

Chapter IX

LOGISTICS

1. Background

This chapter defines the authority and responsibilities for and control of logistics within and supporting the joint force and defines the six functions of logistics. It also describes DRB and MEF (FWD) logistics organizations and operations and concludes with integrated logistics operations using the six logistics functions as the framework for discussion (*supply, maintenance, health services, transportation, services, and general engineering*).

2. Authority for Logistics Operations

Unity of effort and unity of command demand that a single command authority be vested with the responsibility and the authority for logistics to support AMCI operations. The purpose is to improve efficiency and effectiveness and to prevent unnecessary duplication of logistics effort among the service components.

a. Delegation of Directive Authority. The CINC may delegate directive authority for logistics with the joint force area of responsibility to the JFC (i.e., the CINC may *delegate directive authority for a common support capability*).

b. Exercising Directive Authority. There are three methods of exercising directive authority.

(1) Cross Servicing. Cross servicing logistics is that function performed by one military service in support of another military service for which reimbursement is required from the service receiving support.

(2) Common Servicing. Common servicing logistics is that function performed by one military service in support of another military service for which reimbursement is

not required from the service receiving support.

(3) Joint Servicing. Joint servicing logistics is that function performed by a jointly staffed and financed activity in support of 2 or more military services.

c. Staff Supervision and Control. JFC must carefully supervise and control logistics operations. JFC may employ various means to supervise and control logistics; for example—

(1) Coordinate the total logistics effort through service components and other subordinate commands as required.

(2) Establish joint boards and offices as authorized and required to exercise control of logistics assets and functions and promote economy of effort and efficiency of operations.

(3) Establish policies consistent with authority and existing joint publications.

(4) Coordinate with other supporting commands to achieve long term sustainment of forces.

(5) Prescribe and allocate common-user resources to components and subordinate commands.

(6) Use interservice support and common or cross servicing agreements to eliminate unnecessary duplication.

(7) Establish and coordinate priorities and programs to ensure effective use of supplies, facilities, and personnel.

(8) Assume temporary operational control of all logistics forces in exigent circumstances IAW Joint Pub O-2.

(9) Review adequacy of service components' requirements consistent with service directives.

(10) Synchronize the concept of logistics with the concept of operations and ensure unity of effort.

d. Commanders of Service Component Commands. Service component commanders exercise responsibility for logistics for their forces. Specifically, service component commanders—

(1) Provide logistics for assigned forces within the command except as provided by common or cross servicing.

(2) Forward logistics requirements to or through the JFC as required.

(3) Communicate directly with appropriate service departments on all logistics matters except as directed by the JFC.

(4) Identify logistics forces required to support operational planning and execution.

(5) Time-phase logistics to support operational execution.

(6) Use standard service planning factors as outlined in approved publications except as otherwise directed.

(7) Provide qualified personnel to serve on joint boards and offices as required.

(8) Advise JFC of logistics capabilities and limitations and projected critical shortfalls.

3. Joint Logistics Functions

The Army recognizes six tactical logistics functions: *man, arm, fuel, fix, move, and sustain soldiers and their systems*. The Marine Corps recognizes the six logistics functions defined in joint doctrine: *supply, maintenance, health services, transportation, services, and general engineering*. To ensure a common approach to logistics operations, the joint standard is the basis used for all discussions throughout this manual. Joint Pub 4.0, *Doctrine for Logistics Support of Joint Operations*, describes the functions as follows:

a. Supply. Supply systems acquire, manage, receive, store, and issue the materiel required by the operating forces to equip and sustain the force from deployment through combat operations and their redeployment. Table IX-1 defines the classes of supply that serve as the basis for the discussions throughout the text.

Table IX-1. Classes of Supply

CLASS	SUPPLIES
I	Subsistence and gratuitous health and comfort items
II	Clothing, individual equipment, tents, organizational tool sets and kits, hand tools, and administrative supplies and equipment
III	Petroleum fuels, lubricants, hydraulic and insulating oils, preservatives, liquids and gases, bulk chemical products, coolants, de-icer and antifreeze compounds, components and additives of petroleum and chemical products, and coal
IV	Construction materials including installed equipment and all fortification and barrier materials
V	Ammunition of all types (including chemical, radiological, and special weapons), bombs, explosives, mines, fuses, detonators, pyrotechnics, missiles, rockets, and propellants
VI	Personal demand items such as soap, toothpaste, writing materials and other nonmilitary sales items
VII	Major end items such as launchers, tanks, mobile machine shops, and vehicles
VIII	Medical materiel, including repair parts peculiar to medical equipment
IX	Repair parts and components to include kits, assemblies, and subassemblies (reparable or nonreparable) that are required for maintenance support of all equipment
X	Material to support nonmilitary program such as agriculture and economic development (not included in Classes I through IX)
MISC	Water, maps, salvage, and captured material

b. Maintenance. Maintenance includes actions taken to support combat readiness and effectiveness by sustaining weapons systems and equipment in a fully mission capable condition as effectively, responsively, economically, and as far forward as the situation permits. Maintenance keeps materiel in a mission capable condition, restores equipment to a serviceable condition, or updates and upgrades equipment through modification. Maintenance includes—inspecting, testing, servicing, classifying, repairing, replacing, reclaiming, modifying, converting, calibrating, rebuilding, and overhauling. Table IX-2 defines the levels of maintenance.

c. Health Services. Health services include evacuation, hospitalization (to include medical treatment), medical logistics, casualty collection, health maintenance, casualty treatment, medical laboratory services, blood management, vector control, preventive medicine services, veterinary services, dental services, and the required command, control, and communications of medical operations. Levels of care referred to in subsequent discussion are defined as follows:

(1) Level I. Level I support encompasses that medical support and treatment provided by designated individuals or elements organic to combat, combat support, combat service support, or designated medical units. This echelon of care includes—

- (a) Immediate lifesaving measures.
- (b) Disease and nonbattle injury prevention.
- (c) Combat stress control preventive measures.
- (d) Casualty collection.
- (e) Evacuation from supported units to supporting medical treatment units.

(f) Return of sick and injured to duty after recovery.

(2) Level II. Level II includes Level I support plus resuscitative and surgical measures to stabilize casualties for further evacuation, decontamination of NBC casualties, and temporary medical replacement and medical resupply of Level I units.

(3) Level III. Level III care includes Level II support plus emergency life and limb saving surgery, hospitalization, and temporary medical replacement and medical resupply of Level II units.

(4) Level IV. Level IV care includes Level III health services and adds definitive treatment and hospitalization of casualties and temporary medical replacement and medical resupply of Level III units.

d. Transportation. Transportation is the movement of units, personnel, equipment, and supplies from the point of origin to the final destination.

e. Services. Other services associated with nonmaterial support activities that consist of various functions and tasks provided by service troops and the logistic community and support of the force (i.e. aerial delivery, laundry, clothing exchange and bath, and graves registration).

f. General Engineering. General engineering provides the construction, damage repair, and operation and maintenance of facilities or logistics enhancements required to provide shelter, warehousing, hospitals, water and sewage treatment, and water and fuel storage distribution to enhance provision of sustainment and services.

4. DRB Logistics Organizations

Logistics organizations supporting the DRB include the DRB forward support battalion and augmentation provided by the parent division and the corps.

a. DRB FSB.

(1) The FSB provides the DRB with all classes of supplies, heavy maintenance support, medical evacuation and treatment operations, and field services activities. The FSB also provides limited support to non-DRB units located in the brigade AO. The FSB is the single point of contact for support to the brigade and for support operations within the brigade's AO. All FSB units are 100 percent mobile using organic transportation.

(2) The battalion consists of a headquarters and headquarters detachment (HHD), supply company, maintenance company, and medical company as shown in Figure IX-1.

(a) Supply Company. The FSB supply company supports the DRB by

receiving, storing, and issuing Classes I, II, III, IV (less construction), and VII supplies and by operating an ammunition transfer point (ATP). Table IX-2 identifies the supply company's capabilities and major equipment.

(b) Maintenance Company. The FSB's maintenance company provides DS maintenance and common repair parts supply support to the DRB's attached and supporting units including all equipment except medical, COMSEC, airdrop, avionics, aircraft, aircraft armament, and ammunition. The company provides tailored tank, mechanized, and artillery maintenance support teams (MSTs) that provide on-site maintenance for the supported task forces and for the artillery and engineer battalions. The company normally maintains an authorized stockage list of approximately 1000 lines of repair parts and provides repairable exchange (RX) of selected items to

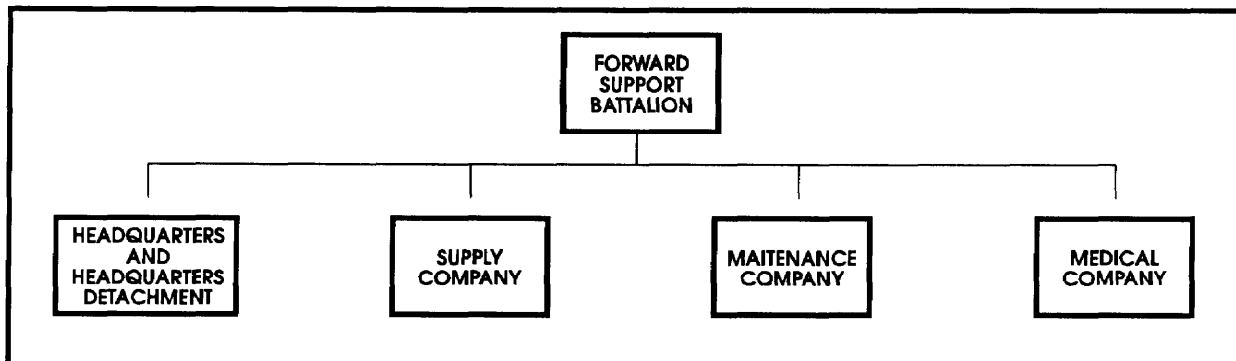


Figure IX-1. Forward Support Battalion

Table IX-2. FSB Supply Company Capabilities/Major Equipment

SUPPLY CLASS	TYPE SUPPORT	CAPABILITY
Class I	Receive/store/issue	16.0 short ton (STON)
Class II	Receive/store/issue	8.8 STON
Class III (P)	Receive/store/issue	.8 STON
Class III (Bulk)	Store/issue	58,600 gal/day
	Distribute	94,200 gal/day
Class IV	Receive/store/issue	7.9 STON
Class V	Transload	550 STON/day
Class VII	Receive/store/issue	5.4 STON
Salvage	Establish/operate salvage and collection points	
Major Equipment	10 5000-gal tankers	
	14 5-ton tractors	
	8 6000-lb fork lift, rough terrain	

support the items stocked in combat prescribed load lists (PLLs) of supported units. When required, the company provides backup organizational maintenance to supported units.

(c) Medical Company. The medical company consists of a company headquarters, treatment platoon, and ambulance platoon supported by 5 HMMWV ambulances and 5 M113 armored ambulances. The company provides division- and unit-level health service support to all units operating in the DRB AO on an area basis. 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.

- Receipt/issue/storage of 1.6 short ton (STON) of Class VIII supplies.

- Patient holding for up to 40 patients able to return to duty within 72 hours.

b. DRB Logistics Augmentation. Augmentation for the DRB's FSB primarily comes from 2 sources: the parent division's main support battalion (MSB) and a CSG(-). Exact organization and composition is dictated by other division missions the MSB is supporting, host nation (HN) augmentation availability, and infrastructure capability of the specific theater of operations. The augmentation must provide support that exceeds the capability of both the DRB FSB and the MEF, to include back-up DS and GS logistics for the DRB and other supporting Army forces.

c. MSB Augmentation. The main support battalion of the DRB's parent division provides assets that deploy with and augment the DRB's FSB. Table IX-3 details the specific types of equipment that may be included in such an augmentation package. For command and control purposes, the package could either be configured into a 5th company under FSB control or the individual sections could be further attached to the FSB's organic companies.

Table IX-3. MSB Augmentation of DRB

Q UANTITY	TYPE AUGMENTATION
10	5000-gal tankers
10	22.5-ton tractor-trailers
2	6000 lb fork lifts, rough terrain
4	10 litter HMMWV ambulances
As Required	MSTs and shop vans to support DS maintenance and Class IX PLL/ASL requirements for— <ul style="list-style-type: none"> • Aviation equipment • Chemical equipment • Communications equipment • COMSEC equipment • Engineer equipment • TACFIRE/MLRS/fire support control equipment • TOW, DRAGON, and ITV missile systems • Night vision devices

d. Other Division Augmentation. The parent division also provides the following augmentation to assist in coordinating and supporting the DRB's logistics requirements:

(1) Section from the division's materiel management center (DMMC) to assist in supply and maintenance management.

(2) Section from the division ammunition office (DAO) to coordinate, control, and manage Class V stocks for the brigade.

(3) Personnel services detachment with functional representatives to perform/assist in replacement operations, casualty management, mortuary affairs, legal services, postal services, public affairs, and finance. Detachment sections collocate with the DRB, CSG(-), or FSSG as appropriate.

(4) Medical operations cell from the division medical operations center to provide medical support planning, medical evacuation and regulating, and coordinate Class VII/blood resupply.

(5) Medical field support cell from the MSB's medical company to provide Level III health services including preventive medicine, intratheater medical supply, medical equipment maintenance, biomedical equipment maintenance, and combat stress control.

e. CSG(-). The multifunctional CSG(-) provides support for the DRB that exceeds the capabilities of the DRB FSB, attached MSB slice, and those of the MEF. The CSG(-) collocates with the FSSG and furnishes backup DS and GS logistics functions for the brigade. The CSG(-) also provides the logistics framework for deployment of follow-on Army forces and for the transition back to Army corps control. Because CSGs are tailored to support nondivisional and divisional requirements, their task organization varies. Figure IX-2 depicts a "sample" organization of a CSG(-).

A brief recapitulation of the mission, capabilities, and major equipment of the units reflected in Figure IX-2 follows. The text references complete unit tables of organization and equipment; all or any subelements of these units may be used in developing the tailored CSG(-). Many of these same units would be used as "building blocks" to develop a composite logistics organization tailored to augment the capability of the MEF (FWD)'s CSSE when operating with a corps.

(1) HHC. The CSG(-) headquarters provides command, control, staff planning, and supervision of 3 to 7 assigned or attached battalions and any separate companies. It exercises technical supervision over mission operations of subordinate units. The headquarters company supports all personnel and equipment assigned and attached to the HHC.

(2) Port Transportation Group. The port transportation group assists in seaport of debarkation (SPOD) operations and provides the motor transportation support to the CSG(-), and in some cases, directly to DRB units. See FM 55-1, *Army Transportation Services in a Theater of Operations*, for details.

(3) Corps Support Battalions (CSBs). Figure IX-2 depicts two CSBs that provide the requisite command and control for the companies assigned to the CSG. One CSB consists of primarily transportation units; the other is multifunctional in nature.

(4) Field Services Company (DS).

(a) Mission. To provide field services, to include laundry, shower and limited clothing repair operations.

(b) Capabilities. Provides laundry service at the rate of 15 lbs per person, per week and shower service as the tactical situation permits in support of 17,500 personnel.

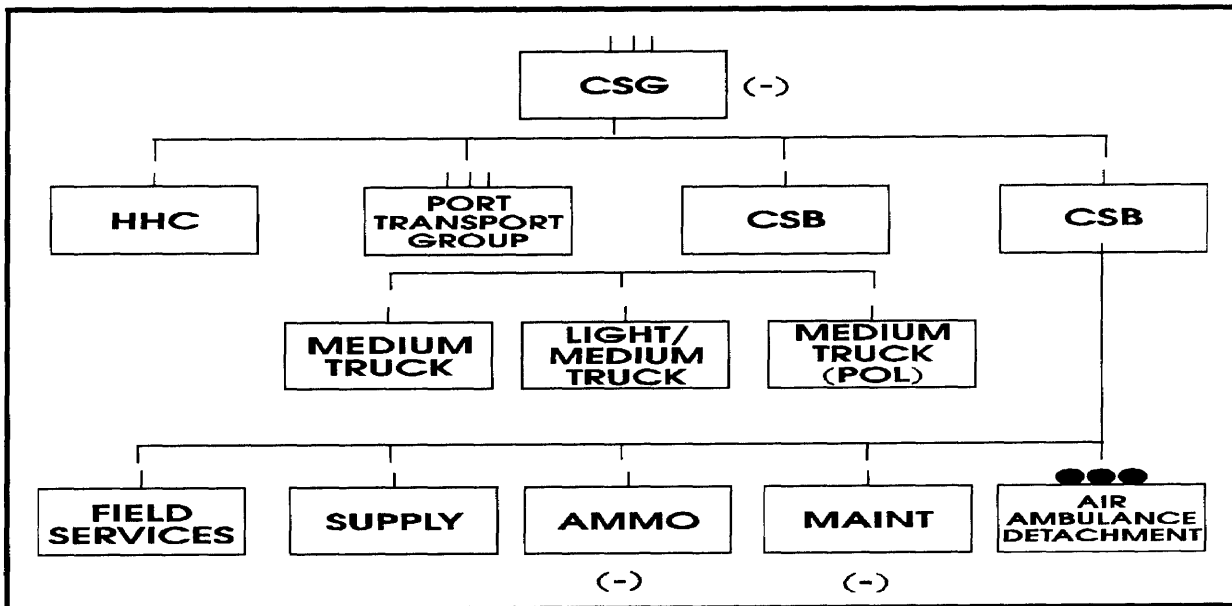


Figure IX-2. Sample Corps Support Group (-)

(c) Major Equipment. 8 5-ton cargo trucks and 9 2.5-ton cargo trucks.

(5) Supply Company

(a) Mission. To operate a direct support supply facility to support 18,500 personnel.

(b) Capabilities include-

- Receiving, storing, issuing, and accounting for 168 STON of Class I, II, III (P), IV, and VII supplies.

- Storing 174,000 gallons of bulk POL a day; distributing 81,000 gallons a day.

- Producing 60,000 gallons of water each at 4 water points; treating 146,150 gallons of contaminated water.

(c) Major Equipment. Table IX-4 defines the company's major pieces of equipment.

Table IX-4. Supply Company (DS) Major Equipment

QTY	TYPE EQUIPMENT	QTY	TYPE EQUIPMENT
4	Forward area water supply points	4	Filter separator, 350 GPM
12	Semitrailer, flatbed, 22.5-ton	40	Tank, collapsible, 3000-gal, water
9	Semitrailer, tanker, 5000-gal	6	Tank, trailer, mounted, 600-gal POL
1	10,000 lb forklift, rough terrain	2	Trailer, water, 400-gal
3	4000 lb forklift, rough terrain	17	Trailer, 1.5-ton
4	Truck, tractor, M915	3	Truck, 2.5-ton
5	Tank and pump units, 1200-gal truck	6	Truck, 5-ton, dropside
4	Tank, collapsible, 3000-gal semitrailer mounted fabric tank (SMFT)	13	Truck, tractor, 5-ton
4	ROWPU, 3000 GPH	4	FSSP, 60,000-gal
12	Tank, collapsible, 10,000-gal, POL	4	350-gal/minute pumping assembly

(6) Medium Truck Company.

(a) Mission. To move supplies and equipment from corps/FSSG supply units/stockage points to users.

(b) Capabilities. Local haul 2700 or line haul 1350 STON daily.

(c) Major Equipment. 60 M915 line haul tractors; 120 M871 22.5-ton semitrailers.

(7) Light-Medium Truck Company.

(a) Mission. To move personnel and general noncontainerized cargo.

(b) Capabilities. Local haul 1200 or line haul 600 STON daily.

(c) Major Equipment. 10 5-ton tractors; 25 22.5-ton semitrailers; 50 5-ton dropside cargo trucks.

(8) Medium Truck Company (POL).

(a) Mission. Wholesale delivery of bulk POL to POL supply units.

(b) Capabilities. Local haul 900,000 or line haul 450,000-gal daily.

(c) Major Equipment. 60 line haul tractors; 60 5000-gal semitrailer tankers.

(9) Ammunition Company.

(a) Mission. To receive, store, warehouse, combat configure, and issue conventional ammunition.

(b) Capabilities. Establish and operate 3 ASPs capable of receiving and issuing 840 STON and configuring 560 STON of ammunition (total lift capability of 2350 STON); 1 ammunition transfer point (ATP) capable of rewarehousing 970 STON.

(c) Major Equipment. Table IX-5 details the ammunition company's major equipment.

(10) Maintenance Company.

(a) Mission. To provide direct support and backup maintenance and repair parts supply service.

(b) Capabilities. Table IX-6 describes maintenance company capabilities.

(c) Major Equipment. Table IX-7 recaps maintenance company major equipment.

Table IX-5. Ammunition Company (DS) Major Equipment

QTY	TYPE EQUIPMENT	QTY	TYPE EQUIPMENT
9	6000 lb forklift, rough terrain	8	10-ton truck, tractor
6	5-ton crane, rough terrain	3	40-ton semitrailer, lowbed
12	Truck, cargo, 5-ton	3	Trailer, palletized loading
5	25-ton semitrailer, lowbed	8	Truck, cargo 2.5-ton
6	Truck cargo, heavy palletized loading system (PLS) transporter		

Table IX-6. Maintenance Company (DS) Capabilities

CAPABILITY	CAPABILITY
Automotive repair	Communications-electronics equipment repair
Computer repair	Engineer equipment repair
Fabric repair	Power generation equipment repair
Small arms repair	Refrigeration repair
Metal working	Special electronics devices repair
Chemical equipment repair	

Table IX-7. Maintenance Company (DS) Major Equipment

QTY	TYPE EQUIPMENT	QTY	TYPE EQUIPMENT
1	Semitrailer, lowbed, 25-ton	14	Truck, cargo, dropside, 2.5-ton
2	Semitrailer, van, repair parts, 6-ton	1	Truck, cargo, dropside, 5-ton
2	Semitrailer, van, ship, 6-ton	18	Truck, tractor, 5-ton
15	Semitrailer, van, supply, 12-ton	1	Truck, van, expansible, 5-ton
1	4000 lb fork lift, rough terrain	5	Truck, van, shop, 2.5-ton
7	Truck, cargo, 2.5-ton	1	Semitrailer, electric repair shop equipment
1	10,000 lb fork lift, rough terrain	4	Truck, contact maintenance
1	Crane, 5-ton, rough terrain	3	Semitrailer, electronic shop
8	Semitrailer, flatbed 22.5-ton		

(11) Air Ambulance Detachment.

(a) Mission. To evacuate patients to and between medical treatment facilities or to airheads for further evacuation out of theater.

(b) Capabilities. Provide immediate aeromedical evacuation of all categories of patients, consistent with evacuation priorities and other operational considerations. Operates 6 air ambulances, each configured to carry 4 litter patients and 1 ambulatory patient. Maintain aircraft with organic/attached aviation unit maintenance personnel and equipment.

(c) Major Equipment. 6 UH-60 Blackhawk aircraft.

(12) Other Corps Augmentation. The corps would also provide the following augmentation to assist in coordinating and supporting the logistics requirements for Army forces supporting the MEF:

(a) Split-based section from the corps materiel management center (CMMC) to assist in coordination of supply operations.

(b) Split-based section from the corps movement control center (CMCC) to coordinate transportation operations.

(c) Forward support platoon from a corps medical logistics battalion

(forward) to support medical units with medical supplies and blood support.

5. DRB Logistics Operations

DRB logistics operations occur in general terms as described below. Discussions focus primarily at the CSG(-) level and below.

a. Supply.

(1) Class I. During initial deployment, units consume the meal, ready-to-eat (MRE). As conditions permit, a variety of group rations (A-, B-, and T-rations) augment and modify the initial MRE-only ration cycle. The ultimate objective is to provide soldiers with a minimum of 1 hot A- or B-ration meal per day.

(2) Class II, III (P), IV, and Maps. Units maintain basic loads of Class II, III (P) and IV supplies. Resupply of using units occurs through the FSB and CSG(-) supply companies.

(3) Class III Operations. The brigade S4's POL forecasts form the basis for CSG(-) and corps/MEF distribution plans. Using 5000-gal tankers the CSG(-) pushes fuel directly to the FSB supply company's Class III supply point located in the brigade support area. Battalions draw and transport bulk Class III from the fuel supply point to supported elements using organic assets such as the 12 2500-gal HEMTT fuelers and 7

truck-mounted 1200-gal tank and pump units belonging to the tank and mechanized infantry battalions respectively.

(4) Class V Operations. Supply of ammunition of all types is based on a required supply rate (RSR) and a controlled supply rate (CSR). Availability drives the CSR. Based on command guidance the CSR provides the basis for Class V distribution to using units. The CSG(-) pushes ammunition from the JTSA or CSA to an ASP located in the rear of the AO or directly to the ATP located in the BSA. The FSB manages the ATP. Combat units use organic assets such as the tank battalion's 10 HEMTT ammunition trucks to draw and transport Class V from the ATP to the users.

(5) Class VII. Class VII resupply to using units occurs based on battle loss reports and priorities established by commanders. The CSG(-) delivers equipment to the FSB supply company or directly to users at the battalion level.

(6) Class VIII (Medical) Resupply. The CSG(-) transports medical supplies to the FSB medical company. The medical company further distributes using support medical elements, Ground and air ambulances effect emergency resupply of Class VIII materials via backhaul.

(7) Class IX. See maintenanc discussion below.

b. Maintenance.

(1) Ground Systems Maintenance. Maintenance support occurs as far forward as possible. The FSB provides dedicated DS maintenance support to brigade units and area support to other units. The FSB maintenance company provides a MST to each maneuver battalion, as well as to the DS artillery and engineer battalions. The company also maintains 15 days of ASL repair parts to augment the limited combat PLL of repair parts maintained by supported battalions. The CSG(-) provides backup automotive and missile maintenance support

to unit MSTs. Repair parts not available through the CSG(-) or FSSG generally flow from CONUS depots via air lines of communications (ALOC) to the CSG(-) for further distribution to the FSB and supported units.

(2) Aviation Maintenance.

(a) The Army aviation maintenance system focuses on ensuring maximum availability of mission-capable aircraft. Maintenance support occurs in three levels: AVUM, AVIM, and depot maintenance. Each aviation element owns an organic AWM capability backed up by higher echelon AVIM units.

(b) Air Ambulance Detachment Maintenance. Aviation maintenance for the air ambulance detachment is accomplished primarily by the AWUM personnel organic to the aeromedical unit. A slice of AVIM personnel from the corps AVIM will accompany that unit and provide backup and limited AVIM support to AWUM personnel. The maintenance capability consists of battle damage assessment and repair, contact maintenance, and line replaceable unit/module replacement. Phase maintenance on aircraft is normally not possible until a more robust aviation maintenance capability exists, such as the aviation augmentation packages described in Chapter VII.

c. Health Services. Medical units organic to maneuver battalions provide Level I medical support to units in the brigade's forward areas. The FSB medical company provides Level II support to the brigade and Level I support to units without organic medical assets; it also provides backup Level I support and ground evacuation support to the battalions. The air ambulance detachment (which may be attached to and collocated with the DRB medical company) provides the DRB with an aeromedical evacuation capability as described earlier.

d. Transportation. The FSB has no assigned DS transportation assets. The DRB

requests external transportation support through the CSG(-) movement control cell. The CSG supports DRB requests for external assistance with the truck companies available to the CSG(-). The movement control cell requests assistance from the MEF FSSG when requirements exceed CSG capabilities.

e. Services. The DRB has no organic laundry or bath capability, water assets, or graves registration capabilities; it depends on the CSG(-) and MEF for all field services support.

(1) Field Services. The CSG(-) field services company, augmented with a mortuary affairs collection section, provides laundry and shower support and mortuary affairs support respectively for the brigade.

(2) Water Storage and Distribution. The CSG(-) supply company supplies the FSB with water.

f. General Engineering. The DRB engineer battalion's capability to perform general engineering tasks is limited; external support is required.

6. MEF (FWD) Logistics Organizations

The FSSG provides logistics support for the MEF. The FSSG performs those functions which exceed the organic capabilities of the supported units. The FSSG commander, normally a brigadier general, serves as the principal logistics advisor to the MEF commander. The FSSG consists of the FSSG headquarters plus 8 permanent battalions. These battalions include a headquarters and service battalion, a supply battalion, a maintenance battalion, a motor transport battalion, an engineer support battalion, a medical battalion, a dental battalion, and a landing support battalion. Based on the mission, the commander task organizes these battalions into CSSDs. These CSSDs provide support to the combat units of Marine divisions and to forces operating in MEF rear areas.

a. MEF (FWD) CSSE. The CSSE of a MEF (FWD) derives from the MEF's FSSG. The notional MEF (FWD) CSSE depicted in Figure IX-3 consists of a detachment from each battalion in the FSSG and organization is based on mission.

(1) Headquarters and Service (H&S) Detachment. The H&S detachment provides command, control, administration, communications, and automated data processing (ADP) to the CSSE. It provides supporting services to the MEF (FWD) in the amphibious assault and subsequent operations ashore, to include such services as GS data processing, disbursing, postal, exchange service, military police, information systems, legal service support, civil affairs support, graves registration, and limited communications support.

(2) Supply Detachment. The supply detachment exercises responsibility for stock control, cross servicing, and civilian contracting for all classes of supply except bulk fuel, and aviation/aircraft related supply support. This support includes receiving, storing, assembling, inspecting and issuing ordnance, parts, equipment and reparable to ground elements, and providing medical supply support and intermediate level maintenance on all medical and dental equipment of the MEF (FWD).

(3) Maintenance Detachment. The maintenance detachment provides DS maintenance support to elements of the MEF (FWD). This support includes providing DS maintenance contact teams to forward elements, furnishing backup DS maintenance support that exceeds the capabilities of the contact teams, tracked vehicle recovery, evacuation, and calibration/repair of electrical and mechanical equipment.

(4) Motor Transport Detachment. The motor transport detachment provides organic medium and heavy motor transport support, augmenting GCE and ACE organic capabilities on a mission-type basis.

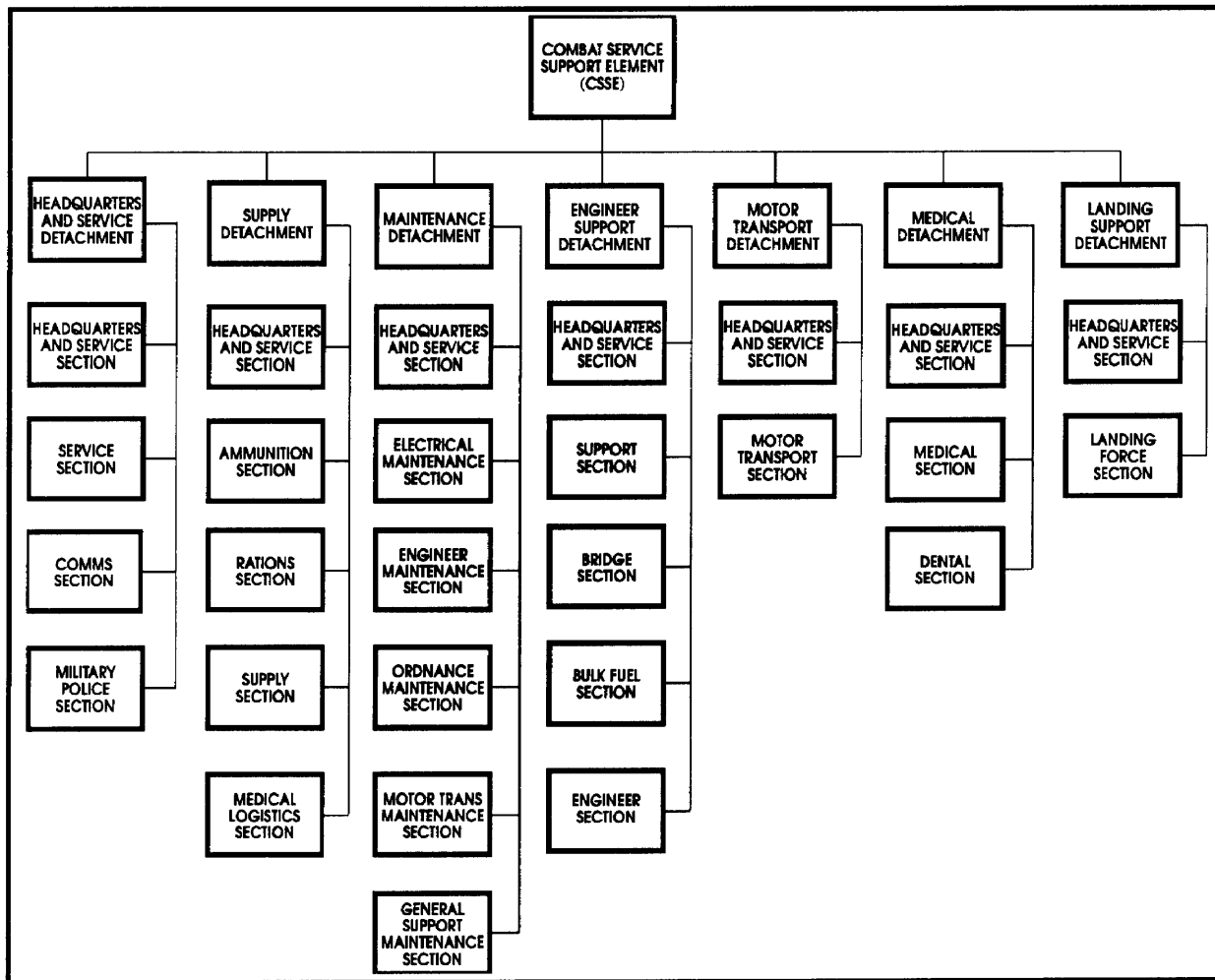


Figure IX-3. Notional Combat Service Support Element

(5) Engineer Support Detachment. The engineer support detachment furnishes general organic engineering support, including horizontal and vertical construction fortification, construction, repair and maintenance of aviation facilities, facilities maintenance, engineer reconnaissance, and deliberate demolition and obstacle removal. See Chapter VIII for detailed discussions.

(6) Medical/Dental Detachment. The medical/dental detachment, staffed with US Navy medical personnel, provides casualty collection, emergency treatment, temporary hospitalization, specialized surgery, and evacuation support for the MEF (FWD).

(7) Landing Support Detachment. The landing support detachment provides landing support to the MEF (FWD) and

subordinate elements in the assault and subsequent operations ashore. The landing support consists of communications, materials handling equipment, helicopter support, beach and terminal port operations, and the establishment of temporary storage areas on the beach.

b. ACE. The ACE's aviation logistics organizations include Marine aviation logistics squadrons (MALS) and MWSS as illustrated in Figure IX-4. Organizational functions are addressed within the context of the six logistics functions discussed below. The MWSS provides airfield operations support including fuel, crash-fire-rescue (CRF), ammunition storage, limited runway repair, personnel support, engineer support, and ground transportation within the airfield.

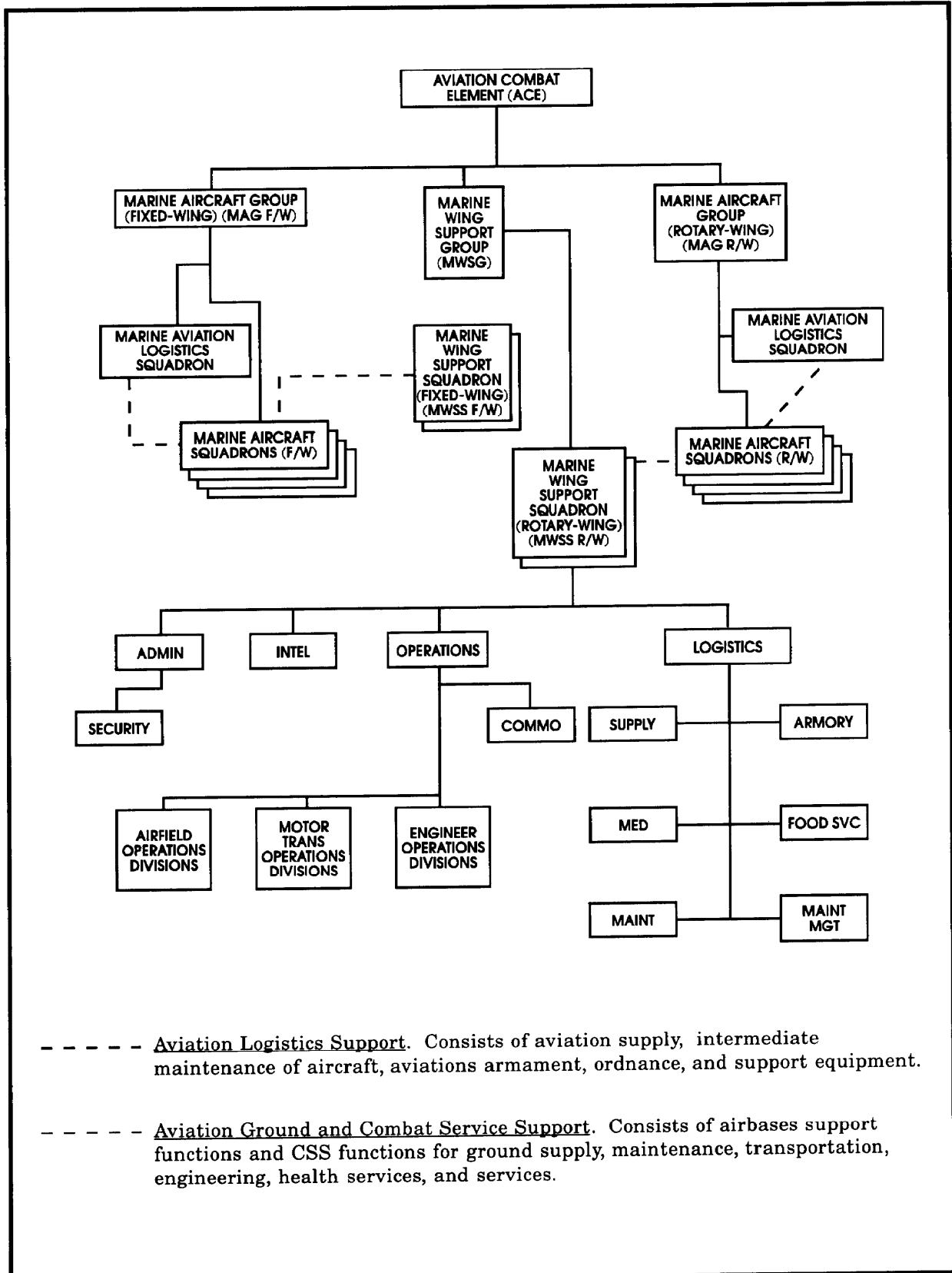


Figure IX-4. Aviation Combat Element Logistics Organization

7. MEF (FWD) Logistics Operations

MEF (FWD) logistics operations occur in general terms as described below:

a. Supply. MAGTF sustainment occurs through a mix of accompanying supplies and resupply. Accompanying supplies are an integral part of the MAGTF logistics load in virtually all situations. Operational factors and/or supply availability may require readjusting accompanying and resupply balances. The minimum baseline for a MEF (FWD) accompanying supplies is 30 days. The availability of aviation ordnance, ground material, and bulk POL fluctuates and is theater-dependent. Resupply begins with force employment. It is scheduled to commence before expending of accompanying supplies and to continue through the entire period as established by the supported theater combatant commander's guidance. Accompanying supplies are a combination of supplies aboard maritime prepositioning ships (MPS), supplies accompanying the amphibious forces, and additional items shipped from CONUS or key locations around the world. The Marine Corps logistics system is designed to support most general MAGTF requirements from on-hand supplies through the CSSE. The naval supply system provides aviation-peculiar support through MALS. Subsistence items and POL are provided by the DLA. Theater ground ammunition assets are stored in Army or Navy ammunition depots; air ordnance resides in Navy depots before issue. External support may be provided to meet MEF (FWD) requirements. Wartime Host Nation Support and Inter-service Support Agreements may also be established.

b. Maintenance. MAGTF maintenance is conducted at the organizational and intermediate levels only. Depot-level maintenance is conducted at Marine Corps logistics bases in the CONUS.

(1) Maintenance at Organizational and Intermediate Levels. During combat operations, ground force maintenance focuses on battle damage repair, salvage, removal/

replacement of critical repair parts, and performance of essential preventive maintenance. Ground and air organizational maintenance is conducted by equipment operators and trained maintenance personnel. Intermediate ground maintenance is conducted by the CSSE. This is normally accomplished by sending repair teams conducting on-site repairs or evacuating equipment that cannot be repaired in place. Air intermediate maintenance is conducted by supporting maintenance activities for the fixed- and rotary-wing squadrons.

(2) Aviation Maintenance. To support the task-organized combat element aircraft, the Marine Corps uses the Marine Corps Aviation Logistics Support Program (MALSP). The MALSP enables the individual identification of personnel, equipment, and parts required to support each type, model, or series of fixed- and rotary-aircraft in the ACE. The personnel are assigned, as required, to the fixed-wing or rotary-wing MALS to support MAGTF-assigned aircraft squadrons. The supporting equipment and parts are tailored into support packages. The first of these, the fly-in support package (FISP) accompanies the aircraft fly-in echelon. The FISP contains organizational-level maintenance support. The second package is the contingency support package (CSP). The CSP contains appropriate intermediate-level maintenance support. When the MAGTF is initially supported by a maritime prepositioning ship squadron (MPSRON), the ACE receives support from an aviation logistics support ship (TAVB). In this case, a small organizational-level FISP will be constituted to support organizational maintenance until arrival of the TAVB and MPSRON.

c. Health Services. USMC health services support is similar to that of the Army. Level I care occurs at battalion level. The medical detachment at the CSSE provides Level II care. Combat zone fleet hospitals and hospital ships based at the FSSG or offshore furnish Level III care.

Level IV care capabilities exist at the communications zone fleet hospital. MEF (FWD) health service functions include health maintenance, casualty collection and treatment, temporary hospitalization, and casualty evacuation. The Navy provides all MEF (FWD) medical and dental personnel. Medical personnel are organic to all combat and combat support units of battalion/squadron size or larger. Medical material support is provided by the CSSE. Medical capabilities and evacuation facilities are concentrated in combat organizations, especially infantry, where most combat casualties are expected. Each combat and combat support battalion has the organic Navy medical personnel and capability to establish one or more aid stations. For example, an infantry battalion has up to 2 doctors and 65 Navy corpsmen. Within the ACE, the MWSSs have organic medical personnel and equipment needed to establish an airfield aid station. In addition, each squadron has a flight surgeon assigned. Tailored medical support in the MWSS provides limited dental, laboratory, x-ray, and pharmacy support. The CSSE provides medical and dental coordination, direct support, administration, and maintenance to the MAGTF. The CSSE detachment coordinates medical and dental requirements planning and provides limited casualty collection, surgical support, hospitalization, medical evacuation, x-ray, laboratory, pharmacy, and blood bank support. Medical unit functions also include preventive medicine and identification of human remains. The CSSE medical logistics unit provides Class VIII supply and intermediate maintenance support.

d. Transportation. MEF (FWD) organic transportation support consists of ground and air transportation assets as described below. The CSSE commander normally exercises responsibility for MEF (FWD) movement control.

(1) GCE/ACE Motor Transport. Motor transport assets within the GCE and ACE are limited. Motor transport for both

elements above their organic capabilities are provided by the CSSE as GS to the MAGTF. Organic GCE motor transport is limited and employed primarily for organic tactical mobility. Organic motor transport for the ACE is provided by the MWSS positioned at each airfield. All organic ground transportation assets within the GCE and ACE may be consolidated to provide transport to the MAGTF when not used for tactical mobility.

(2) CSSE Assets. CSSE ground transportation assets are used to link ports, supply centers, terminals, and other CSS facilities. They are also used to augment organic GCE and ACE capabilities. General-use CSSE assets may include 5-ton trucks and logistic vehicle system (LVS) vehicles.

(3) Air Transport. An ACE normally contains significant helicopter assets that can conduct equipment, cargo, and personnel movement operations. The ACE KC-130 may also provide limited intratheater air transportation; however, its primary role is an air-to-air refueler. See Chapter VII for additional discussion.

(4) Landing Support Operations. Landing support operations include beach and port terminal operations, air delivery support, helicopter support teams, departure/arrival airfield, and rail operations. Navy augmentation to the landing support organizations facilitate the ship-to-shore assault movements from amphibious ships to locations ashore.

(5) Embarkation. Embarkation is the process of putting personnel or vehicles and their associated stores and equipment into ships or aircraft. Embarkation is an extremely important planning requirement. Embarkation and movement in a theater of operations are accomplished with amphibious ships, strategic sealift, and strategic airlift. See Joint Pub 3-02.2, *Joint Doctrine for Amphibious Embarkation Operations*, for additional details.

e. Services. Services include the functions of postal operations, dispersal, law enforcement, enemy prisoner of war management, information systems management, utilities support, legal services support, civil affairs, and graves registration. For field services support that exceed the capabilities of MEF (FWD) assets (e.g., bath and laundry services that exceed the capability of the engineer support detachment or graves registration requirements that exceed supporting Navy corpsman capacities), the MEF (FWD) requires augmentation by Army assets.

f. General Engineering. In addition to providing the MEF (FWD) with mobility support, the CSSE engineer support unit capabilities include camp construction and maintenance; electrical power supply and distribution; construction design; bulk fuel reception, storage, and issue; potable water production and storage; and explosive

ordnance disposal. Chapter VI discussed engineer operations in detail.

8. Integrated Logistics

Topical discussions on integrated logistics operations include command and control of logistics operations; detailed applications of the six logistics functions during DRB and MEF (FWD) cross service operations; and logistics reporting procedures.

a. Command and Control of Logistics Operations.

(1) DRB Under MEF Control. Based on Operation Desert Storm experience, the CSG(-) should be attached to the MEF and under the operational control of the MEF FSSG. This command relationship provides command and control the CSG(-) and requires the MEF to provide security and terrain management. Figure IX-5 depicts the command and control logistics when the DRB operates under the control of the MEF.

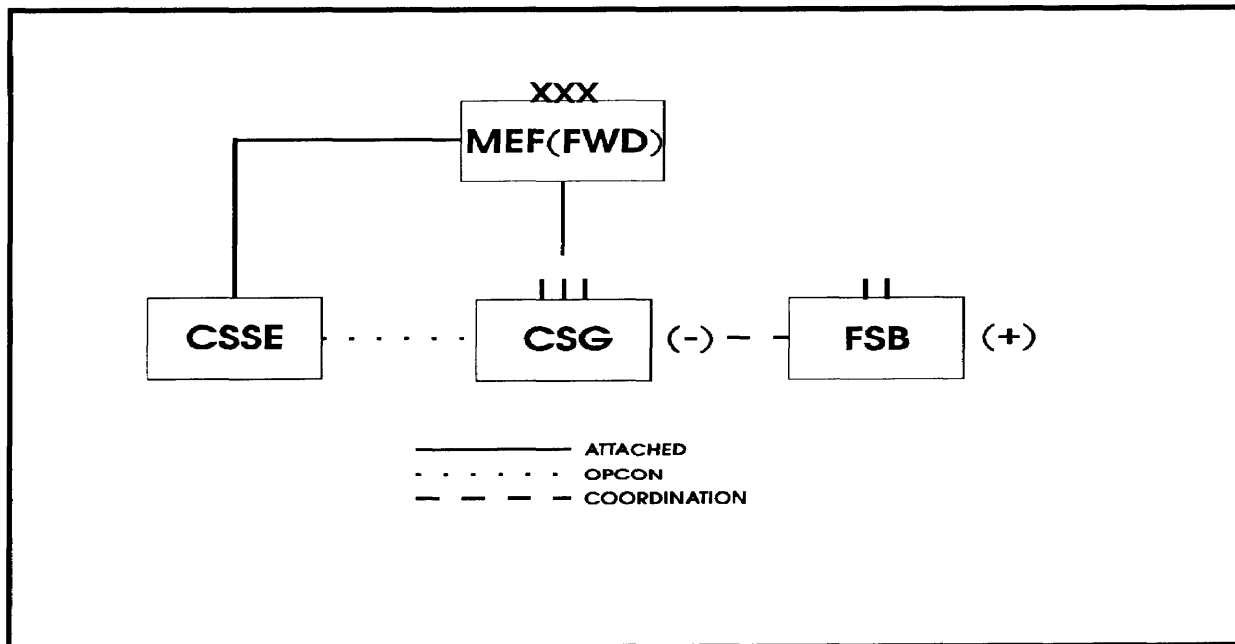


Figure IX-5. Logistics C2 DRB Under MEF

(2) MEF (FWD) Under Corps Control.

(a) Augmenting the MEF (FWD) with Logistics Support. With the exception of selected Class II, V (primarily aviation), VII, and IX supplies and maintenance requirements peculiar to USMC equipment, the Army can provide the majority of logistics support required by the MEF (FWD) that exceeds the capability of the CSSE. Figure IX-6 depicts a notional CSB constituted to provide that support. CSB tailoring is contingent not only upon

the support required by the MEF (FWD); its task organization would also accommodate support requirements for any additional Army elements placed under the control of or in support of the MEF (FWD). For example, the CSB would be task organized with additional Class III and Class V capabilities to support a field artillery brigade placed in support of the MEF (FWD).

(b) Command and Control. Figure IX-7 reflects the command and control relationship of logistics elements when the MEF (FWD) operates as part of a corps.

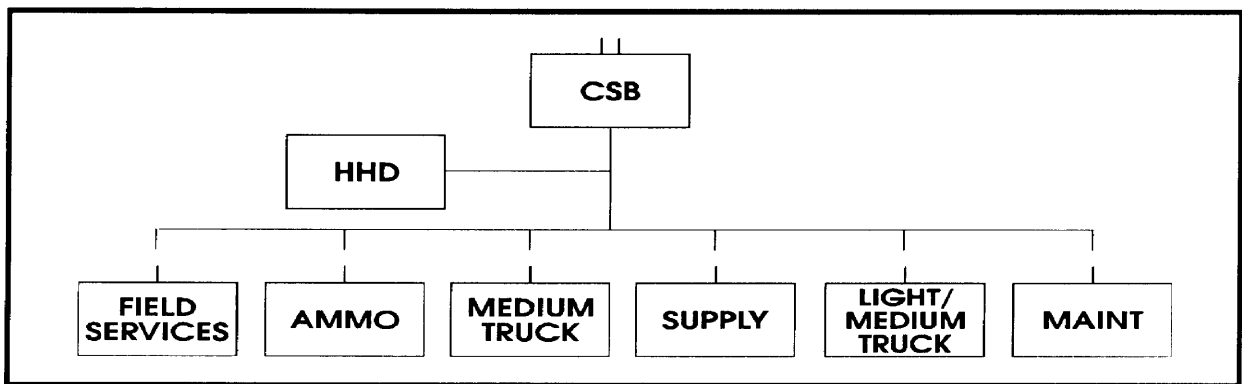


Figure IX-6. Notional Combat Support Battalion in Support of MEF (FWD)

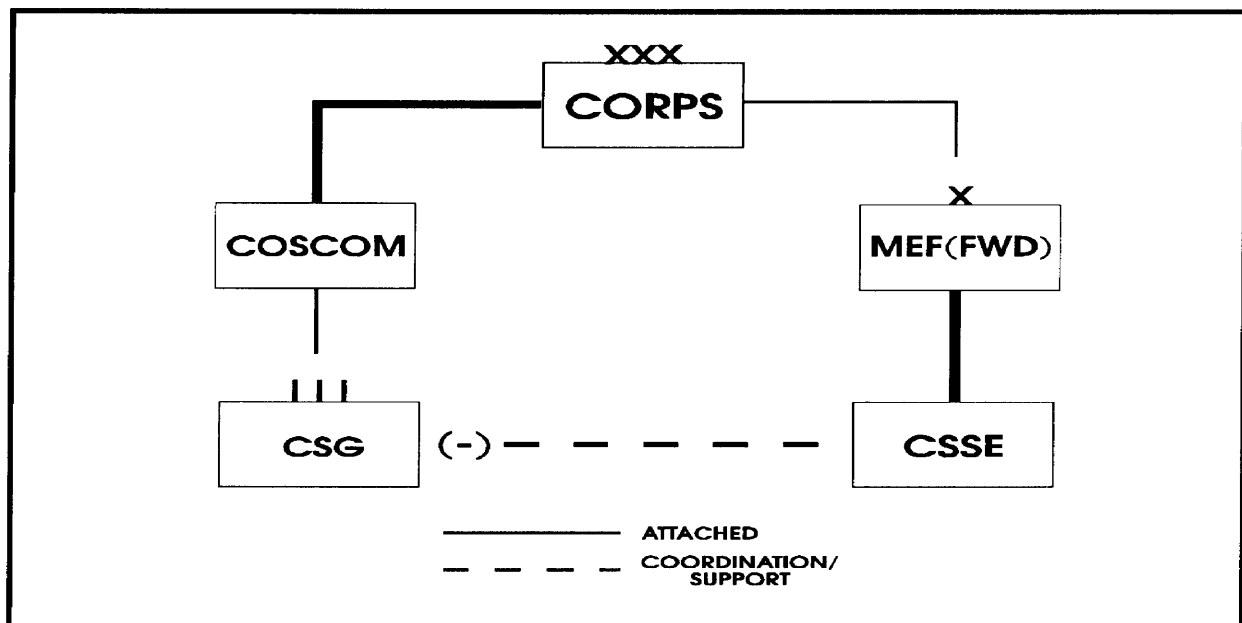


Figure IX-7. MEF (FWD) Logistics C2 When Under Corps Control

(3) Liaison. Regardless of the command and control relationship established, a logistics liaison team should be provided to the new controlling headquarters. The team coordinates support and ensures information flow between the unit and the controlling headquarters. Minimum information includes—

- (a) Critical fuel and ammunition requirements.
- (b) Status of each class of supply to include water.
- (c) Maintenance requirements and backlog.
- (d) Class IV, V, and IX requirements and availability.
- (e) Movement requirements and available transportation assets to include aircraft.
- (f) Availability of medical treatment and evacuation assets.
- (g) Locations of support elements.
- (h) Status of support personnel.
- (i) Anticipated support problems.
- (j) Compatibility of automated equipment.
- (k) Unique equipment.

(4) Command, Control, Communications, Computers, and Intelligence Support (C4I). Joint force C4I support planning must consider and accommodate logistics requirements in order to synchronize and fully support operational execution. Similarly, C4I contingency plans define backup automated and manual capabilities that ensure uninterrupted logistical support of ongoing operations.

b. Supply Operations.

(1) Class I.

(a) DRB Under MEF Control. During the initial phase of an operation, rations are pushed forward based on personnel strength, unit locations, type of operations, and feeding capabilities of supported units. As the situation permits, Class I support transitions from a “push” system to a “pull” system. Units submit requisitions to the FSB’s forward Class I supply point where all requests are consolidated and submitted to the supporting materiel management center Class I section at the CSG(-). From there, requests flow to the MEF FSSG. The FSSG throughput the requested rations to the FSB’s ration breakdown point located in the brigade support area (BSA). At the BSA rations are broken down for issue to requesting units. Requesting units use organic transportation to move rations from the BSA to forward units.

(b) MEF (FWD) Under Corps Control. Until a decision is made to transition to a pull resupply system, rations are pushed to the MEF (FWD) based on the considerations described above. Once the transition occurs, the MEF (FWD) sends consolidated ration requests to the supporting CMMC Class I section for further transmission to the corps support command (COSCOM). Corps units deliver rations to the CSSE for breakdown and further distribution to supported units.

(2) Class II, III (P), IV and VII.

(a) DRB Under MEF Control. Supply requests flow from the requesting unit through supply channels to the CSG(-) supply company. Common items requests are passed to the supporting CSSD. If a requested item is available, the CSSD transports it to the user through unit distribution when possible, otherwise supply point distribution may be required. If the

item is not on hand, the CSSD passes the requisitions to the FSSG for further processing. Once the requisition is filled, the FSSG normally provides the transportation to deliver supplies and equipment to the subordinate CSSD. Surface transportation is the norm; high priority supplies may be delivered by air to the user based on asset availability. Service-unique supplies are processed through the split-based CMMC at the CSG(-).

(b) MEF (FWD) Under DRB Control. User supply requests flow to the CSSE supply detachment at the MEF (FWD) level. The supply detachment passes requests it cannot fill to the CSB supply company, which fills the request or passes it to the CMMC. The CMMC fills the request or passes it to the theater Army materiel management center (TAMMC) for procurement through a national inventory control point (NICP). Corps units throughput supplies to the CSSE for further distribution to supported units.

(3) Class III.

(a) Petroleum operations are particularly difficult to orchestrate in a joint operational setting. POL considerations include—

- Forecasting requirements and establishing an adequate storage and distribution system.
- Monitoring consumption and submitting requirements for bulk fuels and packaged products.
- Defining responsibility for storage and land distribution of POL;

operations and maintenance of pipelines and related facilities when required; packaging of bulk fuels; and provision of petroleum laboratory facilities for quality control in support of all forces deployed.

- Planning for augmentation by commercial bulk POL distribution capability, transportation assets, and collapsible tanks and containers.

- Establishing aerial resupply in support of operations until surface resupply can be established.

(b) DRB Under MEF Control. The FSSG does not have the capability to store, transport, or distribute the amount of Class III that the DRB will consume. During operations, a tank battalion requires tactical refueling approximately every 6 hours. Table IX-8 provides some expected consumption rates for the DRB and MEF (FWD) ground equipment during different types of operations. Figures are for illustration purposes only; many factors affect actual consumption rates. At the SPOD, an Army tactical petroleum terminal (TPT) element off-loads bulk fuel from ships. Fuel that exceeds naval storage capabilities can be stored by a corps petroleum supply company with a storage capacity of some 2.5 million gallons. The CSG(-)'s medium truck company (POL) transports bulk fuel directly to the FSB.

(c) MEF (FWD) Under Corps Control. The MEF (FWD) CSSE may establish a rearm/refuel point (RRP) to support a mechanized or other rapidly moving force. The corps pushes fuel from the COSCOM to designated RRP, where combat units draw and transport Class III support forward to their units using organic assets.

Table IX-8. Illustrative Class III Consumption Rates

UNIT	OFFENSE	DEFENSE	RESERVE
DRB	160,000	150,000	50,000
MEF (FWD)	65,000	44,000	20,000

(4) Class V (Ammunition) Operations. There is a significant difference between Army and USMC combat ammunition logistics support doctrine. Because of the large quantities of Class V munitions consumed during combat operations, Army units employ the PLS for resupply operations. The PLS is the centerpiece of a transportation-intensive, continuous throughput system. Limited forward stocking of Class V occurs. USMC logistics doctrine places considerably more emphasis on stocks uploaded on organic vehicles in the combat force and less emphasis on a structured distribution system.

(a) DRB Under MEF Control. An Army ammunition accountability detachment (port) element provides accountability, surveillance, and safety support for incoming shipments of ammunition at the SPOD. The CMMC section provides data to the NICP and manages in-theater ammunition stocks. The configuration of stocks arriving in the AO determines the requirements for handling and transloading stocks. If stocks arrive in containers, ammunition units require container handling equipment, ammunition handlers, and container-capable transportation to move ammunition from the port to designated storage areas. If stocks arrive on pallets, they are transloaded by smaller non-container units using forklifts. Army transportation units deliver stocks from the SPOD to the JTSA. Shipment from the storage area to forward ASPS or directly to the DRB ATP may be effected by PLS vehicles carrying combat-configured Class V loads or by conventional cargo transporters and trucks.

(b) MEF (FWD) Under Corps Control. Resupply of combat units occurs through the CSSD. The corps pushes Class V to the RRP established by the CSSD. Supported units transport ammunition from the RRP forward elements using organic transportation.

(5) Class VIII.

(a) DRB Under MEF Control. A medical logistics distribution team from the forward support platoon of the medical logistics battalion provides Class VIII medical resupply to the DRB medical company and to the medical units at echelons above brigade. The CSG(-) supports the team with transportation support for Class VIII. The team coordinates with the CSSE supply detachment (medical logistics element) battalion on all medical supply matters.

(b) MEF (FWD) Under Corps Control. The corps medical logistics battalion supports the medical resupply needs requested from the CSSE supply detachment (medical logistics element).

(6) Class IX.

(a) DRB Under MEF Control. Both Class IX requests that cannot be satisfied from PLL or ASL stocks and stock replenishment requests flow through maintenance channels to the maintenance battalion at the CSG(-). If the repair part is a common service item, the request goes to the MEF FSSG supply system for further processing. The FSSG obtains required repair parts and delivers them to the CSG(-). The CSG(-) delivers the parts to the FSB maintenance company for subsequent pickup by requesting units. If the repair part is an Army-peculiar item, the CMMC passes the request directly to the NICP for processing. Parts typically arrive via air lines of communications for reception and processing by the FSSG, CSG(-), and/or the FSB.

(b) MEF (FWD) Under Corps Control. Requests for repair parts from using units flow to the maintenance detachment located at the MEF (FWD)'s CSSE. Further processing of common item requests occurs through the CSB's maintenance battalion. The CSB delivers repair parts to the CSSE for further distribution to using units.

Requests for service-unique repair parts flow from the CSB through corps to the Marine Corps Unified Materiel Management System.

(7) Class X. Materials to support nonmilitary programs are requested and obtained through supply channels on an as-needed basis based on civil-military requirements articulated through command guidance.

c. Maintenance Operations. Commanders exercise responsibility for coordination of maintenance within their commands. Maintenance priorities must focus on mission-essential weapon systems that can be rapidly returned to combat readiness. Whenever practical, maintenance facilities for joint or cross service use should be established, and interservice use of salvage assets should be emphasized. Service-peculiar items that require maintenance support normally remain the responsibility of service component commanders.

(1) DRB Under MEF Control. As described earlier, maintenance support teams provide on-site maintenance to DRB units. Backup automotive and missile support maintenance occurs at the FSB. If required, equipment is evacuated to the CSG(-) for repair or other disposition. The CSSE also provides backup maintenance support on common items.

(2) MEF (FWD) Under Corps Control. Intermediate-level maintenance support is performed at established RRP. Support includes repair of subassemblies, assemblies, and major end items for return to lower echelons or supply channels. Maintenance requirements for common equipment that exceed the capability of the maintenance detachment are supported by the CSB(-). Requirements for USMC-peculiar equipment that cannot be supported by the detachment CSB(-) or

corps must either be evacuated and/or replaced through Class VII resupply.

d. Health Services.

(1) Planning Medical Service Support. Planning medical support for the force requires detailed integration and coordination. Medical support planning addresses how the operation is medically supported to assist in achieving the overall mission. Medical planning considerations include—

(a) Evaluating each service component's medical capability and deployable medical systems (DEPMEDS).

(b) Providing, where practical, for joint use of available medical assets to support operational execution.

(c) Selecting appropriate sites for field hospitals that facilitate timely care and support, provide appropriate protection, and support battlespace management.

(d) Evaluating transportation assigned and available to recover, move and evacuate wounded personnel; planning interservice evacuation procedures, to include air movement to hospitals afloat.

(e) Projecting and providing for the amounts of medical supplies and blood required to sustain committed units.

(f) Evaluating NBC decontamination capability for patients and chemical protective facilities.

(g) Treating of EPW, civilian internees, and detainees.

(h) Providing medical support for CSAR operations.

(i) Ensuring effective medical supply and resupply operations in general and blood support and resupply in particular.

(j) Providing dental services.

(2) DRB Under MEF Control. Casualties requiring treatment beyond that provided at brigade level are evacuated to combat zone fleet hospitals or hospital ships.

(3) MEF (FWD) Under Corps Control. Health services requirements that exceed the MEF (FWD) organic capabilities are supported by echelon care facilities provided by the corps medical brigade.

e. Transportation Operations.

(1) Transportation considerations include but are not limited to the following:

(a) Emergency movement of forces into combat.

(b) Emergency resupply of ammunition, fuel, water and food to forces in combat.

(c) Movement of emergency medical supplies.

(d) Emergency evacuation of casualties.

(e) Programmed routine re-supply to combat operations.

(f) Evacuation of EPW and civilians.

(g) Recovery and salvage of damaged or destroyed weapon systems.

(2) DRB Under MEF Control. The CSG(-) features a substantive capability for supporting transportation requirements that exceed DRB organic assets. Requests for USMC air transportation support flow through channels described in Chapter VII.

(3) MEF (FWD) Under Corps Control. Requests for transportation support flow to the motor transport detachment

located at the CSSE. Task-organized assets support mobility and transportation requirements as required in the priority established by the MEF (FWD) commander. The CSSE passes requests that exceed the capability of available assets to the supporting CSB. The CSB commits assets from attached truck companies as required to support prioritized requirements.

f. Services. Services for both the DRB and MEF (FWD) will be provided on a support basis.

g. General Engineering.

(1) Regarding general engineering operations, service components—

(a) Identify civil engineering support requirements to support assigned forces.

(b) Provide resources for completion of civil engineering support programs.

(c) Negotiate contract construction for all services if designated as construction agent for the geographic area concerned.

(d) Use standard service department planning factors unless otherwise directed.

(e) Provide or coordinate logistics for the maintenance and repair of facilities, utilities, and routes as assigned by the JFC.

(f) Assume responsibility for maintenance and repair of facilities and infrastructure in a geographic area where it has exclusive operational interest.

(g) Maintain external and access routes and utilities required by all services when the command-wide distribution system or network is operated by that service component.

(2) DRB Under MEF Control. The DRB's extremely limited general engineering capability demands the DRB's augmentation by Army corps engineer units, the MEF's subordinate engineer units, or attached Navy mobile construction battalion(s) to perform required general engineering tasks. Support is provided on a mission basis or by designating a support relationship as described in Chapter VI between the supporting unit and the DRB.

(3) MEF (FWD) Under Corps Control. When required, a corps provides the MEF (FWD) with engineer support from the corps engineer brigade. Such support ranges in scope from single specialized company-sized units to multifunctional engineer groups comprised of 2 or more engineer battalions. As described above, support occurs on a mission-specific basis or formalized through the establishment of command relationships.

9. Logistics Status Reporting

Logistics status reports provide the CJTF critical input for making decisions in a dynamic operational setting. Functional logistics areas where recurring or special reporting requirements are detailed include—

- a. Status of deploying forces.
- b. Personnel summary reports.
- c. Logistics status reports for all classes of supply and for selected, critical commodities.
- d. Projected resource requirements for probable execution of selected contingency options.
- e. Materiel readiness status of weapons systems, vehicles, and equipment.
- f. Status of JTF transportation assets.
- g. Medical status of the force.
- h. Status of JOA infrastructure.
- i. Status of support of civil-military operations.

Additional guidance on standardized logistics reporting will be provided through emerging joint doctrine and joint tactics, techniques, and procedures associated with the global command and control system.