medical assets are available, sweeps of the BSA may expedite discovery, treatment, and evacuation of casualties.

The preventive medicine team attached from the division preventive medicine section of the MSB ensures that preventive medicine measures are implemented to protect against food-, water-, and vector-borne diseases and environmental injuries (such as heat and cold injuries). Specifically, the team—

- Performs environmental health surveys and inspections.
- Monitors water production and distribution within the brigade area.
- Investigates incidents of food-borne, water-borne, insect-borne, zoonotic, and other communicable diseases.
- Helps train unit field sanitation teams.

The team emphasizes preemptive action. In past conflicts, more soldiers have become ineffective from DNBI than as a direct result of combat. The team cannot wait until problems appear to take action. For example, it cannot wait for the first case of malaria or sand fly fever to suppress mosquito or sandfly

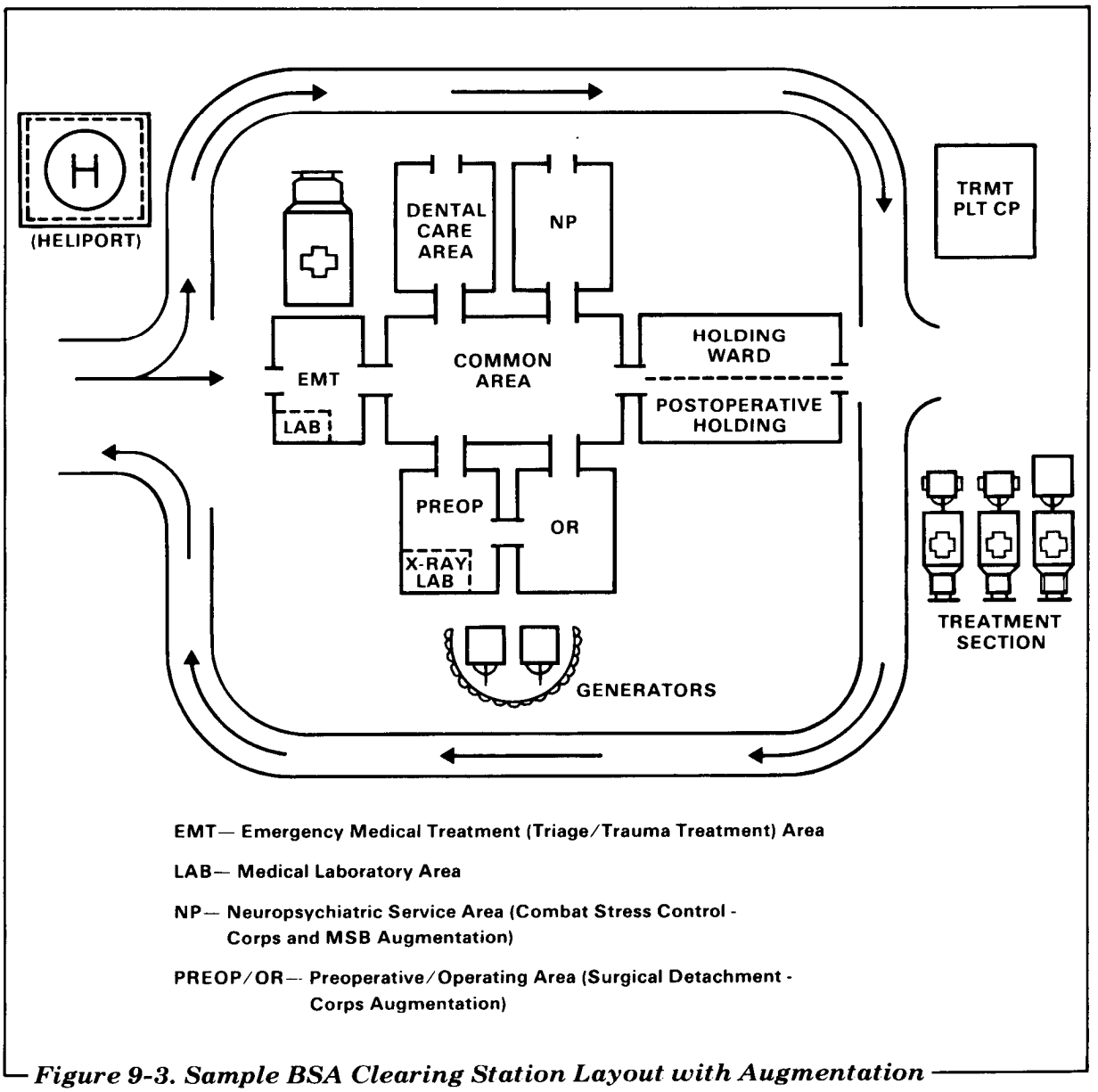


Figure 9-3. Sample BSA Clearing Station Layout with Augmentation

populations in troop assembly areas. The team may coordinate with the designated civil-military officer and the local population.

The representative from the division mental health section of the MSB functions as the brigade combat stress control coordinator. He is normally attached to the FSB medical company and operates from the BSA clearing station. He advises the brigade surgeon on mental health considerations. He keeps abreast of the tactical situation and plans for battle fatigue/neuro-psychiatric care when maneuver units are pulled back for rest and recuperation. He assists in patient triage and ensures BF/NP patients are handled properly. Normal treatment follows these guidelines:

- Mild cases are given a brief respite of 1 to 6 hours of comfort and reassurance and are returned to their units.
- Moderate cases maybe assigned work at a logistics facility in the BSA for 1 to 2 days. During this time, however, they must be under medical supervision, and the medical company remains responsible for such services as feeding the patients. Moderate cases may also be held at the holding facility if space is available.
- Severe cases may be held in the clearing station holding facility for up to 72 hours if behavior is not too disruptive. The CSCC provides guidance to clearing station personnel on treating BF/NP patients. Treatment consists of sleep, hydration, quality food, hygiene, general health measures, and restoration of confidence. It also includes soldierly work details and individual counseling. Medication is prescribed by the attending physician only to briefly aid in sleep or to control disruptive behavior. The CSCC also helps the attending physician to coordinate RTD of patients fit to perform normal duties.
- Severe cases beyond the ability of the clearing station to manage are evacuated to the DSA clearing station as conditions permit. Physical restraints are used during transport when necessary. The physician, in coordination with the CSCC, may evacuate the patient directly to a corps facility only if long-term care is required. In such cases, the patient's field medical card should be annotated to reflect a psychiatric illness.

Ammunition and individual weapons belonging to patients to be evacuated out of the division are normally kept by the patients' units. If they arrive at the clearing station, they are collected and given to the brigade S4, the FSB S4, or the supported CS/CSS unit's designated representative, or they are disposed of according to command SOP.

EVACUATION

Evacuation from the BASS is normally provided by the FSMC ambulance platoon and a forward air ambulance team of the supporting corps air ambulance company. These assets also support other units in the brigade area on an area basis. Typically, one team from the ambulance platoon is field sited at each BAS. The other ambulances of the platoon are located at AXPs, designated collection points, or at the clearing station. Within the BSA, units are responsible for getting wounded, injured, and sick soldiers requiring treatment to the clearing station.

An air ambulance team of the corps air ambulance company is normally field sited at the BSA. Administrative and logistics responsibilities, discipline, internal organization, and training are the responsibility of the parent air ambulance company. The team leader should be involved with the tactical planning process enough to ensure appropriate employment of the air evacuation assets and to obtain the required airspace management information. He coordinates aviation support requirements and airspace C2 matters with the brigade S3 (air). When air superiority exists, the team evacuates urgent patients from forward sites in the brigade area to the BSA clearing station. The treatment platoon sets up and marks the helicopter landing zone at the forward triage site. The support operations section and brigade surgeon plan the air evacuation routes to and from the forward triage site with the air ambulance team leader.

If medical company evacuation assets are overwhelmed, additional assets may be requested from the MSB medical company or

the corps through the medical operations center of the DISCOM. Another alternative is the use of nonmedical air or ground transportation assets. This support is normally coordinated by the company XO with the FSB support operations section. Whenever possible, these assets are augmented with medical personnel and supplies to provide en route care.

When necessary to keep tracked ambulances from having to spend too much time evacuating patients to the BSA, an ambulance shuttle system may beset up between the clearing station and BASS. Such a system uses ambulance exchange points. AXPs are positions where patients are exchanged from one ambulance to another. They are normally preplanned and moved often. Using AXPs allows ambulances to return to their supporting positions more rapidly. This is desirable since the crews are more familiar with the roads and the tactical situation near their bases of operations.

Another form of ambulance shuttle system involves the use of ambulance loading points and relay points. In this type of system, ambulances are stationed at loading points ready to receive patients. Ambulances are also stationed at relay points ready to replace ambulances leaving loading points to evacuate patients. Control points may also be required at crossroads or junctions to direct empty ambulances from relay points to loading points.

CLASS VIII SUPPLY

Medical supplies, equipment, and repair parts are provided through medical logistics channels. Unit- and division-level medical elements carry a 5-day stockage of medical supplies. During combat operations, the medical section/platoon and the FSB medical company receive preconfigured medical supply packages pushed forward from the division medical supply office. Push resupply operations will continue until the situation stabilizes. At that time, if METT-T permits, line-item requests will begin. Resupply requests are sent through the class VIII supply point at the FSMC. Items will be issued from supply point stocks if available. If a request cannot be filled at the supply point, it is passed to the DMSO. Truckload delivery for one unit may be delivered directly by division transportation assets. The normal method of moving class VIII supplies forward is by ambulance backhaul. This is preferred since it maximizes use of transportation assets and because Geneva Convention markings of ambulances afford some protection from attacking aircraft.

CONSIDERATIONS FOR VARYING TACTICAL SITUATIONS

OFFENSE

The basic characteristics of medical support in offensive operations are—

- As areas of casualty density move forward, the routes of evacuation lengthen, requiring forward movement of medical assets.
- Heaviest patient loads occur during disruption of enemy main defenses, at terrain or tactical barriers, and during assaults on final objectives.
- Medical elements of the brigade and FSB treat indigenous and displaced

persons that become sick or wounded as a result of military operations. In coordination with the division G5, these people are moved to civilian treatment facilities immediately after being treated.

- The main attack normally receives the greatest medical support.

Initially, company treatment assets are located as far forward as combat operations permit. When the brigade is assigned an independent mission or one likely to disperse its elements over unusually long distances, assets from the FSMC maybe attached to the brigade.

Two basic problems confront the medical company in the offense. First, contact with the supported units must be continuous. Also, the mobility of treatment elements must be maintained. Contact is maintained through evacuation elements operating within and between the unit-level facilities and the clearing station. Treatment elements should be minimally staffed consistent with the patient work load, and patients must be evacuated as promptly as possible. Therefore, available ambulance assets are positioned forward.

Treatment elements are issued maximum allowable loads of medical supplies before the start of the attack. From the clearing station, supplies move forward via ambulances in response to informal requests from supported medical elements and through exchange of medical equipment received from aid stations.

In fast-moving situations, patient collection points are predesignated along the axis of advance. The points operated by FSMC assets also provide units lacking organic medical support with areas for patient disposition in high mobility situations.

DEFENSE

Medical support of defensive operations is more difficult than in the offense. Casualty rates are lower, but forward acquisition is complicated by enemy action and the initial direction of maneuver to the rear. Increased casualties among medical personnel will reduce treatment and evacuation capabilities. Heaviest casualties, including those produced by enemy artillery and NBC weapons, may be expected during the initial enemy attack and in the counterattack. The enemy attack may disrupt ground and air communication routes and delay evacuation of patients to and from aid stations.

The probability of enemy penetration requires locating treatment elements farther to the rear than in the offense. However, their locations must not interfere with the maneuver of reserve forces.

The depth and dispersion of the mobile defense create significant time and distance problems in evacuation support to security and fixing forces. Security forces may be forced to withdraw while simultaneously carrying their patients to the rear.

RETROGRADE

Medical support in retrograde operations varies widely. However, certain factors should always be considered:

- Time available for medical operations is likely to decrease. The brigade surgeon must evaluate the company's capability to collect, treat, and evacuate patients.
- Patient evacuation will be complicated by movement of troops and materiel on evacuation routes and by enemy disruption of C3. Plans for evacuation in such conditions should be included in tactical SOPs. Mobility of the clearing station may be increased by evacuating

patients directly from the BASS to corps MTFs whenever possible.

- Sorting of patients becomes more critical. Proper sorting and rapid evacuation lessen the need for establishing complete clearing stations.
- When patient loads exceed the means to move them, the brigade commander must decide whether to leave patients behind. The brigade surgeon assists in such decisions. Medical personnel and supplies must be left with patients who cannot be evacuated.
- Medical company assets displace by echelon and hold patients for the shortest possible time. Locations of successive positions must be planned in advance. Initial locations are further to the rear than in other types of operations. For continuity of support, the next rearward locations are operational before the forward MTFs are closed.

APPENDIX A

BSA Movement

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PRINCIPLES

On the fluid AirLand Battlefield, providing continuous and responsive support represents a significant challenge to the FSB commander. Some elements of the FSB will usually be involved in some stage of movement from planning the next move to completing the last one. BSA elements must be proficient at movement techniques.

Frequent moves will be required for two reasons. First, the BSA must remain close enough to supported forward units to maintain responsive support. In addition, for security purposes the FSB relies on frequent moves. It should maintain an adequate distance from the FLOT—25 to 30 kilometers—and not provide a stationary target for the enemy. How often it will have to move will depend on a variety of factors including the type of tactical operation, the rate of movement of the FLOT, and the terrain. However, BSA units must be prepared to move every 24 hours. The actual determination on when to move will be made by the FSB commander with close coordination with the DISCOM and brigade commanders. Moves should not be conducted just for the sake of moving. The brigade commander must understand support operations are disrupted by moves. This disruption is only justified by security considerations and maintenance of proximity to supported units. Short moves (about 5 kilometers or less) which are considered to stay close to supported units, as opposed to security reasons, should be avoided in most cases. The benefit of shorter support distances must be weighed against the cost of disrupted support operations.

The FSB S2/S3 develops the movement annex to the OPLAN/OPORD in accordance with the brigade OPLAN/ORORD, FM 101-5,

and the tactical SOP. The XO approves the annex. The FSB S2/S3 ensures that the move is coordinated with all supported elements, subordinate elements, and the DISCOM. All must be aware of when support operations will cease at the old BSA and where the new site will be and when operations there will begin. Supported units must recognize that support operations will be degraded while elements move. To minimize support disruption, however, FSB elements move in echelons as described later in this appendix. Operations at the new site begin before the old site is completely closed out.

PLANS

The FSB has sufficient organic transportation assets to move its personnel and equipment in one lift. So should other elements located in the BSA. However, what may cause mobility problems are downloaded supplies at FSB supply points and disabled equipment at BSA maintenance sites (field trains and maintenance company base shop). Disabled equipment that cannot be repaired or moved to the new site should be evacuated. In the offense, an alternative is to leave it (after proper coordination is effected) for advancing maintenance elements to repair. As much as possible, supplies should be uploaded in the BSA. For all transportation requirements beyond the FSB's capability, the S2/S3 must request additional support from the MSB TMT company through the DISCOM movement control officer.

The S2/S3 must also select the type of motor march to be used. A close column is one in which elements are formed as compactly as possible. This reduces pass time and allows better control with fewer guides, escorts, and markers. However, it is easier to detect, may cause traffic congestion, and makes quick dispersion difficult. To overcome these disadvantages, an open column with more widely spaced elements may be used. However, this technique makes control more difficult. The third type of march is infiltration. With this type, vehicles are dispatched individually, in small groups, or at irregular intervals for maximum security. The disadvantages of this type are that it takes more time and is hard to control.

The S2/S3 assigns march commanders and ensures they have all required information. Each march commander in turn organizes his march column according to certain guidelines:

- Slower, heavier vehicles are assigned positions in front.
- Control vehicles are not placed according to a set pattern.
- Recovery vehicles are placed in the rear.
- Gun vehicles are placed up front and near the rear. If sufficient quantities are available, they are dispersed evenly throughout the convoy.
- All air approaches are covered.

Each march commander is responsible for providing strip maps to all drivers and briefing all convoy personnel on the following:

- Convoy chain of command.
- Convoy route.
- Rate of march.
- Vehicle intervals.
- Accident and breakdown procedures.
- Immediate action security procedures.

- Blackout condition procedures.
- Location of medical support.
- Halt procedures.
- Location and identification of destination.
- Ambush reaction procedures.
- Time schedules.
- Arm and hand signals during radio silence.
- Radio frequencies and call signs for control personnel, security force commander, fire support elements, reserve security elements, and medical evacuation support.

Sample convoy briefing and convoy commander checklists are in FM 55-30.

For convoy control, the S2/S3 should establish a convoy command net including the convoy commander (the FSB commander), security force commander, serial commanders, and trail party commander. Each march element should also have a control net which includes the element commander, lead and trail escort vehicles, and recovery vehicles.

A complete BSA movement SOP makes planning quicker. Predetermined movement packages may be specified in the SOP. Items addressed in the SOP should include—

- Duties of convoy commander and control personnel.
- Convoy organization.
- Weapons and ammunition to be carried.
- Hardening of vehicles and protective equipment for personnel.
- Preparation of vehicles.
- Counterambush techniques.
- Communications.
- OPSEC measures.
- Procedures for halts.
- Maintenance and recovery procedures.
- Actions at release points.

A sample SOP is included at Appendix L of FM 55-30.

CONDUCT

A move is usually initiated by a FRAGO issued by the supported brigade headquarters. The FSB S2/S3 issues a warning order to all BSA units. Each unit reports its vehicle, supply, and maintenance work load status to the S2/S3, who uses the information to finalize the convoy organization, compute additional transportation requirements, and perform required march computations (Appendix F, FM 55-30). He ensures load plans are changed to accommodate current operational status.

The route will often be prescribed by the brigade headquarters. In such cases, a map reconnaissance will be used to confirm checkpoints, identify problem areas, and begin planning positioning of elements in the new BSA. If the route is not prescribed, the S2/S3 briefs the reconnaissance team on the displacement plan and provides it with a strip map and designated MOPP level.

The BSA reconnaissance party wears the designated MOPP gear and monitors all

radiological and chemical detection devices. It performs the following duties:

- Verify map information.
- Note capabilities of bridges.
- List significant terrain features and possible ambush sites.
- Compute travel times and distances.

Though FSB company personnel are tasked to reconnoiter the route, they do so for the entire BSA. They do not only reconnoiter the company route. They provide information to the FSB S2/S3 who then advises the FSB commander on the best route or routes.

When they receive the warning order, BSA units begin to break down tentage, heaters, and sleeping areas. They load equipment according to the load plan. They also begin taking up wire and policing up the area. The medical company will increase evacuation to reduce the patients in the holding area who have to be moved. The maintenance company will also increase evacuation if possible. Field trains assets will arrange to top off class I, III, V, and IX levels before supply points close out. All units will begin uploading supplies and equipment as much as possible.

A quartering party moves before the main body. It consists of representatives from the FSB S2/S3 and support operations sections, the brigade rear CP, and every trains and platoon-sized unit of the BSA. As a rule of thumb no more than 25 percent of BSA assets are included. On arrival at the new site, the party begins to set up a jump CP. It ensures dispersion and other countersurveillance measures are followed. It also continues to plan positioning of units in the BSA and roughs in the perimeter. Representatives of field trains and other units begin preparations for occupation, which include selecting sites for crew-served weapons. They notify the jump CP of problems with the new positions. The jump CP reports to the FSB CP when it is prepared to begin operations. It also relays any information the commander will need to change movement plans.

The main body begins the move in accordance with the OPORD issued by the FSB CP. The serials should be carefully planned to move by echelon. An entire FSB company's mission capability should never be included in a single serial. Otherwise, loss of a serial will eliminate all of the FSB's capability in a functional area. In addition, if the whole company is moving at the same time, continuity of support cannot be achieved. Instead, FSB elements move by echelon. Care should be taken not to fragment the battalion too much due to the austerity of communications assets at the company level. The first serial or serials should include elements of each critical support point. These consist of—

- Class III, V, and IX elements.
- Maintenance elements from the automotive/armament and ground support platoons to setup a new MCP.
- One of the treatment squads of the treatment platoon to provide EMT and ATM at the new site.

The FSB CP is responsible for ensuring the shift to the new support base is thoroughly coordinated with the DISCOM and all supported units. Deliveries must be directed to the new site at the right time, and units must know where the new sites are and when to begin using them.

Typically, field trains will likely move next. The remaining elements of the FSB companies will cease any support operation not already stopped. They will upload the rest of their materiel, disconnect and pick up the

rest of their wires, break down their camouflage, and move out with permission of the CP. The FSB CP/brigade rear CP then transfers control to the jump CP, breaks down its equipment, and moves out.

The trail party closes out any remaining operations, ensures the old site is clear of evidence of intelligence value to the enemy, and moves to the new site. This party should include maintenance elements to deal with disabled vehicles from the rest of the column. It also picks up guides and markers along the route. All actions must be completed within the parameters in the tactical SOP.

At the new site—

- Local security and camouflage is set up.
- The new support points are made fully operational.
- The new CP takes control from the jump CP.
- Internal wire is laid among FSB elements.
- Base commanders report to the BCOC. They report on readiness and provide the BCOC with a base sketch.
- Wire is laid from the field trains to the BCOC.
- Sleeping areas are set up.

The CP reports to the DISCOM and brigade TOC that the move is complete, and the advance party is often sent out to begin the next move.

CONVOY TECHNIQUES

FSB commanders are responsible for ensuring all elements practice good convoy techniques. All must practice good march discipline. This includes following traffic regulations, responding to all signals, keeping proper distances, and practicing proper security measures. Drivers must also know what to do in case of mechanical failure. Drivers move the disabled vehicle off the road and notify the march element commander. They perform unit maintenance operations within their capability. Maintenance beyond the driver's capability is performed by mechanics in the trail party.

The main body of the FSB will frequently move at night. Therefore, knowledge of night convoy techniques is also required. The FSB commander must decide whether or not to move under blackout conditions. Blackout moves reduce the probability of enemy observation but make the convoy more vulnerable to ambush and sniper fire. They also contribute to driver fatigue. In any case, night moves require greater coordination. Additional radios may be required. More information is in Chapter 5 of FM 55-30. In addition, if the convoy must cross a contaminated area, it will follow the procedures prescribed in FM 3-3.

CONVOY DEFENSE

A key consideration in FSB movement is security. The FSB's limited self-defense assets make convoy defense a challenge. The FSB must coordinate closely with the supporting MP platoon to provide convoy security whenever possible. FM 19-50 discusses the MP role in these operations. However, FSB elements must take proper

measures throughout the move, including during halts. The FSB commander or S2/S3 must also coordinate fire support in advance with the field artillery battalion to get a priority of support for the convoy. The artillery battalion must know start and release points, time schedules, checkpoints, and convoy size. Call signs, frequencies, and other required signal information must be set. Information from reconnaissance should be used to plan fires. Procedures for actual calls for fire and adjustments of fires must be coordinated and rehearsed.

Movement on an open road makes a convoy very susceptible to air attack. Since the FSB lacks significant firepower, passive defensive techniques are critical. Closed columns should not be used during daylight. Tarps and bows may be used to disguise the shape of lucrative targets such as fuel tankers. Portions of vehicles that reflect light should be covered. Drivers should scan the surrounding areas for objects to use for cover and concealment if ordered to disperse. In addition, soldiers should be assigned to scan for aircraft. (Search and scan procedures are in FM 44-3.) Use of radios should be minimized.

If attacking aircraft are spotted, the convoy commander may choose to halt the convoy, continue to move, or disperse. A halt makes the convoy harder to spot, but if spotted, it becomes easier to hit. If the move continues, vehicles are easier to spot but harder to hit. Also, fewer soldiers are available to provide small arms fire. Proper dispersion makes it harder for pilots to make multiple hits. However, it makes it easier for the pilot to spot targets as vehicles move to dispersion positions, and it makes it more difficult to continue the move after the attack.

Though the FSB has limited firepower, small arms defense can be effective against low-flying aircraft. The key is to put up as much volume of fire as possible; all available weapons are concentrated on the aircraft.

Passive defense measures against artillery or indirect fire are similar to those discussed above. Active defense consists of coordinating air or artillery fires or directing fires against the enemy forward observer if located.

In case of ambushes, proper planning should be conducted to avoid them whenever possible and minimize effects by protecting vehicles and personnel. If the convoy is ambushed, vehicles in the kill zone must drive out if possible. Disabled vehicles in the kill zone are abandoned or moved if blocking the road. Vehicles not in the kill zone must not attempt to pass through it. Personnel should dismount and take up defensive positions. If available, calls should be made for artillery or air fire on enemy positions or for reaction forces to counter the attack.

Details on all aspects of convoy security are covered in FM 55-30.

EMERGENCY MOVES

In addition to conducting routine moves as described above, the FSB should have an SOP for conducting emergency moves. These procedures would be used when the BSA is faced with a Level III threat.

Each BSA element will identify personnel, vehicles, and equipment to immediately move out to a predesignated rally point. These elements will be capable of providing limited support in critical support areas—class III,

APPENDIX B

NBC Operations

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DEFENSE MEASURES *B-1*

SUPPORT MISSION IMPLICATIONS *B-3*

DEFENSE MEASURES

Contamination avoidance, protection (individual and collective), and decontamination are the basic measures for defense against NBC hazards. FSB personnel must be trained in these defensive measures to minimize the effects of NBC attacks. FMs 3-3, 3-4, 3-5, and 3-100 have details.

PLANNING

The plans-operations branch of the S2/S3 section is responsible for developing the NBC defense plan. The branch reviews the tactical SOP and the brigade NBC vulnerability analysis to develop the plan. The plan must include an NBC defense requirement forecast and a set of priorities for decontamination of the FSB assets. It also identifies backup command and control procedures and components of and procedures for NBC control parties. Procedures for NBC equipment operators are also included. In developing the plan, the branch coordinates with the following elements:

- FSB S1 and medical company for medical evacuation and treatment support.
- Support operations section for alternate methods of providing supply, services, and maintenance support.
- Communications branch of the S2/S3 section for alternate lines of communication.

CONTAMINATION AVOIDANCE

The main defensive measure against NBC hazards is contamination avoidance. This reduces and sometimes eliminates requirements for protection and decontamination. Measures include—

- Taking passive measures such as dispersion, cover, concealment, deception, camouflage, and OPSEC.
- Limiting contamination spread. Measures may be taken before, during, and after an NBC attack to limit the spread and exposure to other individuals, equipment, and areas. These include prescribing levels of MOPP.
- Detecting, identifying, and marking. Advance warning is vital to avoidance.

Remote and local automatic alarms are deployed to provide early detection, warning, and identification of NBC hazards. The FSB S2/S3 will ensure that all contaminated areas in the BSA are properly marked with the NBC contamination marking set. All contamination areas are reported to the brigade and DISCOM headquarters. FMs 3-3 and 3-100 cover NBC marking.

- Issuing contamination warnings. Warning signals should be designated in advance. They are normally initiated by the BCOC.

- Relocating to an uncontaminated area. Unless the attack consists of a nonpersistent chemical agent, the BSA is generally moved as soon as the tactical situation allows to minimize exposure to residual hazards. The FSB commander must consider the tactical situation, support requirements, protection provided by the current BSA location, and increased exposure to the hazard incurred by movement. He must also consider the possibility that the threat's intention in using the NBC attack may be to cause the BSA to move. In addition, he must consider the possibility of further NBC attacks and the impact of continuing to support in an increased MOPP level. Movement may involve distances from 100 meters for certain FSB elements to several kilometers for the whole BSA.

Additional information on contamination avoidance is in FM 3-3.

PROTECTION

The FSB S2/S3 directs the response to an NBC attack. He is responsible for alerting higher, lower, and adjacent units. He sends all required NBC reports to the DISCOM S2/S3 and brigade S3. He arranges for additional support from the DISCOM S2/S3 or brigade S3.

On the individual soldier level, the best protection against a nuclear attack is to be well dug in with overhead cover. Deeply dug foxholes, caves, tunnels, or storm drains provide good protection. Most buildings do not. Basements of concrete or steel framed buildings may be adequate if available. Personnel should react immediately to the initial sign of attack, a flash. They drop to the ground or into a foxhole immediately without trying to move to cover. They close their eyes, put arms near or under their bodies, and keep helmets on. They should stay down until the shock wave has passed and returned. Once it has passed, injuries should be treated and preparations should be made for ensuing fallout. The area should be monitored and appropriate actions taken. Improvements may be made to shelters and food and water should be placed in protected areas.

The basic individual protection against a biological agent attack is the wearing of the protective mask with hood attached. The duty uniform and gloves provide additional protection against bites from vectors such as mosquitoes and ticks.

In a chemical environment, personnel must wear MOPP gear to protect themselves from contamination. To determine the level of MOPP, the FSB S2/S3 should use the procedures in FM 3-100. The S2/S3 recommends MOPP level to the FSB commander. The commander is responsible for designating MOPP level. All soldiers must know the signals and alarms and react to them quickly. Detection personnel should be designated in advance to survey contaminated areas.

DECONTAMINATION

When personnel, equipment, and areas within the BSA have been exposed to NBC

contamination, decontamination measures must be taken. With chemical agents, steps must be taken immediately. Deliberate decontamination is rare and limited to vital areas. Most items can be decontaminated with soap and water or decontaminating apparatus. The same applies to contamination with a biological toxin. Radiological decontamination is accomplished by aging, sealing, or removal.

On the basis of input from the NBC NCO and the brigade surgeon, the S2/S3 recommends to the FSB commander priorities for the FSB units to be decontaminated when deliberate decontamination is required. Company commanders are required to list in unit SOPS the priorities within their units. The FSB has no organic assets to perform deliberate decontamination. If it is required, support may be provided by a decontamination platoon of the chemical company supporting the brigade, though priorities are set by the brigade commander. If the FSB receives this support, the S2/S3 identifies decontamination areas. He also directs and monitors the operations to ensure priorities are being followed. In addition to his decontamination responsibilities, the S2/S3 must direct the exchange of MOPP gear and request replenishment of NBC defense equipment and supplies from the FSB S4.

Decontamination procedures are outlined in FM 3-5.

SUPPORT MISSION IMPLICATIONS

Priorities must be set in advance to ensure effective logistics support during NBC attacks. Normally, supply of ammunition, fuel, food, water, and chemical defense equipment and essential maintenance are given the highest priorities. Planning must emphasize the flow of supplies by increased throughput. Alternate channels and procedures are arranged for each type of support.

SUPPLY

In an NBC environment, the most critical supply items are issued on an automatic basis. Emergency resupply may be by air. Contaminated stocks are normally not issued. Until fully decontaminated, they are segregrated from clean stocks. In emergencies, when not enough uncontaminated supplies are available, contaminated supplies may be used under certain conditions. They are only issued if they would give the receiving unit a decisive tactical advantage. Contaminated supplies would be issued first to units similarly contaminated. Only under the most dire circumstances would contaminated stocks be issued to an uncontaminated unit. The decision to issue contaminated items would be made jointly by the issuing and receiving commanders. The decision is based on the tactical situation, criticality of items, type and extent of contamination, and resources available for decontamination. Every attempt to avoid unnecessary spread of contamination must be made. Contaminated stocks must be clearly marked using standard NATO NBC markers.

Class I and Water

Preplanned resupply is not normally provided to units operating in or near contaminated areas. Units carry enough operational rations to operate without resupply for several days.

Rations are stored under protective covering or in containers to prevent or reduce contamination. If rations are contaminated,

they are not normally issued. Decontamination efforts are limited to removing the containers and carton overwrap. Supporting chemical and medical personnel provide technical assistance.

Contaminated water is not issued or used. Water from local sources, such as lakes, ponds, and water systems, can become contaminated. Therefore, local sources must be tested before use. Frequent testing is required. If a water source is suspected of contamination, it is marked with appropriate NATO NBC contamination markers. It is not used until it is tested, treated if necessary, and determined that the water is safe. Whenever water becomes contaminated and cannot be treated for drinking, it is disposed of to prevent secondary contamination. The area is marked appropriately. All water treatment, storage, dispensing, and associated equipment, such as pumps and filters, are monitored frequently for possible contamination. Decontamination procedures are outlined in FM 3-5.

Class II

Critical class II items, such as chemical defense equipment, receive priority of issue to selected units on an NBC battlefield. Highest priority support is given to units located in contaminated areas. The next priority is to units that recently left contaminated areas. The third priority is to units deployed in forward areas.

Class III

Class III supply is critical in NBC environments. More frequent unit moves increase consumption. Emergency resupply of isolated units may be by air. Storage tanks protect bulk petroleum to a large degree. However, caution must be taken to reduce contamination on tanks.

Class V

Resupply is done at night as much as possible. Ammunition support elements are responsible for decontaminating ammunition under their control, though deliberate decontamination may require additional support. If the situation requires the issue of contaminated stocks, the standard NATO NBC marker will be used. After issue, the user performs required decontamination.

Class IX

Contaminated class IX items are normally issued only in emergencies. In such cases, contaminated items for critical weapon systems may be issued. Before issue, the items are marked with the standard NATO NBC markers. Repair parts, especially sensitive electronic parts, must be checked for damage before issue.

MAINTENANCE

Maintenance company personnel face a particular risk due to the fact that petroleum products trap chemical contamination. They collect in bolt threads, hydraulic fluids, and closed assemblies. Hence, a vehicle may be safe to drive without MOPP 4, but not be safe to repair. Also, since oil, grease, and dirt degrade the effectiveness of chemical overgarments, mechanics must keep as clean as possible. Wet weather gear helps but causes heat buildup. As much as possible, maintenance company elements should operate in protected areas like underground garages and concrete buildings.

When possible, the maintenance company will operate both clean and contaminated repair areas. Repairs can be done much faster in clean areas. Inspectors ensure that contaminated equipment does not enter the clean area. Contaminated equipment is identified with NATO NBC markers. If contaminated with a nonpersistent agent and

repair cannot be performed in MOPP 4, the item may be left to weather (which is unlikely due to time constraints) or decontaminated if cost effective. If contaminated with a persistent agent, contaminated components should be replaced with the next higher assembly that can be replaced in MOPP 4.

On-site repair and recovery of contaminated equipment should not be done by uncontaminated teams. Contaminated equipment will be moved by other contaminated vehicles whenever possible. Otherwise repairs are done in MOPP 4, or the equipment is decontaminated. Contaminated tools and equipment should be kept segregated and used on other contaminated equipment.

Physical or emotional constraints may limit the time personnel can operate in MOPP 4 on contaminated equipment. Repair may be limited to the most critical items. Monitors should keep track of the level of contamination.

FM **43-12** has more on NBC maintenance operations in forward areas.

MEDICAL

Large numbers of patients and the loss of medical facilities and personnel will greatly affect health service support. Advanced stages of MOPP result in heat buildup, reduced mobility, and degradation of sight, touch, and hearing. Individual and unit operational effectiveness and productivity are degraded. Medical units in the brigade sector will require augmentation commensurate with the threat to continue operations in an NBC environment. Typical requirements include additional trauma treatment personnel and equipment, additional ambulance teams, and nonmedical personnel for patient decontamination. Detailed doctrine on medical operations in an NBC environment is in FMs 8-9 and 8-285, TC 8-12, and TM 8-215.

Contamination is a major problem. To maximize survivability and effectiveness, medical units must take action to avoid contamination and lessen the initial effects of nuclear weapons. Medical supplies and equipment should be protected from contamination by chemical agent-resistant coatings or protective coverings. Class VIII stocks are dispersed to minimize damage and contamination. Contaminated items are decontaminated before issue.

Each physically capable soldier is responsible to decontaminate himself and his equipment as soon as possible. Decontamination stations should be set up at medical treatment facilities. They should be conveniently located for the flow of patient traffic. See Figure B-1. Patients should be decontaminated before evacuation. Medical units are responsible only for the decontamination of patients who have reached medical facilities and are unable to perform self-aid. Patients will not be admitted to clean areas of MTFs in clothing or blankets known or suspected of being contaminated. Sometimes, a contaminated patient will require immediate treatment. No decontamination procedure should preclude required lifesaving procedures. A contaminated patient is treated in the contaminated treatment area. SOPS will govern the use of prophylactic measures for a known or suspected biological or chemical agent attack.

After a nuclear attack, individuals who suspect radiation injury may reach the MTF to seek medical attention. Suspected nuclear radiation injury alone, without specific symptoms and physical findings, does not justify evacuation. Usually, in nuclear and conventional warfare, burns and traumatic injury will be the basis for early medical care and evacuation.

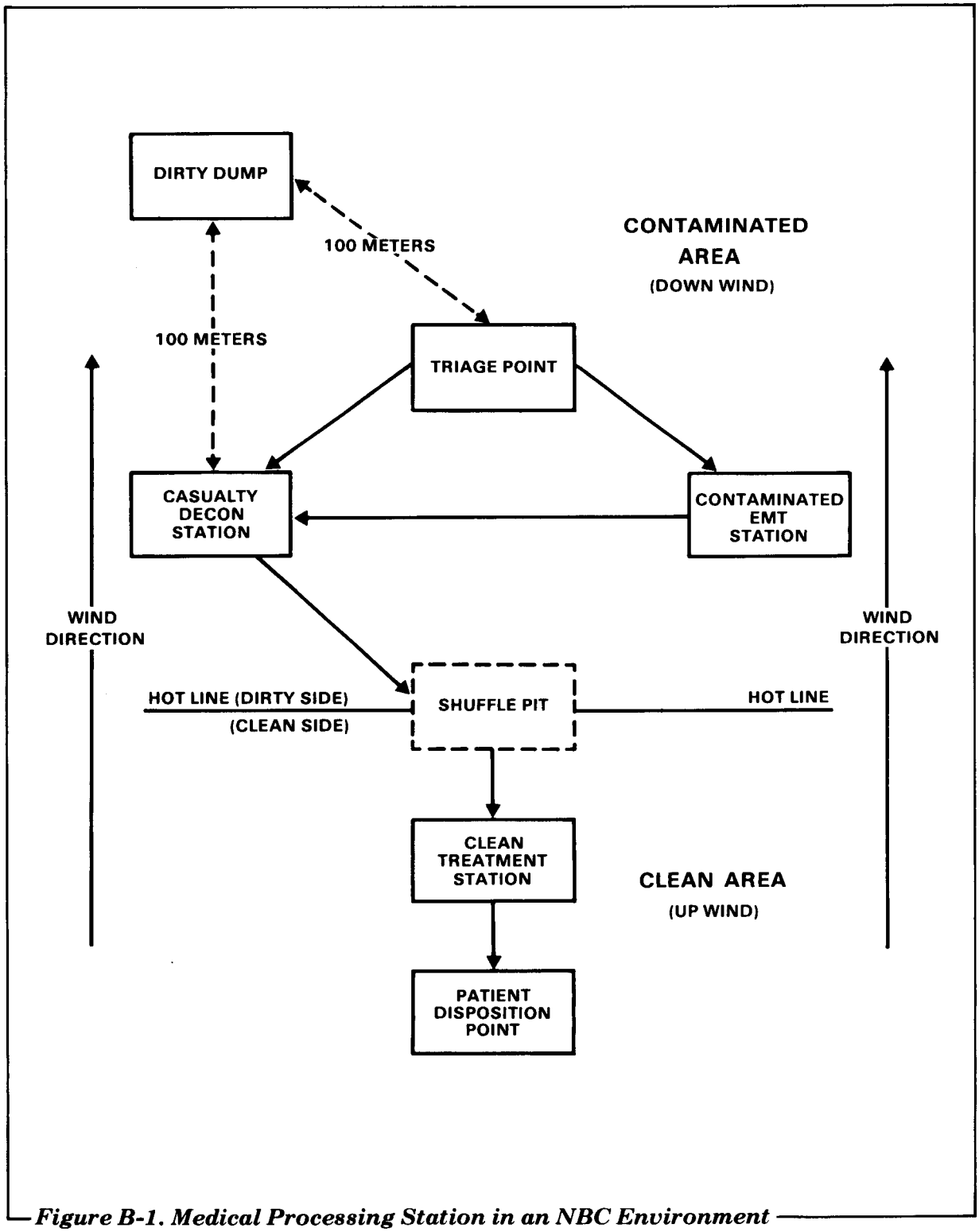


Figure B-1. Medical Processing Station in an NBC Environment

APPENDIX C

Deception

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DECEPTION ON THE AIRLAND BATTLEFIELD

Use of battlefield deception can enhance a division's ability to fight according to AirLand Battle tenets. For example, battlefield deception operations may allow the commander to mass forces without being noticed by the enemy. This may permit the commander to take the initiative by acting in a manner unexpected by the enemy. The key is to synchronize operations with the overall combat mission.

Battlefield deception operations are conducted by commanders to mislead or confuse enemy decision makers. They seek to distort, conceal, or falsify indicators of friendly intentions or capabilities. Successful deception operations cause the enemy to take operational actions favorable to friendly plans.

Successful deception operations depend on denying true dispositions and intentions to the enemy and having thorough knowledge of the enemy. The first depends on effective OPSEC. In the planning stage, friendly profiles must be identified and used to advantage. OPSEC is also essential during the execution and evaluation phases. In addition, intelligence is required on enemy collection capabilities, decision making, and deception doctrine.

CSS PLANNING

CSS elements must be integrated into all battlefield deception plans. Planners must consider whether the deception-specific and other resources required to execute a deception story are available. They must also be aware of the risks involved in committing limited resources to the deception story. This is especially true in the brigade area. Commanders must determine whether the potential gain of a deception is worth the resources required.

A division Battlefield Deception Cell under the staff supervision of the G3 plans the division's role in a corps deception, or may plan independent division-level deception operations. The G4 prepares logistics estimates by analyzing logistics factors affecting deception operations. He advises the deception cell on logistics feasibilities of various courses of action. The G1 advises the cell on the availability of personnel to support deception operations. The G4 coordinates with the G3 and his deception element to ensure deception tasks are integrated into the logistics annex to the OPLAN.

DECEPTION MEANS FOR FSB ELEMENTS

Once the deception plan is formulated, FSB elements may be required to employ deception means. Deception means are methods, resources, and techniques used to convey or deny information to the enemy. There are four categories of deception means—visual, olfactory, sonic, and electronic. FSB units may use any combination of the four types to accomplish the two deception objectives—to hide the real and display the false.

HIDE THE REAL

Concealing logistics activities ties in with overall OPSEC measures. In addition to these other OPSEC measures, the following specific deception means may be used:

- Use civilian cars and trucks or converted buses for logistics operations.
- Store supplies and perform maintenance and medical operations in train cars, houses, factories, subway tunnels, caves, or bunkers.
- Setup activities in partially destroyed installations.
- Disguise packages and containers to look like ones used by local civilians.
- Send FSB personnel forward with deploying forces to find and camouflage suitable locations before supplies are sent forward.
- Set up in unusual or unorthodox positions and use secondary supply routes.
- Require vehicles to move randomly, rather than in convoys, and during periods of reduced visibility.
- Screen activity with smoke.
- Change movement patterns and relocate activities at irregular intervals.

DISPLAY THE FALSE

FSB units may use deception means to lead the enemy to believe activities are located where none exist. These activities may include logistics installations; supply points, including ammunition and fuel storage areas; motor pools; and airfields. Though such activities are normally performed by elements at echelons above the brigade, FSB units may be required to play a role in such specific deception means as—

- Spraying surplus oil or tar on the ground to create false runways.
- Arranging empty ammunition containers and fuel drums to portray logistics bases.
- Using smoke to simulate activity or obscure a dummy base.
- Setting up fake supply routes to a dummy base.

- Portraying all indicators normally associated with base activity. These include latrines, trash, concertina wire, buried cable, and foot and vehicle tracks.

- Using any available logistics base decoy packages. Several devices to portray logistics bases are under development.

FSB units are not limited to visual deception. The smell of sprayed surplus POL products enhances the believability of the presence of vehicles or fuel storage areas. Similarly, cooking odors lead a nearby enemy to believe a unit large enough to warrant a dining facility is in the area. Noises, either real or simulated, are also necessary to convince the enemy that a logistics activity is operating in the vicinity. Such noises are most effective in periods of limited visibility. Finally, CSS elements should transmit bogus reports and orders on administrative/logistics nets to confuse the enemy. This activity should be coordinated with the CE and electronic warfare staff officer.

SAMPLE TECHNIQUES IN VARYING TACTICAL SITUATIONS

The following are examples of how deception measures may be used by FSB elements to support various tactical situations. These are only examples; there are numerous others. The best deception means to use depends on METT-T. The main point is that synchronization of effort depends on the FSB techniques being integrated into the overall deception and operations plans.

OFFENSE

If the deception story is that 1st Brigade will conduct the main attack, when in reality 2d Brigade will, FSB units help simulate noise and light patterns in 1st Brigade's notional assembly area. They also appear to close logistics activities in the old area. At the same time, FSB units in support of 2d Brigade postpone the forward movement of vehicles until the last possible moment. Even at that point, the movement is restricted to that which appears normal for a defensive or supporting attack.

DEFENSE

In the defense, deception may be used to lead the enemy to believe the division is withdrawing. FSB elements conduct rearward movement of convoys with dummy loads. Units also simulate evacuation, abandonment, or destruction of supplies and equipment.

RETROGRADE

The FSB may use several techniques to have the enemy believe the brigade is defending in its present position when a withdrawal will be conducted. Stockpiles of supplies— ammunition, fuel, and barrier materiel—are portrayed in the present position. Normal patterns of activity are continued in the current location. Movement of FSB elements to the rear are concealed through infiltration and night movement.

APPENDIX D
Night Operations

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MAINTENANCE D-2
MEDICAL D-2

GENERAL CONSIDERATIONS

FSB commanders must anticipate a substantial amount of their units' work being done at night or in limited visibility. They must plan for the equipment needed and the precautions necessary to perform the mission in such conditions. For these types of operations, they should consider—

- Reduced electromagnetic emissions. Support activities are a major source of such emissions. FSB commanders must continually emphasize the role and use of wire, messengers, and sound and visual signals.
- Appropriation of civilian buildings to reduce thermal signatures.
- Lightproofing of shelters.
- Use of filtered lights.
- Use of night vision devices.
- Elimination of all but essential noise.

In addition, the BSA is susceptible to a night attack. This may further slow down CSS activities.

Use of chemical lights may be applicable. Possible techniques that may be used or modified include—

- CPs lit only by chemical lights to eliminate generator noise and thermal signature.
- Chemical trip flares which create no fire hazard but illuminate targets, mark target reference points, or mark ranges.
- Magnetic holders to allow placement of colored chemical lights on vehicles.
- Use of chemical lights to illuminate areas of vehicle engine compartments for night repair.
- Chemical light holders to regulate the amount and direction of light.

SUPPLY

Supply planners can anticipate high consumption of batteries, flashlights, and illumination rounds during night operations by their supported brigade. Also, additional fuel will be used to run vehicle-mounted night sights.

When resupply operations are conducted at night, MSRs must be clearly marked. Chemical lights are one possibility, but enemy scouts can easily move them. Engineer tape on stakes is more secure.

Aerial resupply will require a directional light source to guide helicopters. Directional strobe lights or bean-bag lights (and in emergencies, chemical lights) may be used.

Use of prestocked supplies requires careful coordination. Locations must be capable of being found in limited visibility. Despite the difficulties, however, this technique will be important. Care must be taken to ensure the attack is not signaled by the prepositioning.

Use of materials-handling equipment is more dangerous at night. Therefore, whenever possible, supplies to be delivered at night should be loaded during the day. External SOPS should require supported units to provide additional walking guides or personnel to load supplies onto trucks.

MAINTENANCE

Unless prohibited by the tactical commander, maintenance company elements work in lightproof shelters with subdued visible light. Tarps and tentage may be draped over tank and howitzer main guns to provide expedient shelters. When available, night vision devices are used to repair critical items that cannot be fixed in the shelters. Equipment, tools, and repair parts are prepositioned and marked for easy use.

BDA is difficult. Therefore, recovery vehicles should be placed forward during night attacks. Equipment should be moved to a location where assessment can be performed more easily. Recovery personnel should reconnoiter routes during daylight so they can rapidly recover vehicles to the MCP.

MEDICAL

Light discipline requirements will affect medical operations much as they do supply and maintenance operations. Extensive treatment operations will require lightproof shelters. Patient acquisition will be more difficult. Units may employ some sort of casualty-marking system such as luminous tape or filtered flashlights.

Evacuation will be slowed by limited visibility. Additional ground ambulances may be required to compensate. In the offense, ambulances will move forward with battalion aid stations. However, this movement will also have to be done carefully to avoid signaling the enemy. Predesignated AXPs and patient collecting points should also be used. Air evacuation will be difficult. Precise grid coordinates as well as prearranged signals and frequencies are required.

APPENDIX E
FSBs for the Heavy/Light and Infantry Divisions

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HEAVY/LIGHT DIVISION FSB E-1
INFANTRY DIVISION (NATIONAL GUARD) FSB E-3

HEAVY/LIGHT DIVISION FSB

DIVISION OPERATIONS

The threat to the heavy/light division (2d Infantry Division) relies on massive firepower, large numbers in multiple echelons, and high maneuverability. It may attack with very little warning. The US and its allies must defend against the initial attack, then seize the initiative while using the terrain to maximum advantage.

The US division designed to oppose the threat is a mix of heavy and light forces along with aviation assets. The heavy forces are to be used along roads and in open areas. Aviation assets will be used to insert infantry forces into overwatch positions. The division has only a limited capability of self-sustainment. It is designed to fight as part of a combined command, not a US corps. FM 71-100 describes the operations of the heavy/light division.

DISCOM

The DISCOM structure for this division is designed to support a heavy night mix without some support normally provided by a corps to a division. The DISCOM is a modified heavy DISCOM with attachments. The MSB has maintenance teams to provide or supplement repair capability for MLRS, Chapparal, tracked vehicles, artillery/turret/fire control systems, and radios. Supply and missile maintenance capabilities have also been adjusted to meet the force requirements.

The DISCOM has three FSBs. Each is constructed differently to meet the needs of its supported force. The basic support concepts and considerations employed by each FSB are the same as those discussed in the previous chapters of this manual. The support requirements, however, will differ due to differences in terrain and mission, as mentioned above, and the people and equipment of the supported force. Each FSB is designed to support two battalions. One supports two tank battalions, one supports two mechanized infantry, and one supports two infantry. The HHD of each FSB is identical to that of the heavy division FSB HHD. Organizational differences are summarized in

Table E-1. Characteristics of Heavy/Light Division FSB Companies

	Supply Company	Medical Company	Maintenance Company
Tank FSB and Mech Inf FSB	Same as Hvy Div FSB, except for smaller sup and petrl sec	Same as Hvy Div FSB, except has only two trkd amb sqd	Same as Hvy Div FSB
Inf FSB	Same as above	Same as Hvy Div FSB except has no trkd amb sqd	Much smaller than Hvy Div FSB. See Figure E-1

Table E-1. Figure E-1 shows the organization of the maintenance company.

The FSBs for the tank and mechanized infantry battalions can plan to support as do the FSBs of heavy divisions. The FSB for the infantry battalions will support a primarily dismounted force. The decreased mobility and less complex weapon systems reduce logistics requirements, particularly class III and V and maintenance. Like the units it supports, the FSB must use dispersion and relative mobility in close terrain. FM 7-30 has information on infantry brigade operations.

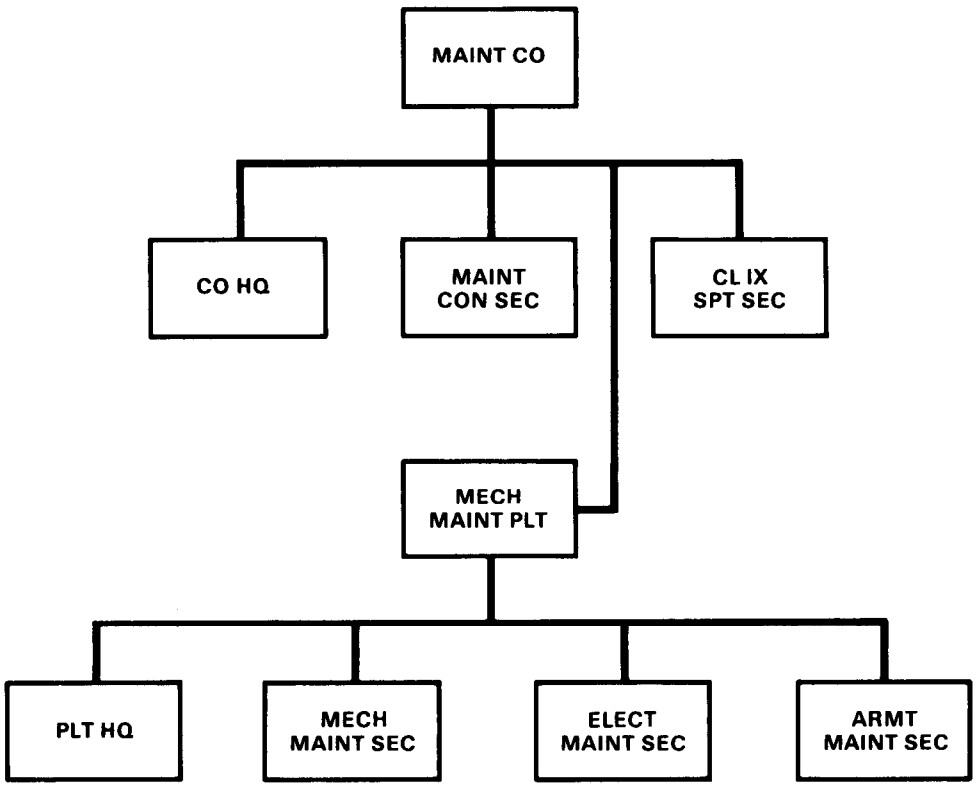


Figure E-1. FSB Maintenance Company Supporting Two Infantry Battalions

INFANTRY DIVISION (NATIONAL GUARD) FSB

DIVISION OPERATIONS

The infantry division operates in nearly all terrain, weather, and enemy situations. Since its maneuver elements consist primarily of dismounted infantry, the division is optimized to fight in terrain with restricted mobility. The division's tank and mechanized infantry battalions give the commander flexibility in tailoring the force, mixing heavy and light forces at the brigade level. Further discussion of infantry division and brigade operations is in FMs 71-100 and 7-30.

DISCOM

The DISCOM of the infantry division is structured the same as the heavy division DISCOM with an HHC/MMC, MSB, three FSBs, and an AMCO. However, these units, with the exception of the HHC/MMC have been modified to account for differences in the supported force.

As in the heavy/light division, each FSB is designed to support a different brigade structure. One FSB supports the two heavy battalions and one infantry battalion. It is structured like a heavy division FSB and operates much the same. It must constantly be prepared to task organize to support brigade task forces which include one or both of its supported brigade's heavy battalions.

The other two FSBs are designed to support brigades whose maneuver battalions are infantry. One is structured to support three battalions, and the other, four. Their HHDs are identical to those of heavy division FSBs. Their supply companies have a greater capability in the supply section for class I, II, IV, and VII supply than their counterparts in a heavy division. However, they have less than half the bulk fuel storage and distribution capability since they support dismounted infantry. The medical company ambulance platoons have no tracked ambulances. The maintenance companies are also structured like heavy division FSB companies except that capabilities in specific areas have been adjusted to correspond to the number and types of equipment in the supported force. An infantry SST is allocated for each battalion supported.

Like the heavy/light division FSB designed to support the two infantry battalions, the FSBs of the infantry division support a force built around dismounted infantry soldiers. Class III and V consumption is significally less than for a heavy brigade, and so is the maintenance requirement. Mobility is limited. FSBs must be prepared to support task-organized forces with heavy forces either from within the division or from without.

APPENDIX F

Sample Operations Plan with Annexes

(CLASSIFICATION)

Copy No ___ of ___ Copies
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MZ23

OPLAN 1234

References:

a. Map, series 1501, sheets NM 32-5 (FRANKFURT), edition 2, NM 32-8 (MANNHEIM), edition 3, 1:50,000 scale.
b. 2d FSB Tactical SOP
c. DISCOM OPLAN 2987
d. 2d Bde OPLAN 222
e. 2d DISCOM Tactical SOP
f. 2d Bde Tactical SOP

Time Zone Used Throughout the Plan: ZULU

Task Organization:

HHD/2d FSB
A/2d FSB (+)
Water team/A/132 MSB (attached)
DAO rep/2d DISCOM
B/2d FSB
C/2d FSB (+)
Amb team/F/132 MSB (attached)
Sig team/B/2d Sig Bn (attached)

1. SITUATION

a. Enemy Forces.

(1) 2d Bde is opposed by two tank bn, estimated to be at 95 percent strength. These ground forces are supported by a helicopter company and an artillery battery which is capable of mass artillery barrages within a 10-mile radius and attack helicopter strikes within 20 miles. Intelligence indicates that the full range of radio electronic combat elements will be employed to gather intelligence and to degrade the effectiveness of friendly command and control nets. The OPFOR has the ability to deliver nuclear weapons and chemical agents into the BSA. Intelligence also indicates that OPFOR will employ TACAIR, airborne/airmobile regular army units, and local guerrilla units in the BSA to disrupt or destroy CSS operations.

(2) See current INTSUM.

(CLASSIFICATION)

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(OPLAN 1234--2d FSB)

b. Friendly Forces. 2d Bde attacks 120500 June through elements of the 1st and 2d OPFOR Tank Bn with two bn abreast. TF 3-25 on the left conducts main attack; TF 3-81 on the right conducts supporting attack. TF 3-3 follows in zone of TF 3-25. Bde secures FREISING (QU0364) and MOOSBURG (QU1773) and prepares to continue attack on to south and southwest on order.

c. Attachments and Detachments. See task organization.

d. Assumptions.

(1) 2d FSB will be in place and prepared to support 2d Bde.

(2) There will be air parity.

(3) DISCOM OPLAN 2987 will be implemented.

(4) 2d Bde OPLAN 222 will be implemented.

(5) Both threat and friendly forces are capable of initiating nuclear or chemical warfare, limited or full scale, in any combination.

2. MISSION. 2d FSB moves to, occupies, and defends BSA vicinity OBERDINGEN (QU 143635) and conducts direct support supply, maintenance, and health services operations in support of units in the 2d Bde sector.

3. EXECUTION.

a. Concept of Operations. 2d FSB and other BSA units move in seven serials to a brigade support area vicinity OBERDINGEN, establish a base cluster defense, and begin support operations no later than 5 hours after last unit clears the release point. 2d FSB supports 2d Bde by initially deploying AXPs forward in sector and an MCP vicinity Hill 760. Based on TF forecasts, 2d FSB prepares to push class III to LRPs 29 and 36. 2d FSB in coordination with 2d DISCOM DAO will coordinate for forward delivery by XX Corps of 2d Bde's CSR for 105-mm main gun, TOW, and 155-mm howitzer ammunition at LZ COSTA and LZ BLAKE. 2d FSB will be prepared to deploy additional assets to LRPs 25 and 59 in support of continued offensive operations.

(1) Operations Overlay. Annex A.

(2) Road Movement. Annex B.

(3) Service Support. Annex C.

(4) Rear Operations. Annex D.

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(CLASSIFICATION)

(OPLAN 1234--2d FSB)

b. Commander's Intent. I intend to provide flexible and responsive logistics and medical support to 2d Bde's offensive operation by rapid mission analysis to determine support requirements as the battle progresses, rapidly configuring forward support elements and deploying them forward to enhance the brigade commander's tactical options. I want to project support as far forward as prudent while still retaining the BSA's capability to defend itself. I intend to defend the BSA by maximixing passive defensive measures and vigilance at all LPs/OPs and checkpoints and by increasing local and MSR patrolling. We will continue night resupply and repositioning to reduce enemy observation of our activities. If attacked, we will bring to bear the full force of coordinated artillery and aviation fires to defeat the enemy before he can threaten the BSA.

c. Company A.

(1) Be prepared to move ATP forward on order.

(2) Provide security for HHD.

d. Company B.

(1) Be prepared to provide maintenance support team to 3d FSB on order.

(2) Be prepared to receive additional reinforcing tracked vehicle maintenance teams from 132 MSB.

e. Company C.

(1) Be prepared to reconstitute one ambulance team for 3d FSB on order.

(2) Be prepared to reconstitute the TF 3-25 aid station on order.

f. Coordinating Instructions.

(1) This OPLAN is effective for planning on receipt and implementation on order.

(2) MOPP-1 is in effect.

(3) Each company will send a perimeter security sector sketch to the CP no later than RP+5. Acknowledge completion of security plan rehearsal.

4. SERVICE SUPPORT. Support to FSB elements provided in accordance with SOP.

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(CLASSIFICATION)

(OPLAN 1234--2d FSB)

5. COMMAND AND SIGNAL.

a. Command.

(1) FSB CP located in vicinity of MA 779705.

(2) Alternate CP is Company A in vicinity of NM 797770.

b. Signal.

(1) Current SOI is in effect.

(2) FM radio traffic is minimized until lifted by FSB commander.

Acknowledge.

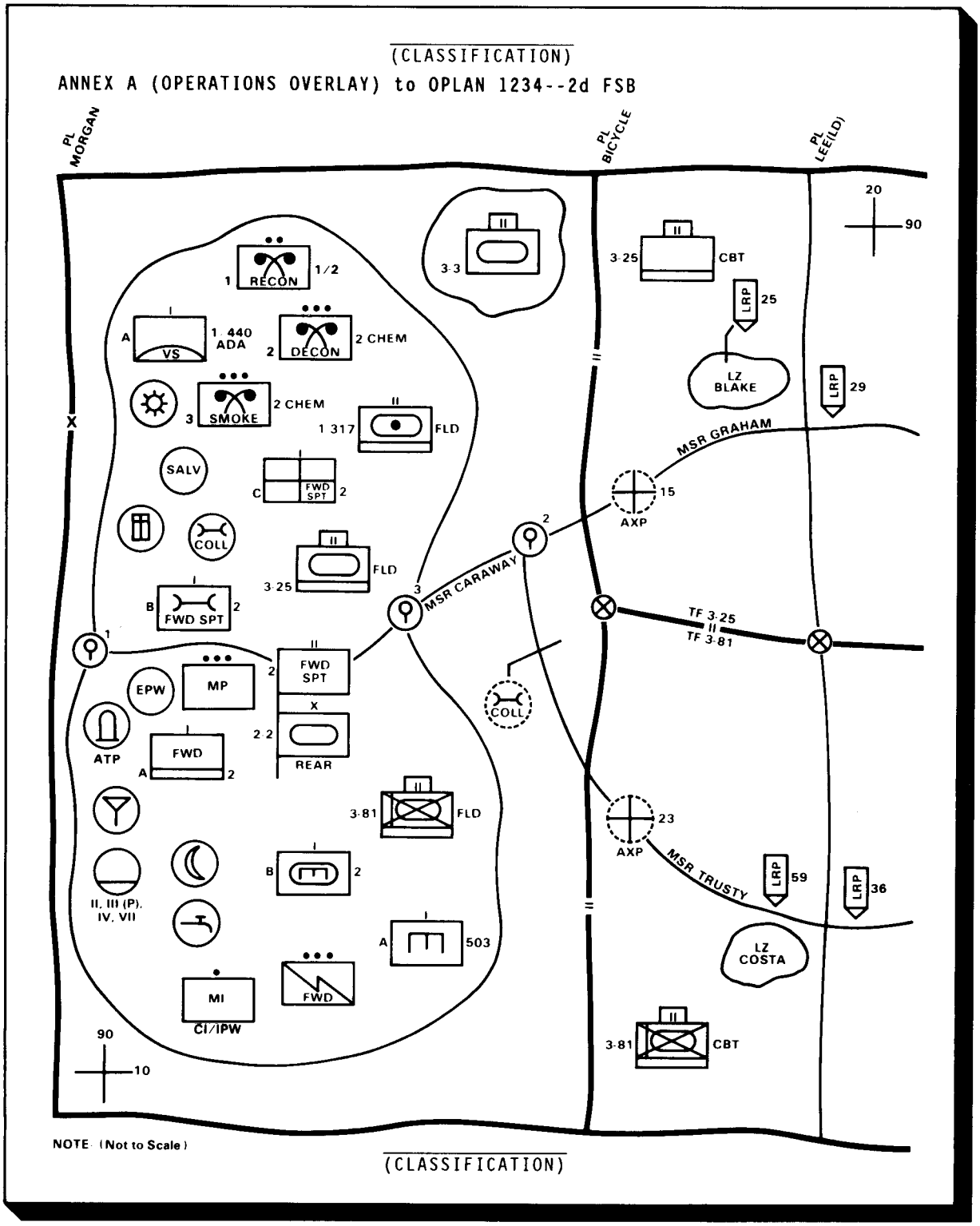
CDR
LTC

OFFICIAL: /s/
S3

Annexes:

A. Operations Overlay
B. Road Movement
C. Service Support
D. Rear Operations

(CLASSIFICATION)


(CLASSIFICATION)
ANNEX A (OPERATIONS OVERLAY) to OPLAN 1234--2d FSB
PL MORGAN
PL BICYCLE
PL LEE(LD)
1 RECON 1/2
A VS 1, 440 ADA
2 DECON 2 CHEM
3 SMOKE 2 CHEM
1 317 FLD
SALV
C FWD SPT 2
COLL
3-25 FLD
B FWD SPT 2
FWD SPT
MP
EPW
ATP
A FWD 2
2-2 REAR
3-81 FLD
B 2
II, III (P), IV, VII
A 503
MI
CI/IPW
FWD
90
10
3-3
3-25 CBT
LRP 25
LZ BLAKE
LRP 29
MSR GRAHAM
AXP 15
MSR CARAWAY
TF 3-25
TF 3-81
COLL
AXP 23
MSR TRUSTY
LRP 59
LRP 36
LZ COSTA
3-81 CBT
20
90
NOTE (Not to Scale)
(CLASSIFICATION)

(CLASSIFICATION)

ANNEX B (ROAD MOVEMENT) to OPLAN 1234--2d FSB

References:

a. Map Series 1501 sheets NM35-2 (FRANKFURT) edition 2, NM32-8 (MANNHEIM), edition 3, 1:250,000 scale.

b. 2d FSB Tactical SOP

c. DISCOM OPLAN 2987

d. 2d Bde OPLAN 222

1. SITUATION.

a. Enemy Forces. The enemy can conduct road interdiction through mining and demolition along the entire route. However, the enemy is expected to limit its interdictions to specific military objectives in ambush attacks. The enemy is capable of simultaneous and multiple convoy ambushes at critical areas. However, this is unlikely because of the restriction on convoy movement within the BSA.

b. Friendly Forces.

(1) BSA units move night of 21-22 June 19XX to assembly area in vicinity of GRAFTON (UV6302).

(2) 227th Aviation Company provides aerial observation and CAS.

(3) Battery B, 317th Artillery provides artillery support, as required.

(4) Company C, 2d FSB provides en route medical support.

(5) TMT Co, 132 MSB, provides transportation support, as required.

2. MISSION. 2d FSB moves beginning 210300 June 19XX to a new AO to support 2d Bde tactical mission.

3. EXECUTION.

a. Concept of Operations. FSB and other BSA units conduct a tactical road march in seven serials over two routes to a new AO. First serial crosses SP 210300 June and last serial crosses RP 210516 June.

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(CLASSIFICATION)

(ANNEX B, OPLAN 1234--2d FSB)

b. Convoy Organization.

(1) Serial 1: Advance/Quartering Party

(2) Serial 2: Company A (-), Company C (-), and HHD (-)

(3) Serial 3: Company B (-)

(4) Serial 4: Inf Bn Field Trains

(5) Serial 5: Armor Bn Field Trains

(6) Serial 6: Company A (-) and Company C (-)

(7) Serial 7: Company B (-) and HHD (-)

c. Tasks to Subordinate Units.

(1) Company C provides medical support along route.

(2) Company B provides recovery support along route.

(3) Company A provides fuel support along route.

d. Checkpoints.

CHECKPOINTS	COORDINATES	KILOMETERS BETWEEN CHECKPOINTS
SP	721642	9.8
40	711121	2.4
12	701243	2.3
93	693240	2.1
77	695179	2.1
RP	711234	1.9

e. Coordinating Instructions.

(1) Advance/quartering party assembles at bn dismount point 210200 June.

(2) Formation: Close column.

(3) Time Gap: 15 minutes between serials.

(4) Appendix A, Road Movement Table.

(5) Appendix B, Route Overlay.

(CLASSIFICATION)

(CLASSIFICATION)

(ANNEX B, OPLAN 1234--2d FSB)

4. SERVICE SUPPORT.

a. Traffic Control.

(1) Quartering party will drop 2-man traffic control teams at Critical Points 1, 2, and 4.

(2) MPs will be responsible for traffic control point at Blue River and in the town of Manndich.

b. Recovery.

(1) Units will recover organic vehicles that break down along the route.

(2) Company B trail serial will recover all vehicles beyond capabilities of owning units.

c. Medical.

(1) Company C will provide ground medical evacuation services.

(2) Aeromedical evacuation procedures. See Medical Annex, Tactical SOP.

5. COMMAND AND SIGNAL.

a. Command.

(1) Jump CP moves with Serial 2.

(2) CP opening, closing times, and locations to be announced.

b. Signal.

(1) SOI Index 1-12 is in effect.

(2) Listening silence is effective 211300 Jan.

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(ANNEX B, OPLAN 1234--2d FSB)

Acknowledge.

SMITH
LTC

OFFICIAL:

/s/Jones
S3

Appendixes:

A. Road Movement Table
B. Route Overlay

(CLASSIFICATION)

(CLASSIFICATION)

APPENDIX A (ROAD MOVEMENT TABLE) to ANNEX B, OPLAN 1234--2d FSB

Map Reference:

General Data:

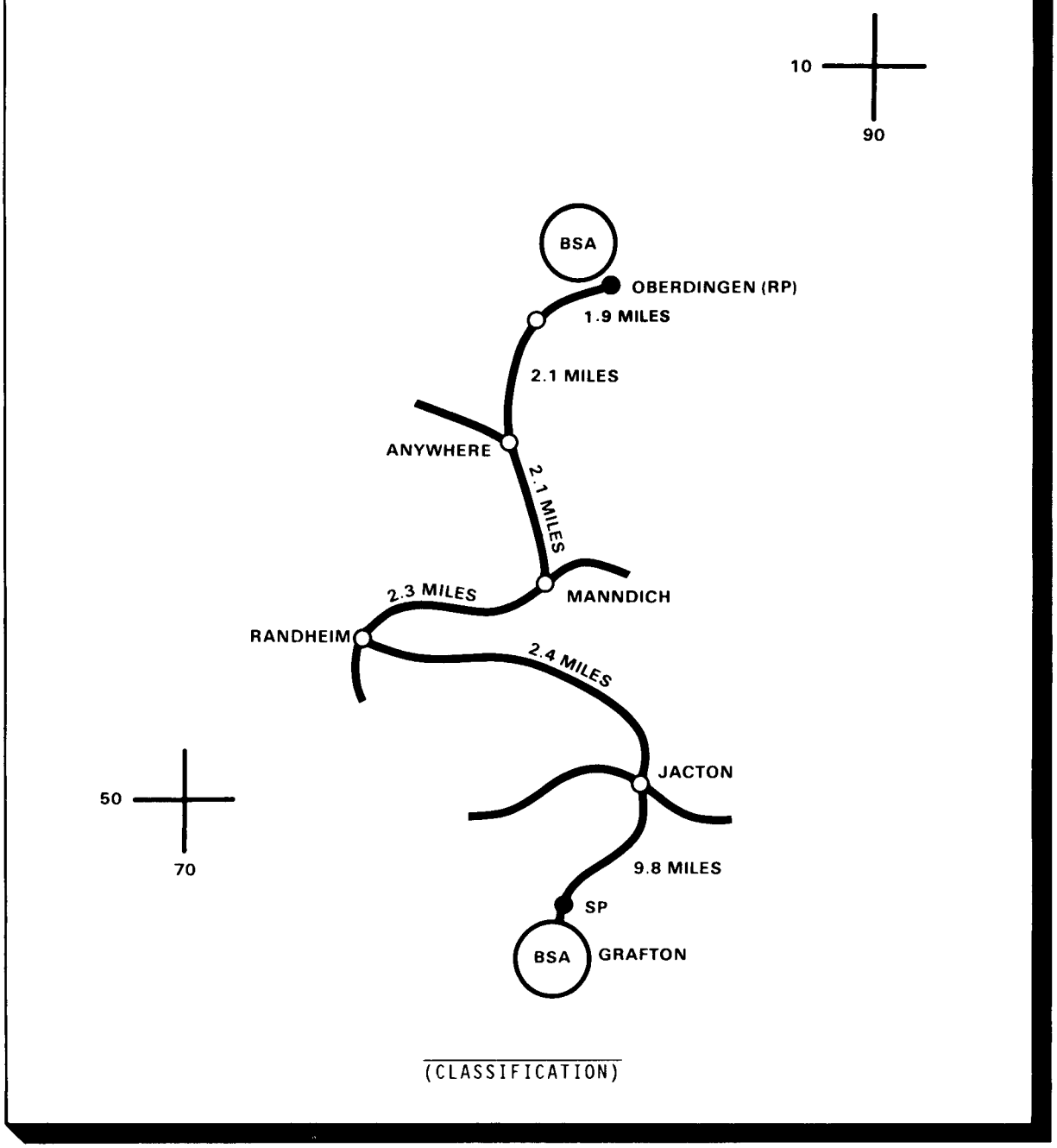
1. Average Speed:
2. Traffic Density:
3. Halts:
4. Critical Points:
   a. SP:
   b. RP:
   c. Other Critical Points:
   d. Route Classification:
   e. Route Restrictions:
5. Main Route to SP:
6. Main Route to RP:

March Unit	Date	Unit	No of Vehicles	Class of Vehicles	From	To	Route	Critical Points

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APPENDIX B (ROUTE OVERLAY) to ANNEX B, OPLAN 1234--2d FSB



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(CLASSIFICATION)

ANNEX C (SERVICE SUPPORT) to OPLAN 1234--2d FSB

1. GENERAL. This annex provides the support plan for 2d Bde units and units supporting the 2d Bde. CSS will be provided/coordinated through the FSB staff and the Bde S1 and S4. BSA installations open not later than 120500 June. Appendix 1 (Service Support Overlay).

2. MATERIEL AND SERVICES.

a. Supply.

(1) Class I. A/2d FSB will operate a class I supply point in the BSA for 2d Bde and its supporting units.

(a) Supply point distribution for all units supported from the BSA on 12 June only.

(b) All units maintain two rations in reserve during period 12 to 15 June inclusive.

(2) Water. The water team attached from 132 MSB will operate the water point.

(3) Class II, III (pkg), III (bulk).

(a) Class II and III (pkg). Supply point distribution will be from A/2d FSB.

(b) Class III (bulk). Supply point distribution will be from any class III supply point. A/2d FSB, will deliver to bde trains area and be prepared to push bulk fuel to LRPs 29 and 59. The Bde S4 will provide allocations when required.

(4) Class IV.

(a) Supply point distribution will be used. Selected class IV materiel will be issued by A/132 MSB.

(b) Class IV priorities to TF 3-25 on arrival objective area.

(c) The following controlled items will be requested through command channels: Culvert, nestable, 60 feet; and lumber, softwood, 2x4.

(d) No barrier/fortification materiel will be available at the BSA until 150012 June.

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(ANNEX C, OPLAN 1234--2d FSB)

(5) Class V.

(a) ATP will be operated by A/2d FSB, beginning 120700 June.

(b) Controlled supply rates for items in critical shortage as listed below. For all other items CSR will equal the required supply rate.

DODAC	NOMENCLATURE	RDS/WPN
1310-B568	Ctg, 40-mm, HE	8 rds/wpn
1315-C704	Ctg, 4.2-in, HE	115 wpn

(c) Units will maintain basic loads.

(6) Class VII.

(a) Class VII will not be stocked by 2d FSB.

(b) Class VII is provided through A/2d FSB.

(c) Requests to fill shortages will be submitted to Bde S4 citing MTOE authority. Battle loss replacements will be requested by submitting Daily Battle Loss Report according to tactical SOP. The Bde S4 will forward request to the FSB.

(d) The following items are command controlled:

NOMENCLATURE	LIN
Mortar, M30, M24A1	L45740
M818, 5-ton trkd	X59326

(7) Class VIII. C/2d FSB provides class VIII support.

(8) Class IX.

(a) B/2d FSB provides repair parts.

(b) Stockage objective: DS--10 days of ASL items.

(c) Critical shortages exist for the following items:

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(ANNEX C, OPLAN 1234--2d FSB)

- o Bradley fighting vehicle--engines
- o Howitzer, 155-mm--tubes

(d) Unserviceable end items and major assemblies will be evacuated to the B/2d FSB collection points. Controlled exchange may be performed at the discretion of the supported unit as prescribed by the bde commander.

(9) Class X. Civil relief supply requirements will be approved by division G5 and DISCOM and coordinated through the FSB.

(10) Air resupply. Appendix 3.

(11) Maps. Maps are provided by A/2d FSB.

(12) Captured enemy materiel. Materiel will be reported to Bde S2 for disposition instructions. Enemy rations and medical supplies will not be used or consumed by bde or BSA personnel.

(13) Excess supplies. All units will report excess supplies through supply channels to the FSB for disposition instructions.

b. Transportation.

(1) All MSRs are two-way.

(2) Ten or more vehicles dispatched to the same destination from one point of origin constitutes a convoy.

(3) Units coordinate convoy movements with the Bde S4 or FSB CP.

c. Services.

(1) Supported units will evacuate remains to the nearest GRREG collection point. The BSA collection point will be operated by A/2d FSB until division and corps assets arrive in the BSA.

(a) Army cemeteries will not be established.

(b) Concurrent return program is in effect.

(c) Isolated or mass burials are not authorized unless approved by the division commander. In emergencies, commanders may request such burials through command channels. When burials are authorized, units will report number of remains, identities (by nationality, sex, age, and name, if possible), and causes of deaths to the Bde S1 or GRREG point within 48 hours of burial.

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(ANNEX C, OPLAN 1234--2d FSB)

(2) Clothing exchange and bath services will be coordinated by Bde S4 with the FSB.

d. Maintenance.

(1) Maintenance collection points will be established in the BSA by B/2d FSB.

(2) Priority of maintenance is to TF 3-25.

(3) Repair time limits: 48 hours.

(4) The user is responsible for recovering damaged equipment to unit maintenance collection point. Damage assessment is done initially at the unit. Repair or further recovery is the unit's responsibility.

(5) B/2d FSB can provide limited recovery and evacuation assistance.

(6) Damaged equipment that requires DS maintenance or higher level maintenance and cannot be recovered by the unit will be reported through the Bde S4 to the FSB.

(7) The FSB coordinates with the 2d DISCOM MCO for heavy equipment to move tracked vehicles from designated collection points to the 132 MSB maintenance facility.

3. MEDICAL EVACUATION AND TREATMENT.

a. Evacuation.

(1) Holding policy is 72 hours.

(2) Primary means of evacuation is ground ambulance.

(3) Preferred means of evacuation is air ambulance.

b. Medical Support.

(1) Medical support will be established in each maneuver bn area and the BSA.

(2) Bde units will receive medical support from C/2d FSB.

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(CLASSIFICATION)

(ANNEX C, OPLAN 1234--2d FSB)

4. PERSONNEL.

a. Maintenance of Unit Strength. Replacements will be assigned to units based upon priorities of the commander.

b. Personnel Management.

(1) Bde evacuates EPWs to division collection points. EPWs from an NBC environment will be reported immediately to the bde or FSB command channels.

(2) Bde HQ will retain US military prisoners until sentences are approved.

c. Development and Maintenance of Morale.

(1) Postal, personnel/administrative, and finance services are provided to bde by corps teams.

(2) Legal services will be requested through S1 channels.

(3) Commanders will give special attention to the problems of illegal sale and bartering of military supplies and equipment. Incidents will be reported to appropriate criminal investigation or MP unit.

(4) Claims by indigenous personnel will be reported through Bde S1 channels.

5. CIVIL-MILITARY OPERATIONS.

a. Division G5 provides civil affairs support.

b. 288th PSYOPS Co provides PSYOPS support.

c. All civil affairs and PSYOPS activities will be coordinated through bde civil-military officer.

6. MISCELLANEOUS.

a. Subordinate units submit Battle Loss Report twice each day to the bde and FSB headquarters. Reporting periods are 0001 to 1200, due NLT 1400; 1201-2400, due NLT 0400 the following day.

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(CLASSIFICATION)

(ANNEX C, OPLAN 1234--2d FSB)

b. Bde chaplain is located at the bde CP and FSB chaplain is located at the FSB CP effective 120800 June. The bde UMT executes the bde religious support plan. It coordinates religious support between maneuver bn UMTs and div UMT. It also provides direct religious support to casualties in the BSA, US military prisoners, and detained personnel. The FSB UMT provides religious support to FSB personnel and casualties at collection points. It also responds to general religious support requirements identified by bde UMT.

c. For all reports, see Reports SOP.

d. Bde rear boundary is army light line.

Acknowledge

JOHNSON
COL

OFFICIAL

/s/PETERSEN
PETERSEN
S4

Appendixes: 1--Service Support Overlay (omitted)
2--Air Resupply (omitted)

Distribution:

(CLASSIFICATION)

(CLASSIFICATION)

ANNEX D (REAR OPERATIONS) to OPLAN 1234--2d FSB

1. SITUATION. See OPLAN 1234--2d FSB.

2. MISSION. 2d FSB conducts rear operations to prevent interruptions of or promptly restore CS and CSS functions throughout the BSA.

3. EXECUTION.

a. Concept of Operations. With rear security operations as a primary consideration, units in the BSA will set up individual bases. The FSB commander is the commander of the BSA base cluster. He will set up the base cluster operations center and ensure it operates on a 24-hour basis. Base commanders are responsible for their own base defense and base damage control. The base cluster commander will coordinate and supervise base defense for bases within the cluster. Under direction of the Bde S3, supporting MPs will respond to bases under Level II threat. The Bde S3 will request the commitment of the 2d Div reaction force if a Level III threat occurs in the BSA. Bde or DISCOM commander will determine commitment of MPs or the 2d Div reaction force. Any rear operations liaison or technical support provided by division or corps will be colocated with the BCOC.

b. Base Cluster Operations Center/CP. The BCOC has the following responsibilities:

(1) Coordinate and supervise protection against Level I threat.

(2) Plan for and coordinate response to Level II and III threats.

(3) Request fire support/TACAIR.

(4) Request ADC support.

c. 2d Brigade S2 and S3. The Bde S2 and S3 have the following responsibilities:

(1) Disseminate tactical information to BSA BCOC.

(2) Forward request for assistance from FSB.

(3) Forward priority communications from FSB.

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(ANNEX D, OPLAN 1234--2d FSB)

(4) Assist BCOC in setting up base defenses, on request.

(5) Monitor base defense preparations.

d. Coordinating Instructions.

(1) Individual units within the base cluster will report all observed enemy acts and locally gathered intelligence data to the BCOC.

(2) No barrier and denial operations will be conducted without the approval of the BSA BCOC.

4. SERVICE SUPPORT. See Annex C.

5. COMMAND AND SIGNAL. Command of rear operations in the BSA is directed by BSA BCOC (MA676988). Current SOI are in effect.

Acknowledge.

JOHNSON
COL

OFFICIAL

/s/PETERSEN
PETERSEN
S4

DISTRIBUTION:

(CLASSIFICATION)

APPENDIX G

Sample Standing Operating Procedures

This appendix contains portions of three sample annexes to an FSB SOP. The purpose of this appendix is to provide a guide for a format and level of detail. It is not intended to be prescriptive.

ANNEX ____ (MAINTENANCE) TO ____ FSB SOP (WARTIME)

1. PURPOSE. To prescribe the policies and procedures for maintenance operations during wartime. Procedures for a particular OPLAN will be published in the service support annex/paragraph of that plan.

2. SCOPE. Applicable to all customers and elements of ____ FSB.

3. GENERAL.

a. Maintenance operations in the field will follow standard maintenance procedures as fully as the tactical situation permits.

b. All maintenance will be performed at the lowest level consistent with maintenance allocation charts in applicable TMs.

c. Maintenance teams and MSTs will perform on-site repair as much as possible.

d. Urgent maintenance work orders will be applied as soon as possible. Application of lower priority MWOs will be done as the tactical situation permits.

e. Maintenance priorities, unless otherwise announced, are first to combat, then CS, then CSS units. Priority to a particular task force will be determined by the brigade commander.

f. The brigade S4 will be the POC for all interservice and HNS maintenance operations.

4. RESPONSIBILITIES

a. ____ FSB provides DS maintenance for all brigade units and any other supported units in the ____ Brigade area except as noted below. Support provided to nondivisional elements will be coordinated between the support operations officer and a LO provided by the corps logistics task force operating in the DSA.

b. ____ AMCO provides AVIM and backup AVUM support.

c. ____ MSB provides backup DS maintenance.

d. ____ Signal Battalion provides DS maintenance for classified items.

5. BATTLE DAMAGE ASSESSMENT AND REPAIR

a. All maintenance personnel and customers down to vehicle commanders will be familiar with the policies and procedures in TM 9-2350-276-BD.

b. All nonstandard repairs will be noted on DD Form 1577. This tag will be tied to the vehicle commander station. It will stay there until standard repairs are made. If cannibalization is performed, a tag will also be fixed to the cannibalized vehicle where the part was removed. The tag will include the nomenclature and NSN of the missing part.

c. Battalion commanders can authorize controlled substitution.

6. RECOVERY AND EVACUATION

a. Battlefield recovery is a unit responsibility. Companies will recover disabled vehicles to the first rearward terrain feature as soon as possible.

b. Vehicles which cannot be repaired by the crew or unit maintenance team within ____ hours will be recovered to the UMCP.

c. Like-vehicle recovery will be used whenever possible. Units should have one tow bar for every two vehicles.

d. Vehicles which require more than ____ hours to repair will be recovered to the BSA. Battalions which require recovery assistance should request support through the BMO to the ____ FSB support operations section. Vehicles to be evacuated by HET will be placed in a collection point next to a Class 60 road.

e....

ANNEX ____ (SUPPLY AND SERVICES) TO ____ FSB SOP (WARTIME)

1. PURPOSE. To prescribe the policies and procedures for supply and service operations during wartime. Procedures for a particular OPLAN will be published in the service support annex/paragraph of that plan.

2. SCOPE. Applicable to all customers and elements of ____ FSB.

3. GENERAL.

a. Priority of issue will be to units in contact, then to units farthest from the supply point.

b. Supply procedures in DA Pamphlet 710-2-1 will be followed as fully as the tactical situation permits.

c. Only the brigade commander has authority to suspend AR 710-2 accountability procedures.

d. Cross-leveling of supplies will be conducted at the lowest level possible.

4. CLASS I

a. Units will maintain three days of supply of MREs on hand.

b. When the tactical situation permits, the ration cycle will be T-MRE-T. Fresh fruit supplements will be provided whenever available.

c. A Co, ____ FSB, will operate the class I point in the BSA.

d. Ration quantities will be based on the personnel status reports.

e. Class I status report will be submitted in accordance with format and procedures in Annex ____ (REPORTS).

5. CLASS II AND IV

a. Units will maintain 10 days of supply.

b. A Co, ____ FSB, will operate the class II, III (pkg), IV, VII point in the BSA.

c. The supply point will have very limited stockage of class II and IV on hand. Requests are normally passed to ____ MSB. Fill time is normally 24 hours or more.

d....

ANNEX ____ (MEDICAL) TO ____ FSB SOP (WARTIME)

1. PURPOSE. To prescribe the policies and procedures for medical operations during wartime. Procedures for a particular OPLAN will be published in the service support annex/paragraph of that plan.

2. SCOPE. Applicable to all supported elements.

3. GENERAL.

a. C Co, ____ FSB, is responsible for health service support on an area basis.

b. It will establish a clearing station in the BSA.

4. GENEVA CONVENTION.

a. Commanders will not employ protected medical elements in combat operations, either offensive or defensive, except for protection of themselves and their patients. Medical vehicles will not move nonmedical supplies or nonwounded combat personnel unless protective markings are removed or concealed.

b. Medical personnel will carry DD Form 1934 at all times.

5. EVACUATION.

a. Unless otherwise stated in the OPLAN, the evacuation policy for the BAS is ____ hours.

b. Maneuver units evacuate to the BAS. C Co ambulances normally evacuate from BAS to the clearing station.

c. Alternate vehicles should be identified by the commander to use when ambulances are unavailable.

d. Deceased personnel will not be evacuated in ground ambulances.

e....

Glossary

A

A2C2 – Army airspace command and control

AA – axis of advance

AAFES – Army and Air Force Exchange Service

AB — aviation brigade

AC – alternating current

ADA – air defense artillery

ADC – area damage control

admin — administration

ADSM – Automated Data Systems Manual

alog — administration and logistics

AM – amplitude modulated

amb — ambulance

AMCO – aircraft maintenance company

AO — area of operations

AR — Army regulation

armt — armament

arty — artillery

ASL – authorized stockage list

ASP – ammunition supply point

ATCCS – Army Tactical Command and Control System

ATM – advanced trauma management

ATP – ammunition transfer point

autmv — automotive

AVIM – aviation intermediate maintenance

avn — aviation

AVUM – aviation unit maintenance

AXP – ambulance exchange point

B

BAS – battalion aid station

BCOC – base cluster operations center

BDA – battle damage assessment

BDAR – battle damage assessment and repair

bde – brigade

BDR — battle damage repair

BF — battle fatigue

BMO – battalion maintenance officer

bn — battalion

br – branch

BSA — brigade support area

bty – battery

C

C2 – command and control

C3 — command, control, and communications

CA — civil affairs

CAS – close air support

CCI – controlled cryptographic items

CCL – combat-configured load

CCS2 – Command, Control, and Subordinate System Structure

cdr — commander

C-E — communications-electronics

CEB – clothing exchange and bath

ch — chief

them — chemical

cmd — command

CNR – combat net radios

co — company

coax — coaxial

comm — communications

COMSEC – communications security

con — control

COSCOM – corps support command

CP – command post

CS – combat support

CSA — corps storage area

CSCC — combat stress control coordinator

CSM — command sergeant major

CSR – controlled supply rate

CSS — combat service support

CSSCS – Combat Service Support Control System

CSST – cavalry system support team

CTA – common table of allowances

ctr — center

CW — continuous wave

D

DA — Department of the Army

DAO — division ammunition officer

DC — direct current

DD — Department of Defense

decon — decontamination

det – detachment

DISCOM — division support command

dist – distribution

div — division

DMMC — division materiel management center

DMSO — division medical supply officer

DNBI — disease, nonbattle injury

DNVT — digital, nonsecure voice telephone

DODAC — Department of Defense Ammunition Code

DS — direct support

DSA — division support area

DSVT — digital, secure voice telephone

DTO – division transportation officer

E

EA — engagement area

EAC — echelons above corps

elct — electronics

elm — element

EMT – emergency medical treatment

eng — engineer

EOD – explosive ordnance disposal

EPW — enemy prisoner of war

eq — equipment

evac — evacuation

EW — electronic warfare

F

FA — field artillery

FAAO — field artillery air observer

FARP – forward arming and refueling point

FAST — forward area support team

fax – facsimile

fld – field

FLOT — forward line of own troops

FM – field manual, frequency modulated

FRAGO — fragmentary order

FS – fire support

FSB — forward support battalion

FSMC — forward support medical company

FSO — fire support officer

fwd — forward

G

G1 – Assistant Chief of Staff, G1 (Personnel)

G2 – Assistant Chief of Staff, G2 (Intelligence)

G3 – Assistant Chief of Staff, G3 (Operations and Plans)

G4 – Assistant Chief of Staff, G4 (Logistics)

G5 – Assistant Chief of Staff, G5 (Civil Affairs)

gen — generator

gnd – ground

GRREG — graves registration

GS – general support

GSE — ground support equipment

H

HE — high explosive

HEMTT – heavy expanded mobility tactical truck

HET — heavy equipment transporter

HF — high frequency

HHC – headquarters and headquarters company

HHD – headquarters and headquarters detachment

hldg – holding

HQ – headquarters

hvy — heavy

Hz — hertz

I

IAW – in accordance with

ID — identification

IEW — intelligence and electronic warfare

IHFR — improved high frequency radio

inf — infantry

instl — installation

intel — intelligence

INTSUM — intelligence summary

IPB — intelligence preparation of the battlefield

J

JP-4 – jet propulsion fuel, type 4

JP-8 – jet propulsion fuel, type 8

K

kg — kilogram

kHz – kilohertz

KIA — killed in action

kw – kilowatt

L

lb – pound

LC – line of contact

LD — line of departure

ldr — leader

LEN — large extension node

LID — light infantry division

LIN — line item number

LO - liaison officer

LOC — line of communication

log – logistics

LOGPAC — logistics package

LOS – line of sight

LP — listening post

LRP – logistics release point

LSB – lower sideband

It – light

LZ — landing zone

M

m— meter

maint — maintenance

mat - materiel

MCO — movement control officer

MCP — maintenance collection point

MCS – maintenance control section, maneuver control system

mech — mechanized, mechanic

med — medical

MEDLOG-D — Medical Logistics-Division

MEDPAR-D — Medical Patient Accounting and Reporting-Division

METT-T – mission, enemy, terrain, troops, and time available

mgt — management

MHE – materials-handling equipment

MHz – megahertz

MI – military intelligence

MLRS — multiple-launch rocket system

mm — millimeter

MMC – materiel management center

MOGAS — motor gasoline

MOPP – mission-oriented protection posture

MOS – military occupation specialty

MP — military police

MRE – meal, ready-to-eat

MRM – maintenance reporting and management

MRO – materiel release order

MSB — main support battalion

MSE — mobile subscriber equipment

msl — missile

MSR — main supply route

MSRT — mobile subscriber radio-telephone terminal

MST — maintenance support team

MTF – medical treatment facility

MWO — modification work order

N

NAI — NATO analog interface

NATO — North Atlantic Treaty Organization

NBC – nuclear, biological, chemical

NCO – noncommissioned officer

NC – node center

NCS — net control station

NLT — no later than

NMF — node management facility

no — number

NP – neuro-psychiatric

NSL – nonstockage list

NSN — national stock number

O

obj — objective

OCOKA – observation, concealment and cover, obstacles, key terrain, and avenues of approach

off — officer

OIC — officer in charge

op — operator

OP — observation post

OPCON — operational control

OPLAN — operation plan

OPORD — operations order

ops — operations

OPSEC – operations security

P

PAC – personnel and administration center

pat — patient

perim — perimeter

petri — petroleum

pkg — packaged

pl — plans

PL — phase line

PLL – prescribed load list

plt — platoon

POC — point of contact

POL – petroleum, oils and lubricants

POM — preparation for overseas movement

prov — provided

PS – power supply

psyops — psychological operations

pwr — power

Q

QSS – quick supply store

R

RATT — radio teletypewriter

RAU – radio access unit

rds — rounds

rec — recovery

rep — repair

RF — reaction force

RMC – remote multiplexer combiner

RP – release point

RSR – required supply rate

RSSP — ration supplement—sundries pack

RTD – return to duty

RX – reparable exchange

S

S1 – Adjutant (US Army)

S2 – Intelligence Officer (US Army)

S3 — Operations and Training Officer (US Army)

S4 – Supply Officer (US Army)

SAAS — Standard Army Ammunition System

SAMS — Standard Army Maintenance System

S&S – supply and services

SARSS – Standard Army Retail Supply System

SCC — system control center

SCOTT – single-channel objective tactical terminal

sec — section

SEN – small extension node

sgt — sergeant

SIDPERS — Standard Installation/Division Personnel System

sig — signal

SINCGARS – single-channel ground and airborne radio subsystem

SOI – signal operation instructions

SOP — standing operating procedure

sp — specialist

SP – start point

SPBS-R – Standard Property Book System–Revised

spt — support

sptd — supported

sqd — squad

SST — system support team

STAMIS – Standard Army Management Information System

sup — supply

supv — supervisor

svc — service

SW — southwest

swbd — switchboard

T

T – ton

tac — tactical

TACAIR – tactical air

TACCS — Tactical Army Combat Service Support Computer System

TACFIRE — tactical fire direction system

TACMS – tactical missile system

TAMMIS-D – Tactical Army Medical Management Information System—Division

TAMMS — The Army Maintenance Management System

TC – training circular

TCP – traffic control point

tech — technician

TF — task force

tm — team

TM – technical manual

TMDE — test, measurement, and diagnostic equipment

TMT — transportation motor transport

TOC – tactical operations center

TOE – table of organization and equipment

TOW – tube-launched, optically tracked, wire-guided

tp — telephone

TPU – tank and pump unit

TRADOC — United States Army Training and Doctrine Command

trkd — tracked

trmt — treatment

U

ULC – unit-level computer

ULLS – unit-level logistics system

UMCP – unit maintenance collection point

UMT — unit ministry team

us — United States

USAF — United States Air Force

USB – upper sideband

V

v — volt

VA — Virginia

VHF – very high frequency

vic — vicinity

W

w — watt

wh — wheeled

WIA — wounded in action

wpn — weapon

WSRO – weapon system replacement operations

X

xo – executive officer

References

REQUIRED PUBLICATIONS

Required publications are sources that users must read in order to understand or to comply with this publication.

Field Manuals (FMs)

63-2-2 . . . . . Combat Service Support Operations: Armored, Mechanized Infantry, and Motorized Divisions

71-3 . . . . . Armored and Mechanized Infantry Brigade

100-5 . . . . . Operations

100-l0 . . . . . Combat Service Support

RELATED PUBLICATIONS

Related publications are sources of additional information. They are not required in order to understand this publication.

Army Regulations (ARs)

27-10 . . . . . Military Justice

30-7 . . . . . Operational Rations

220-1 . . . . . Unit Status Reporting

220-10 . . . . . Preparation for Overseas Movement of Units

600-8-1 . . . . . Army Casualty and Memorial Affairs and Line of Duty Investigations

710-2 . . . . . Supply Policy Below the Wholesale Level

725-50 . . . . . Requisitioning, Receipt, and Issue System

735-5 . . . . . Policies and Procedures for Property Accountability

750-1 . . . . . Army Materiel Maintenance Policies

Automated Information Systems Manual (AISM)

18-L21-AHN-BUR-EM* . . . . . End User Manual for Standard Army Maintenance System (SAMS-1)

Common Table of Allowances (CTA)

50-900 . . . . . Clothing and Individual Equipment

Department of the Army Form (DA Form)

2028 . . . . . Recommended Changes to Publications and Blank Forms

Department of the Army Pamphlets (DA Pares)

27-l . . . . . Treaties Governing Land Warfare

27-10 . . . . . Military Justice Handbook for the Trial Counsel and the Defense Counsel

600-8 . . . . . Military Personnel Management and Administrative Procedures

600-8-1 . . . . . SIDPERS Unit Level Procedures

710-2-1 . . . . . Using Unit Supply System (Manual Procedures)

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567 . . . . . Record of Search and Recovery

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1-111 . . . . . Aviation Brigade

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6-30	Observed Fire Procedures
6-20-1	Field Artillery Cannon Battery
7-30	Infantry, Airborne, and Air Assault Brigade Operations
8-9	NATO Handbook on the Medical Aspects of NBC Defensive Operations
8-15	Medical Support in Divisions, Separate Brigades, and the Armored Cavalry Regiment
9-6	Ammunition Service in the Theater of Operations
10-14	Unit Supply Operations
10-27	General Supply in a Theater of Operations
10-63	Handling of Deceased Personnel in Theaters of Operations
10-63-1	Graves Registration Handbook
10-67	Petroleum Supply in Theaters of Operations
10-69	Petroleum Supply Point Equipment and Operations
10-71	Petroleum Tank Vehicle Operations
10-280	Mobile Field Laundry, Clothing Exchange, and Bath Operations
11-50	Combat Communications Within the Division
16-5	The Chaplain and Chaplain Assistant in Combat Operations
17-98	Scout Platoon
19-1	Military Police Support for the AirLand Battle
19-4	Military Police Team, Squad, and Platoon Combat Operations
19-25	Military Police Traffic Operations
19-40	Enemy Prisoners of War, Civilian Internees and Detained Persons
20-22	Vehicle Recovery Operations
21-11	First Aid for Soldiers
22-9	Soldier Performance in Continuous Operations
24-1	Combat Communications

27-10 . . . . . The Law of Land Warfare

34-l0 . . . . . Division Intelligence and Electronics Warfare Operations

42-4 . . . . . Supply Company, Forward Support Battalion, Armored and Mechanized Infantry Divisions

42-7 . . . . . Supply and Service Company, Main Support Battalion, Armored and Mechanized Divisions

43-5. . . . . Unit Maintenance Operations

43-12 . . . . . Division Maintenance Operations

44-3 . . . . . Air Defense Artillery Employment: Chaparral/Vulcan/ Stinger

44-8 . . . . . Small Unit Self-Defense Against Air Attack

55-2 . . . . . Division Transportation Operations

55-30 . . . . . Army Motor Transport Units and Operations

55-450-1 . . . . . Army Helicopter External Load Operations

63-3J . . . . . Combat Service Support Operations—Corps

63-21 . . . . . Main Support Battalion, Armored, Mechanized, and Motorized Divisions

63-22 . . . . . Headquarters and Headquarters Company, and Division Materiel Management Center, Division Support Command, Armored, Mechanized Infantry, and Motorized Divisions

71-2 . . . . . The Tank and Mechanized Infantry Battalion Task Force

71-100 . . . . . Division Operations

100-27 . . . . . US Army\US Air Force Doctrine for Joint Airborne and Tactical Airlift Operations

101-5 . . . . . Staff Organization and Operations

101-5-1 . . . . . Operational Terms and Symbols

101-10-1 /2 . . . . . Staff Officer's Field Manual—Organizational, Technical, and Logistical Data Planning Factors (Volume II)

Technical Manuals (TMs)

8-215 . . . . . Nuclear Handbook for Medical Service Personnel

8-285 . . . . . Treatment of Chemical Agent Casualties and Conventional Military Chemical Injuries

9-2350-276-BD . . . . . Operator's, Organizational, Direct Support and General Support Maintenance Battlefield Damage Assessment and Repair for Combat Vehicles

38-L09-11* . . . . . Functional Users Manual for Maintenance Reporting and Management

Training Circulars (TCs)

8-12 . . . . . Use of the M51 Shelter System by Division Level Medical Units

12-16 . . . . . Personnel and Administration Center (PAC) Drill Book

12-17 . . . . . Adjutant's Call/The S1 Handbook

25-4-l . . . . . Unit Training Land Requirements: How to Plan, Prepare, and Conduct a Fire Coordination Exercise

*** Source of Procurement: Commander, USALOGC, ATTN:ATCL-SRR, Fort Lee, VA 23801-6000**

PROJECTED PUBLICATION

Projected publications are sources of additional information that are scheduled for printing but are not yet available. Upon print, they will be distributed automatically via pinpoint distribution. They may not be obtained from the USA AG Publication Center until indexed in DA Pamphlet 310-1.

Field Manual (FM)

63-2 . . . . . Division Support Command, Heavy Division

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