

*S/S June 69  
29/ 55-10*

08.3

M

Reference

*55-4-1 (TEST)***FM 55-4-1 (TEST)****DEPARTMENT OF THE ARMY FIELD MANUAL**

# **TRANSPORTATION MOVEMENTS IN A THEATER OF OPERATIONS**



**HEADQUARTERS, DEPARTMENT OF THE ARMY  
APRIL 1967**



## FOREWORD

This manual provides interim guidance to commanders, staff officers, and other personnel concerned with transportation movements support under the TASTA-70 concept of organization and operation. This information can be utilized to facilitate reorganization under the TASTA concept. Firm information on the organizational structure and composition of units will be as contained in TOEs when published. Although the basic TASTA-70 study has been approved by Department of the Army, detailed doctrine contained in this test field manual is under continuing development and review.

Readers are encouraged to submit comments and recommendations for changes that will improve the clarity, accuracy, and completeness of the manual. Comments should be constructive in nature and reasons should be provided for each recommendation to insure understanding and to provide a valid basis for evaluation. Each comment should be keyed to a specific page, paragraph, and line of the text. Comments should be forwarded direct to the Commanding Officer, U.S. Army Combat Developments Command Transportation Agency. An information copy of recommendations that propose changes to approved Army doctrine may be sent, through command channels, to the Commanding General, U.S. Army Combat Developments Command, Fort Belvoir, Va., 22060, to facilitate review and evaluation.



FIELD MANUAL

No. 55-4-1 (TEST)

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, D.C., 21 April 1967

## TRANSPORTATION MOVEMENTS IN A THEATER OF OPERATIONS

		Paragraph	Page
CHAPTER 1.	INTRODUCTION		
	Purpose and scope .....	1	5
	Theater movements services .....	2	5
	Principles of movements .....	3	6
	Terminology .....	4	7
	2. THEATER ARMY SUPPORT COMMAND TRANSPORTATION MANAGEMENT SERVICES		
Section I.	Organization		
	General staff sections .....	5	10
	Transportation movement control agency .....	6	10
	Theater army support command movement control center .....	7	12
	Transportation movement offices .....	8	14
II.	Functions		
	Theater army support command movement control center .....	9	15
	Transportation movement offices .....	10	17
III.	Relationships of the movement control center		
	General .....	11	18
	Relationships with CONUS activities .....	12	18
	Relationships with the TASCOM staff .....	13	19
	Relationships with users of transportation .....	14	19
	Relationships with the transport services .....	15	19
	Other external relationships .....	16	19
IV.	Relationships of the transportation movement offices		
	General .....	17	21
	Staff relationships .....	18	21
	Relationships with users of transportation .....	19	21
	Relationships with the transport services .....	20	22
V.	Highway Regulation		
	General .....	21	22
	Organization of the highway traffic headquarters .....	22	22
	Highway regulation operations .....	23	22
CHAPTER 3.	FIELD ARMY SUPPORT COMMAND TRANSPORTATION MANAGEMENT SERVICES		
Section I.	Organization		
	General .....	24	23
	General staff sections .....	25	23
	Movement control company (FASCOM and corps support brigade) .....	26	24
	Movement control centers .....	27	26
	Transportation movement offices .....	28	27
	Combined movements center .....	29	27
II.	Functions		
	General .....	30	28
	Field army support command movement control center .....	31	28
	Support brigade movement control centers .....	32	28

	Paragraph	Page
CHAPTER 3. FIELD ARMY SUPPORT, etc.—Continued		
Transportation movement offices -----	33	29
Combined movements center -----	34	29
Section III. Relationships		
General -----	35	30
Relationships with the theater army support command -----	36	30
Relationships between movement control centers in field army area -----	37	31
Relationships with users of transportation -----	38	31
Relationships with mode operators -----	39	31
Other external relationships -----	40	31
IV. Highway Regulation		
General -----	41	32
Organization -----	42	32
Highway regulation operations -----	43	32
CHAPTER 4. TRANSPORTATION MOVEMENTS IN A CORPS SUPPORT COMMAND		
General -----	44	34
Organization -----	45	34
Functions of the movement control center -----	46	34
Relationships -----	47	35
Highway regulation -----	48	35
5. MOVEMENT PLANNING AND PROCEDURES		
Section I. Background		
Army logistics system -----	49	36
Theater flow of supplies -----	50	36
Use of automatic data processing equipment -----	51	36
II. Movement Planning		
Movement planning process -----	52	37
Developing the distribution pattern -----	53	38
Time period for movement program -----	54	38
Impact of automatic data processing on the movement planning process -----	55	39
Channels for movement capabilities -----	56	39
Content of movement requirement information -----	57	39
Schematics -----	58	42
Mode selection guide -----	59	43
Movement priorities -----	60	43
Variations from the movement program -----	61	44
Coordination of movement program -----	62	45
Port clearance program -----	63	45
III. Movement Procedures		
Maintaining in-transit inventory -----	64	46
Passenger movements -----	65	47
Evacuation of patients -----	66	47
Nonprogramed movements -----	67	47
Transportation movement release system -----	68	48
Movement instructions -----	69	49
Export shipments -----	70	49
Consolidation and distribution of small-lot shipments --	71	50
Trailer and CONEX control activity -----	72	50
CHAPTER 6. HIGHWAY REGULATION		
General -----	73	52
Terminology -----	74	52
Organization of highway traffic headquarters -----	75	53
Functions of highway traffic headquarters -----	76	53
Highway regulation planning -----	77	53
Management of the plan -----	78	56
Traffic routing -----	79	56

	Paragraph	Page
Traffic scheduling -----	80	57
Procedures -----	81	60
Preparation of a march graph -----	82	61
<b>CHAPTER 7. TRANSPORTATION MOVEMENT OFFICES PROCEDURES AND DUTIES</b>		
General -----	83	68
Movement activities at origin -----	84	69
Movement activities en route -----	85	70
Movement activities at destination -----	86	72
Duties of air traffic coordinating offices -----	87	72
Duties of rail transportation officers -----	88	73
<b>ANNEX A. INTERIM IMPLEMENTATION OF TASTA-70</b>	--	75
<b>APPENDIX A. REFERENCES -----</b>	--	84
B. REPORTS AND PUBLICATIONS FOR TRANSPORTATION MOVEMENTS -----	--	86
C. SOLOG AGREEMENT 27, PRINCIPLES AND POLICIES OF MOVEMENTS -----	--	89
D. SOLOG AGREEMENT 30, MOVEMENTS— GENERAL -----	--	98
E. SOLOG AGREEMENT 31, MOVEMENTS DUTIES IN THE FIELD -----	--	102
F. SOLOG AGREEMENT 50, TRAFFIC DISPATCH ADVICE -----	--	108
G. STANAG 2041, OPERATIONAL ROAD MOVE- MENT ORDERS, TABLES AND GRAPHS -----	--	110
H. STANAG 2151, ROAD NETWORK—DEFINITIONS AND CHARACTERISTICS -----	--	117
I. STANAG 2154, DEFINITIONS AND REGULA- TIONS FOR MILITARY MOTOR MOVEMENTS BY ROAD -----	--	123
J. STANAG 2156, TRANSPORT REQUEST AND REPLY TO TRANSPORT REQUEST -----	--	130
K. STANAG 2159, IDENTIFICATION OF MOVE- MENTS PERSONNEL AND OFFICES -----	--	141
L. STANAG 2164, ADVICE OF MOVEMENT -----	--	144
M. STANAG 2166, MOVEMENTS AND TRANSPORT DOCUMENTS USED FOR MOVEMENTS BY SHIP -----	--	148
N. STANAG 3093, REQUEST FORM FOR AIR TRANSPORT (NARAT) -----	--	157
O. STANAG 3344, PROCEDURES FOR TRACING AND DISPOSING OF BAGGAGE (BAGLO/TROBAG) -----	--	159





## CHAPTER 1

### INTRODUCTION

---

#### 1. Purpose and Scope

*a.* This manual provides a general guide for commanders and staff officers at all levels for the organization and operation of the transportation movement system in a theater of operations. It also provides movement commanders and staff officers with a guide for movements management organization and operations in the field.

*b.* The manual covers the movement organization, functions, procedures, and relationships involved in the management of transportation resources for movement of materiel and personnel.

*c.* The material presented in this manual applies without modification to general, limited, and cold war.

*d.* Users of this manual are encouraged to submit recommended changes or comments for improvements to the Commanding Officer, U.S. Army Combat Developments Command Transportation Agency, Fort Eustis, Va., 23604, on DA Form 1598 (Record of Comments on Publications) in accordance with the applicable provisions of AR 310-3.

#### 2. Theater Movements Services

*a.* The theater commander is responsible for the coordination of all means of transportation assigned to his command. This includes not only that transport capability which is provided by U.S. forces, but also that which is made available to him by host or allied nations. He allocates to his subordinate elements, including theater army, a portion of the total transport capability. Further, he normally delegates to theater army the responsibility for providing and coordinating surface transportation in support of all U.S. forces and for controlling and coordinating the use of space

allocated to the Army for intratheater or inter-theater airlift or sealift. This allocating procedure and a description of the theater army transportation system are contained in FM 55-6-1 (TEST).

*b.* The theater army commander, to carry out his control and coordination responsibilities, develops and issues policy directives to his two major subordinate commands, the field army and the theater army support command (TASCOM). These directives are usually the minimum required to facilitate throughput distribution (para 4e) and to insure effective transportation support under all conditions. The guidelines may include, among others, the following:

- (1) The time frames for programing cycles (para 54).
- (2) The degree of coordination required in movement planning.
- (3) The influence of field army priorities for movements planned from the communications zone (COMMZ) to the field army area, the amount of deviation allowed from coordinated plans, and procedures for resolving conflicts.
- (4) The provisions under which one command may divert, reassign, hold in transit, reload, or otherwise utilize the transport of the other command.
- (5) The priority for use of host nation, allied nation, and U.S. owned and operated transport.

*c.* The theater army commander suballots the total army transport capability to the field army and TASCOM commanders. He gives those commanders the responsibility for managing, within prescribed guidelines, the movement capability so allotted and for regulating

and coordinating the use of the road space within their respective areas of responsibility. These transportation management services (movements management and highway regulation) are discussed in detail in this manual.

### 3. Principles of Movements

The principles of movements (SOLOG 27 (revised), app C) are applicable to the management of transportation services (operative management) and to transportation movements management. They remain constant in peace or war and regardless of whether an automated or a manual system of operation is used. In *a* through *d* below are the principles and a general discussion of their application; annexes A through D, appendix C contain examples of the application of the principles and general guidelines for use when applying them.

#### *a. Control of Movements Will Be Centralized to the Highest Level at Which it Can Be Adequately Exercised.*

- (1) This means that centralized control must be exercised by the commander charged with providing integrated logistics support. He must be able to establish priorities, allocate critical resources, and identify and correct deficiencies. In carrying out this principle, theater army and separate corps commanders are assisted by their respective support command commanders. These commanders provide integrated logistics support, have a single movement control unit, and actually command most of the agencies involved in accomplishing movements.
- (2) In the field army, a variation from the principle exists. The field army support command (FASCOM) is responsible for providing integrated logistical support to the field army. It has subordinate elements (support brigades) which support divisional units of the corps and all units in a corps area or in the army rear area. Movements management activities have been established at FASCOM and at the subordinate corps support brigades.

#### *b. Movements Will Be Regulated.*

- (1) The introduction of automatic data processing (ADP) equipment into supply and transportation operations and the requirements to maintain and support highly mobile forces have greatly increased the requirement and capability for regulation of movements beyond that which existed in World War II and the Korean War. Most supplies are moved from TASCOM rear depots (and in some cases from shipside) to army depots and to division support commands and direct support units. Intermediate depots handle only reserve stocks and are generally bypassed in the normal supply and transportation lines. As a consequence, TASCOM transport equipment is constantly moving into and within the field army area and detailed regulation and coordination are required to prevent congestion and conflict of movement.
- (2) It is probable that in any future war U.S. forces will have to share the available airfields and road, rail, and inland waterway capabilities with allied forces. In this case, only careful regulation of movements and close coordination can insure an efficient, rapid transportation system.

#### *c. Movements Will Be Fluid and Flexible.*

- (1) This means that the transportation system can provide an uninterrupted flow of traffic and can adjust rapidly to changing situations.
- (2) One of the major goals of combat service support is maximum throughput of supplies (para 4e) to reduce the requirement for rehandling materiel in the COMMZ forward area and the field army rear area. The attainment of throughput goals and the effective use of all transport are impossible unless the capability exists throughout the transportation system to divert, reroute, and exchange or to take whatever actions are necessary to insure continuous movement of supplies to destination. For example, the success-

ful accomplishment of a motor transport trailer transfer operation from the TASCOM area to the field army would not be possible without appropriate control.

*d. Maximum Use Will Be Made of Carrying Capacity.*

- (1) This fourth principle of movement means more than just loading each transport vehicle to its optimum carrying capacity. (This is a responsibility of the transport services and the users.) Transport capability that is not used on one day cannot normally be stored to provide an increase in capability for subsequent days. Similarly, a situation allowing fully loaded transport to sit idle is just as much a loss of carrying capacity as is a partially loaded vehicle moving through the system. Tactical considerations may preclude complete adherence to this principle (for example, vehicles designated and held for the movement of special weapons or aircraft delivering unit loads in combat support); however, such use must be considered as an appropriate employment of the vehicles. Thus it is evident that this maximum-use principle penetrates the entire field of transportation movements. It is evidenced by the three principles previously discussed. However, these principles are primarily concerned with full utilization as obtained by the formulation and regulation of an integrated transportation system. The fourth principle is aimed at full utilization of the components of the system.
- (2) The requirements for transportation within a theater or a segment of the theater will fluctuate, depending upon the tactical situation. However, transport will normally be in short supply and proper use must be made of the inherent advantages of each transport mode in accomplishing the commander's objectives. The air transport capability will normally be employed if speed of reaction is paramount or ter-

rain considerations prohibit the use of other modes. Motor transport, with its capacity for wholesale and retail deliveries, complements the air mode and the fixed modes of rail and inland waterways.

#### 4. Terminology

Throughout this manual certain terms are used to describe the movement activities, functions, and tools. Some of the terms are narrowly defined in service dictionaries; others are contained in international agreements. In *a* through *h* below, the terms are more fully described and their relationship within the movement function are shown.

*a. Management.* Management is a process of establishing and attaining objectives to carry out responsibilities. Management consists of those continuing actions of planning, organizing, directing, coordinating, and controlling the use of men, money, materials, and facilities to accomplish missions and task. The efficient operation of the transportation service in a theater of operations involves management from two aspects.

- (1) Movements management is concerned with planning, coordinating, programming, and monitoring the allocation and use of available transportation resources in accomplishing the commander's movement requirements.
- (2) Operative management is a command function exercised by commanders of transport units, transportation facilities, and shipping and receiving installations or activities. By its application, commanders produce maximum movement capability through efficient employment of personnel, materiel, and facilities.

*b. Movement Requirement.* A movement requirement is a request to transport personnel or materiel that has been approved by the appropriate commander. Normally, the commanders will be the support command commanders in the area (TASCOM, FASCOM, support brigade, or corps support command).

*c. Movement Capability.* Movement capability is the sum total of the capabilities of the

shipping and receiving agencies and the transport services.

- (1) The movement capability of a shipping and receiving agency is the agency's ability to receive, load/unload, and release transport during a stated period of time. Some of the factors that influence this capability are the amount of labor available, the quantity and type of shipments to be handled, the quantity and variety of materials handling equipment, and the facilities of the installation.
- (2) The movement capability of a transport service (mode) organization is based on the potential lift capability of the organization and the average turnaround time of the conveyances used. Some of the factors which affect the potential lift capability are availability of operators, status of equipment, and average length of haul.
- (3) Coordination of the capabilities of shippers, transport services, and receiving agencies develops a total movement capability. This coordination includes vigilant observation of the limitations of facilities and equipment to prevent congestion at loading and discharge locations. It recognizes the interdependent nature of terminal, transfer, and mode operations and establishes schedules to avoid delay in transit; priority traffic is allocated to more rapid transport modes. This coordination of capabilities of shipper/receiver and transport modes in consonance with priorities provides the solution to the command's movement requirements.

*d. Movement Program.*

- (1) A movement program is a command directive prepared by the transportation movements element and issued in the name of the commander. It is based on the overall plan of the commander and is coordinated with all interested agencies. The movement program allocates the available transport mode capability to accomplish the movement requirements in ac-

cordance with the movement priorities established by the commander. These priorities provide an orderly basis for resolving competition among the various users for the available transport capability. The movement program normally contains detailed information of origins, destinations, and weight and cube of cargo or type and number of personnel to be moved.

- (2) The movement program serves the following purposes:
  - (a) It serves as the authority by which shipping agencies may initiate action to obtain transportation.
  - (b) It authorizes the transportation movement office (TMO) to issue movement releases.
  - (c) It directs the transport services to furnish the requisite capabilities.
  - (d) It alerts receiving agencies to prepare to accept programed shipments and to unload carriers promptly.

*e. Throughput Distribution.* Throughput distribution is the shipment of supplies from points of origin (normally rear depots) as far forward into the combat zone as possible, bypassing intermediate supply activities. Rehandling and transshipment (transferring) at intermediate locations within the transportation system are avoided whenever practicable.

*f. Critical Movement Locations.* From the standpoint of movement activities, critical locations are those affecting the transportation system that must be kept under surveillance by movement personnel to insure that they do not become bottlenecks that restrict the flow of traffic. In the theater of operations, critical areas may be in the following locations:

- (1) Air and water terminals.
- (2) TASCOM rear area depots.
- (3) International borders.
- (4) Transportation centers (for example, cities, termini of superhighways, and rail yards).
- (5) Intermodal transfer points.
- (6) General support/direct support supply activities in the field army area when the tactical situation or terrain char-

acteristics compel concentration of these activities.

*g. Embargo.*

- (1) An embargo is a command action temporarily limiting or prohibiting the acceptance or movement of shipments (SOLOG 27, app C). It may be placed on an installation or area or on the services of a carrier. An embargo normally is used to prevent or relieve congestion at shipping, receiving, or transshipping points. It is also used when a serious disruption of a carrier's service occurs or is threatened. In any event, an embargo is imposed only when all other efforts, such as holding in transit, diverting to other installations, or using unaffected modes, have failed. When an embargo is imposed, prompt and continuing action must be taken by all concerned to alleviate the condition which caused the embargo and thereby to remove the embargo.
- (2) Because of its widespread effect, an embargo is imposed only by the commander having overall responsibility for all affected activities. This authority is usually exercised by the TASCOM, FASCOM, or field army commander.
- (3) An embargo must be specific as to its application and, when possible, should have a time limitation. Normally, an embargo is necessitated by a specific condition, such as temporary inability to load or unload aircraft or trucks or disruption of a particular carrier's

services to all installations in a specific area. The essential consideration in recommending an embargo is to limit its effect insofar as possible on other areas, installations, or activities within an installation.

- (4) The transportation movements field organization is charged with implementing and supervising the application of embargoes. TMOs must maintain close contact with embargoed activities to prevent further congestion or disruption of services and to assure restoration of normal service as quickly as possible.

*h. Release Unit.* A release unit is a shipment or transportation unit that must be offered to a movements management authority for transport commitment as established by command criteria. Release unit criteria vary according to the type and nature of available transportation service. In the continental United States, for example, the basic release unit criteria are as follows: a shipment weighing 10,000 pounds or more, any shipment occupying the full visible capacity of a railway car or motor vehicle, and all oversize and overweight shipments. In over-sea areas, similar criteria are established, although a lower weight limit may be used to achieve more effective use of transportation resources. Military standard requisitioning and issue procedures (MILSTRIP) tend to generate numerous small shipments, particularly in classes II and IV. However, ADP equipment, appropriately programed, provides a means for consolidating these small shipments into release units and aids effective movements management.

## CHAPTER 2

# THEATER ARMY SUPPORT COMMAND TRANSPORTATION MANAGEMENT SERVICES

---

### Section 1. ORGANIZATION

#### 5. General Staff Sections

a. The transportation functions of the theater army support command (TASCOM) are supervised by specialists assigned to the general staff section of the assistant chief of staff (ACofS), movements. The primary duties of these specialists are to advise the commander and staff on all transportation matters and to develop such plans or planning guidance as are necessary to provide an efficient transportation service for the command.

b. The ACofS, movements, has general staff supervision of the following transportation-related functions (among others):

- (1) Transport mode operations.
- (2) Movements management, excluding POL by pipeline.
- (3) Terminal operations.
- (4) Highway regulation.
- (5) Traffic control.

c. In carrying out his responsibilities to the commander, the ACofS, movements, uses his own staff resources and those of the transportation command to perform the following functions:

- (1) Advises the commander on matters concerning effective utilization of the transport services and effective operations of those elements of the shipping and receiving services that have a direct bearing on the accomplishment of the commander's movement requirements.
- (2) Recommends movements management policies.
- (3) Prepares implementing directives. (Such directives are in consonance

with the guidelines issued by theater army.)

d. The headquarters, TASCOM, staff is a broad policy and planning staff which operates on a management-by-exception basis. It develops broad policy and planning guidance and does not become involved in day-to-day operations, planning, implementation, or management. The transportation command, because it contains the functional control center, technical specialists, and automatic data processing (ADP) facilities, performs the complete operational mission, including operational planning and management, implementing, evaluating, and summary reporting to headquarters, TASCOM. Representation on joint theater boards and committees will normally be provided by the transportation command. The transportation command ACofS, movements, is also the chief of the movement control center (MCC), TASCOM.

#### 6. Transportation Movement Control Agency

a. *General.* The transportation movement control agency is a major subordinate unit of the transportation command. It utilizes data processing capabilities to achieve centralized control of the allocation of transport capability and time and space on controlled highway routes. It makes this control immediately responsive (through the transportation command) to the TASCOM commander's desires, thus assuring the close integration of supply support and transportation support. It is mandatory that maximum utilization be made of modern machine methods to assure the coordination of all the TASCOM movements actions with personnel replacement and supply activities in TASCOM and with the field army.

b. *Mission.* The mission of the transportation movement control agency is to—

- (1) Provide personnel and equipment to operate the TASCOC MCC.
- (2) Provide movements management for movement of personnel and materiel (except bulk POL by pipeline) within the communications zone and interzonal shipments between the communications zone (COMMZ) and the field army area.
- (3) Provide a highway traffic headquarters and regulation of controlled routes within the COMMZ.
- (4) Maintain liaison, as required, with transportation elements of other component U.S. forces and with allied and host nation transportation agencies.

c. *Organization* (fig. 1). The movement control agency (TOE 55-4) is organized along functional lines to include a headquarters and mission elements. The plans and programs division, freight movement division, passenger movement division, and special movement division actually form the TASCOC movement control center (para 7). The agency headquarters

commander is not normally involved in the operation of the MCC or field activities. The highway traffic headquarters and the field teams are also assigned to the transportation movement control agency, which is a carrier unit for the personnel assigned.

- (1) When in a training status or employed in a theater where there is no transportation command, the senior officer assigned to the movement control agency is designated the commander of the movement control agency and is responsible for and directs the activities of the MCC.
- (2) When employed in a theater that has a transportation command, the transportation command ACoS, movements, is designated chief of the TASCOC MCC. In this situation, the MCC operates under the direct control and management of the transportation command ACoS, movements, and is an extension of his office. However, as the transportation command headquarters and the MCC are not co-located, the ACoS, movements, normally designates a deputy to coordinate the actions of the MCC

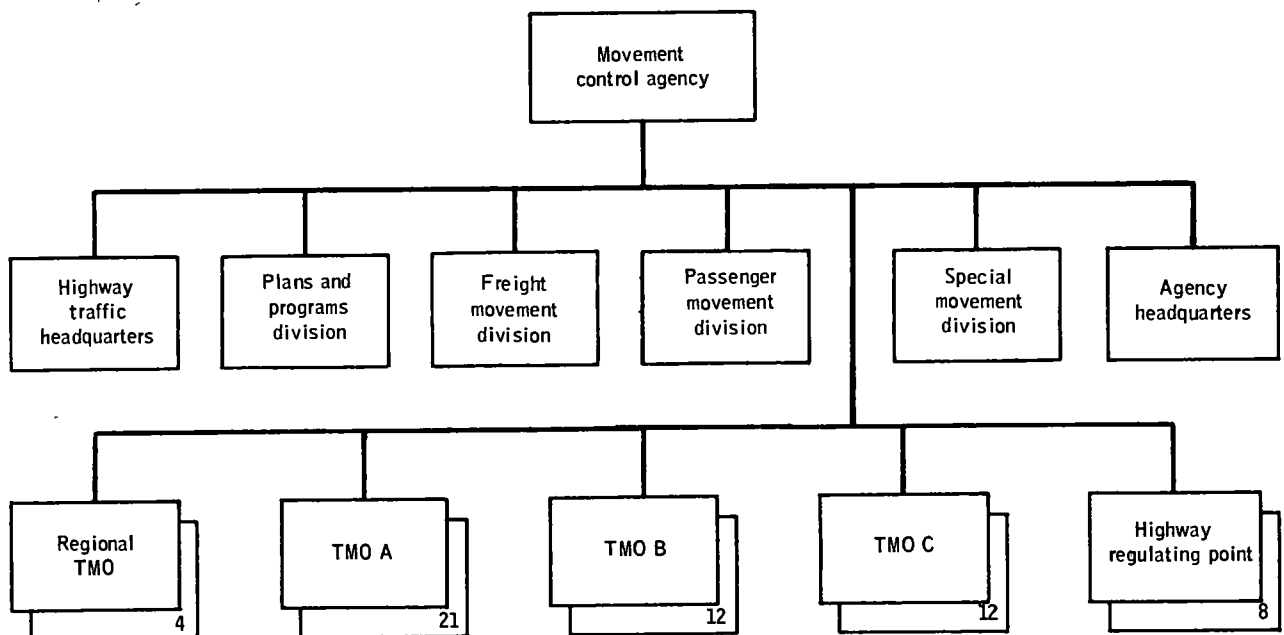


Figure 1. Transportation movement control agency.

and to insure that his policies are carried out. The presence of the deputy at the MCC does not preclude direct contact between the MCC division chiefs or the regional transportation movement offices (RTMOs) and the ACofS, movements.

- (3) The agency headquarters provides housekeeping and administrative service for the MCC and the traffic headquarters. The agency headquarters commander is responsible for unit disciplinary actions on all enlisted personnel to include those assigned to RTMOs, transportation movement offices (TMOs), and highway regulating points (HRPs) and for assuring that field teams are provided mess and maintenance support.
- (4) The TASCOM highway traffic headquarters operates under the supervision of the transportation command ACofS, movements. Engineer, communications, civil affairs, or other service officers may be attached by the TASCOM commander to the highway traffic headquarters on a mission or on as-required basis. Co-location of the MCC and highway traffic headquarters is desirable.
- (5) The RTMOs and TMOs A, B, and C are under the operational control of the MCC. The RTMOs report directly to the chief of the MCC and, by supervising the activities of the TMOs assigned to regions, they reduce the span of control of the chief of the MCC to manageable proportions.
- (6) HRP teams are under the operational control of the highway traffic headquarters. They are stationed at critical locations on the highway net to carry out the traffic regulating plan.

*d. Capabilities.* The movement control agency is capable of—

- (1) Providing personnel and equipment required to operate the TASCOM MCC and highway traffic headquarters, including the necessary field teams.

- (2) Providing a central organization and field offices to furnish movements management services in support of a theater army.

- (3) Providing a central organization and field offices to furnish highway regulation services in a COMMZ.

*e. Location.* The movement control agency is so located that trips to and from the transportation command headquarters can be quickly accomplished with ground transportation. However, it is far enough from the transportation command headquarters and the ADP element to minimize simultaneous damage to all of these critical facilities.

## **7. Theater Army Support Command Movement Control Center**

*a. General.* The TASCOM MCC is normally established as an element of the staff of the transportation command ACofS, movements. It provides an agency which balances and coordinates the capabilities of the shipping, transporting, and receiving activities to provide a responsive transportation system capable of accomplishing the TASCOM commander's movement requirements. The MCC acts as the nerve center of the entire TASCOM transportation system through its planning and day-to-day transportation movements management.

*b. Mission.* The mission of the MCC is to provide movements management services for the TASCOM. These services include negotiating for and procuring allied and host nation transportation, recommending movements management procedures, providing a smooth-working interface with CONUS (continental United States) and field army transportation activities, and operating the theater CONEX (container, express) and roll-on/roll-off trailer control agencies.

*c. Organization.* The MCC is composed of the plans and programs, freight movement, passenger movement, and special movement divisions. The MCC is supported by the agency headquarters. The chief of the MCC (transportation command ACofS, movements) has direct access to and control of the RTMOs, which he exercises through his staff divisions of the MCC.

- (1) The chief of the MCC plans, super-



vises, and directs the activities therein. He establishes standards for all movement activities and controls and manages operations to provide for movement support in conformity with policies and decisions of higher headquarters.

- (2) The plans and programs division is responsible for developing, coordinating, publishing, and distributing the movement program and, as directed, for preparing transportation movement plans and annexes in support of TASCOM logistic or contingency plans. New or modified directives issued by the commander of the theater, the theater army, TASCOM, or the transportation command are reviewed by the division to determine their effect on the movement system. The division recommends procedures for implementing these directives and prepares supplementing directives as required. This office exercises management and comptroller type functions, as required, for the MCC or the movement control agency.
- (3) The freight movement and passenger movement divisions monitor the execution of the movement program. Based on special guidance from higher headquarters and on movement status and movement requests received, they recommend changes to the movement program, where additional TMOs are required, or where a probable relocation of transport mode operating units would be advantageous. These divisions also have responsibility for manually processing as exceptions those movement actions which are outside ADP machine program parameters.
- (4) The special movement division is responsible for the operation of the theater CONEX and roll-on/roll-off trailer control agencies, for allocating the use of scarce special purpose equipment to various lifts, for coordinating large unit movements involving both personnel and equipment, for

coordinating and monitoring the movement of special ammunition, and for arranging and monitoring such other special movements as may arise from time to time that require close supervision or monitoring.

*d. Location.* The MCC is located as outlined in paragraph 6 for the movement control agency.

*e. Communications.* (See Annex A, Interim Implementation of TASTA-70.) Efficient traffic management demands prompt transmission of information and instructions, and the establishment of a reliable signal communications system is mandatory. With subordinate offices and teams dispersed over the entire COMMZ, the problem becomes more complex because of the increased distances between the headquarters and its subordinate elements. The theater operations signal command provides access facilities (radio relay and wire carrier) for each transportation movement activity which requires access to the theater army communications system (TACS). When for any reason TACS cannot adequately support the movement control organization, the theater commander may authorize the attachment of appropriate signal teams organized under TOE 11-500.

- (1) The MCC and each RMTO have a radio set AN/VRC-46, which permits entry into the radio wire integrated system (RWI) of a major headquarters if necessary and if located within operating range.
- (2) Each of the field offices and the MCC has an electric typewriter capable of transmitting directly over wire facilities or receiving or transmitting punched paper tapes or edge-punched cards. Tape-to-card converters give the machine the additional capability of receiving and transmitting conventional hole-punched cards such as the transportation control and movement document punchcard formats. The MCC uses a display unit in conjunction with the electric typewriter.
- (3) Common user telephone is provided at the MCC and at each field office for contact with local users of transport,

transport mode operators, and supporting and supported activities.

- (4) The computer serving the MCC is equipped to receive and transmit items of information essential to movements management.
  - (a) The MCC computer has computer-to-computer links with computer centers at FASCOM, the personnel and administration center of the TASCOM personnel command, and the TASCOM inventory control center. It is also linked with the Military Traffic Management and Terminal Service in CONUS.
  - (b) TMOs have transceiver links to the MCC.
  - (c) Transceiver facilities will be provided by the appropriate signal operations company supporting the major headquarters of TASCOM. Standard links are utilized by other units in the TASCOM area. Keyboard inquiry devices and high-speed hard copy printers are provided theater army, TASCOM, and transportation command headquarters.

## 8. Transportation Movement Offices

*a. General.* The MCC chief is charged with the management of the movement capability of the TASCOM transportation system. In order to obtain effective field coverage of transportation movements, that portion of the COMMZ through which the transportation system runs is divided into transportation movement regions. The number and size of the regions vary with the volume and complexity of movements, the number of critical areas, and the geographical spread of the transportation system. Regional boundaries do not necessarily coincide with political boundaries nor with geographical boundaries established by other military elements. Branch or district TMOs are established within each region. The RTMOs are responsible to the MCC for controlling and supervising all those movements matters pertaining to that portion of the interzonal transportation system which passes through their respective territorial areas. The

district TMOs usually have subareas of responsibility. TMOs may be responsible for the movements activities for a single installation or activity or for a small area.

*b. Mission.* The mission of the TMO is to act as a coordinator between the users and the transport mode operators and to assist the commanders in carrying out movements, both programmed and nonprogramed.

*c. Organization.* TMOs are organized under their respective TOE to meet anticipated needs and functions over a wide range of conditions; however, each individual office must be staffed to meet the needs of its particular location. Generally, the office will be organized into two primary sections, freight and passenger. The activities of these sections complement the needs of the MCC. The sections prepare and maintain records and submit reports to higher, adjacent, and lower headquarters concerning the transportation situation, requirements, and capabilities and the accomplishment of movements within their respective areas. These sections receive and process transportation requests from the users of transportation and prepare the worksheets used on movement actions and requests which are used for data processing. They receive and process reports of shipments and perform other duties delegated by the chief of the branch or region for the accomplishment of the functions listed in chapter 7.

*d. Capabilities.* The capability of each TMO is dependent upon the particular TOE paragraph under which it is organized. Each is capable of providing, within its size and communications limitations, 24-hour supervision, coordination, and monitoring of the movement program for the activity or area which it supports. The TMO is capable of maintaining status information on shipments, investigating and initiating necessary action to avoid delays in movements, and preparing movement instructions.

*e. Location.* The exact site for establishment of a TMO can be effectively selected only after proper analysis of the functions to be performed by the office and after a personal reconnaissance of the transportation and geographic characteristics of the area. The reconnaissance

includes the availability of adequate facilities for assigned personnel and of signal communications. A central location which allows close and constant coordination with the installations and units to be served and with transport mode operators is considered ideal.

- (1) The movement control agency headquarters commander is responsible for arranging billet and office space and for mess, supply, maintenance, and mail support for the TMOs. Usually, arrangements are made through the RTMO with the area support battalion in accordance with command procedures. As the team must operate 24 hours each day, consideration must be given to distances and facilities for movement between the office and billet and to providing for meals at other than regular mealtime hours.
- (2) If inadequacy of facilities or distances from the job make it impractical to attach TMO personnel to a nearby unit or installation for messing or quartering, local facilities may be used. Utilization of local facilities

must be in accordance with established command policy, and care must be exercised to insure that the desired standards of adequacy, cleanliness, and performance exist at all times.

- (3) Once the office has been located and established, appropriate signs are erected immediately outside the office and at strategic points in the vicinity of the office. The signs will be prepared in accordance with STANAG 2159, Identification of Movements Personnel and Offices (app K) and will be erected in accordance with local standing operating procedures.

*f. Communications.* Communications equipment organic to TMOs in the field consists of telephones and input-output devices for the MCC computer, as appropriate. These communications are, however, frequently of short range and insufficient in quantity. Additional communications equipment, when required, may be obtained from an authorization document (modified TOE) resulting from a coordinated communications plan.

## Section II. FUNCTIONS

### 9. Theater Army Support Command Movement Control Center

The functional activities of the movement control center (MCC) are carried out by the four divisions (plans and programs, freight movement, passenger movement, and special movement divisions).

*a. Plans and Programs Division.* To carry out its responsibilities, this division performs the following functions:

- (1) Receives, reviews, and analyzes transportation directives issued by higher headquarters; devises, coordinates, and recommends to the chief of the MCC procedures and policies for implementing the directives.
- (2) Receives and relays to interested activities intelligence information concerning the transportation system.
- (3) Receives from the other divisions problems concerned with the compu-

ter program. Forwards the problems or recommended changes to the computer program to the ADP (automatic data processing) operating unit for their resolution and preparation of necessary changes to the program. Results of the program changes are coordinated with other MCC divisions to assure that proper results are obtained from the processing of the data.

- (4) Determines movement requirements and available transport capabilities.
- (5) Determines capabilities of actual and potential users to ship and receive traffic by each mode or a combination of modes.
- (6) Analyzes requirements and capabilities.
- (7) Prepares and coordinates the movement program.
- (8) Publishes the movement program.

- (9) Reviews and analyzes program performance data.
- (10) Reviews and analyzes nonprogramed movements to determine if they are of a recurring nature and should be programed.
- (11) As directed, prepares movement plans or annexes in support of logistic or contingency plans.

*b. Freight Movement and Passenger Movement Divisions.* These divisions are primarily concerned with acquiring and maintaining user requirements and capability data and with administering and monitoring the movement program. In accomplishing these functions, they recommend policies and establish procedures for the following major movements management actions. Such procedures are normally capable of either manual or ADP application.

- (1) *Collection and dissemination of requirements and capabilities data.* Specific, timely, and accurate movement information is fundamental to effective movements management. Continuous contact must be maintained with every possible source of such information, including user staff agencies and field installations, transport service facilities, and transportation movement offices (TMOs) in the field. The latter are the primary sources of the most current information. DA Form 1322 (Daily Installation Situation Report) also provides current and detailed information.
- (2) *Establishment of movement release system.* This system applies only to the use of transportation resources employed in providing a common-use command-wide or interzonal service. It includes policies designed to permit TMOs the widest possible latitude in making adjustments at the local level and procedures for maintaining close supervision of shipments from request for transportation to delivery at destination. This system is carried out primarily by TMOs in the field through issuance of transportation movement releases (TMRs).

- (3) *Consolidation of shipments.* Shipments are most effectively consolidated by shipping activities. However, the transportation service must provide consolidation and break-bulk distribution service (in addition to that provided by the TASCOT (theater army support command) rear depots) geared to small-lot shipments, normally identified for specific consignees, in order to accomplish its mission. The units to operate the consolidation and break-bulk points will be designated by the TASCOT commander.
- (4) *Holding in transit.* This stops the movement of traffic to eliminate or prevent congestion in the transportation system. Such action is taken only in coordination with receiving agencies and only for the period necessary to alleviate the condition.
- (5) *Diversion and reconsignment.* In connection with the use of military transportation, diversion applies to any change made in the destination or consignee of a shipment during transportation and reconsignment applies to any change made after arrival at destination.
- (6) *Transferring.* This is a change of shipment from one mode to another. Strategically located transfer points permit continuous and expeditious movement of traffic from origin to destination and reduce congestion in the transportation system.
- (7) *Tracing and expediting.* Tracing is locating or confirming a shipment en route. Expediting is speeding its delivery. Both are a joint responsibility of TMOs and mode operators. Details of tracing and expediting responsibilities are contained in paragraph 85c, and d.
- (8) *Coordination with Military Airlift Command.* The freight movement and passenger movement divisions are the primary contacts for the MCC with the Military Airlift Command (MAC). They are responsible for

coordinating channel and special mission airlift for personnel, unit, or cargo movements. They coordinate the schedules of Army airlift used in less-than-carload or lateral movement in the TASCOT area with those of the MAC.

*c. Special Movement Division.* This division is the troubleshooting office for the MCC. It coordinates and monitors those movements which require exceptional coordination, monitoring, or reporting. Some of the specific functions performed by this division are as follows:

- (1) Operating control agencies. The theater CONEX (container express) control agency and theater trailer control agency maintain running inventories of controlled containers or vehicles designed for or customarily employed in movements between the continental United States and the theater. The agencies keep records of the location of each container or trailer. The containers allotted for intratheater use are controlled so as to prevent unwarranted concentrations in one or two areas with consequent shortage at others and resulting misuse and lack of flexibility.
- (2) Allocating the use of scarce special purpose equipment. Certain types of special purpose equipment may have to be allocated by the division to particular movements; for example, heavy duty deep-well cars or high pressure tank cars.
- (3) Providing a reporting system on utilization of the capabilities of the aviation service support companies assigned to the transportation command.
- (4) Coordinating and monitoring large unit movements and accompanying equipment.
- (5) Coordinating and monitoring shipments of chemical, biological, and etiological agents and radioactive material that are required by AR 740-32 to be accompanied by technical escort (munitions safety control team) personnel.

## 10. Transportation Movement Offices

Movement officers in charge of regional, district, or branch TMOs are responsible for the following functions within their assigned areas:

- a.* To act as field representative of the chief of the MCC.
- b.* To maintain liaison among the transport services, shippers, and receivers.
- c.* To keep informed of and advise the MCC on location of units and installations, transportation requirements, availability of modes of transport, capabilities of installations to ship and receive, and the general transportation movements situation in their areas.
- d.* To make recommendations on selection of sites for supply activities, truckheads, railheads, airheads, and inland waterway terminals, taking into consideration the facilities for handling supplies, adjacent transportation networks, and storage space.
- e.* To advise the commanders of units and service installations on transportation matters.
- f.* To assist in carrying out the movement program and directives from higher headquarters pertaining to movement of personnel and freight.
- g.* To process requests and arrange for the movement of personnel and materiel.
- h.* To enforce movement priorities and to investigate delays in the movement of personnel or materiel.
- i.* To take appropriate action to prevent congestion and to insure the uninterrupted movement of personnel and materiel.
- j.* To receive, process, and forward requests and replies to requests for movement over controlled routes or for other highway clearance.
- k.* To exercise on-the-spot management of the movement of personnel and materiel in accordance with the movement program.
- l.* To carry out plans and schedules for transportation of passengers by any mode, to verify the preparation of itineraries, and to arrange for reservations and approval of requests for transportation as required.
- m.* To direct compilation of records, reports, and other information as required and to submit necessary reports or information to higher,

adjacent, and lower headquarters concerning the transportation situation, requirements, and performance.

n. To assure that regulations pertaining to the documentation, marking, loading, blocking, and bracing of shipments are complied with.

### **Section III. RELATIONSHIPS OF THE MOVEMENT CONTROL CENTER**

#### **11. General**

The movement control center (MCC) is a subordinate activity of the transportation command and an element of the staff of the assistant chief of staff (ACofS), movements. In an emergency situation, the MCC and the ACofS, movements, are alternates for each other. The MCC will, through its computer and communications capabilities, be a primary source of information to the commander for planning for and controlling the operations of the transportation system.

a. The MCC provides a vehicle for coordinating transport activities with those of supply, maintenance, and personnel. The transport activities may include units providing other than general use transportation when authorized and directed by the TASCOM (theater army support command) commander.

b. The MCC is responsible for providing a smooth interface of TASCOM movement actions with those of the continental United States (CONUS) and the field army support command (FASCOM) to assure that personnel and materiel are received in the theater and delivered to destination with minimum delay. In this connection, the TASCOM MCC is responsible for planning, coordinating, and monitoring all throughput shipments originating in either the communications zone or CONUS from their origin to final destination.

c. The MCCs computer capability must interface with that of the inventory control center (ICC) so that when a supply action is taken by the ICC, the information is immediately available to the MCC and action can be initiated to secure the necessary transport equipment and road, rail, or inland waterway space over which the transport will move.

d. In view of the foregoing, it is essential that close working relationships be established between the MCC and CONUS transportation activities, the FASCOM MCC, the transporta-

tion command and its subordinate transport units, and the supply and maintenance command and its ICC and subordinate depots.

#### **12. Relationships with CONUS Activities**

a. The MCC maintains close functional relationships with CONUS transportation activities, particularly with the Military Traffic Management and Terminal Service (MTMTS) and its subordinate terminals. The exchange of information and interface of movements is accomplished through the preparation and transmission of information, documents, and reports required by military standard transportation and movement procedures (MIL-STAMP) and through adherence to the procedures outlined therein.

b. A free flow of information is encouraged to assure that the movements systems of CONUS activities mesh with those of the theater. Such information would include desired changes in port designators for individual shipping address codes as units displace or changes occur in the transportation system. (Formal action on these changes is through TASCOM to the Defense Supply Agency.) Because of its unique position and its communications facilities, the MCC is able to provide the commander of the transportation command with information on changed port capabilities (ability to handle particular commodities, such as POL (petroleum, oil, and lubricants), ammunition, or heavy lifts, or increases or decreases in daily tonnage capabilities) and other factors which influence either the CONUS or transoceanic routing of shipments. During peacetime, this information includes the theater delivery costs from various ports of entry to final destinations for specific commodities so that the lowest overall cost, consistent with service, accrues to the Government. The same type of information is furnished the transportation command by MTMTS so that the MCC can plan retrograde (export) shipments.

### **13. Relationships with the TASCOM Staff**

a. The TASCOM general staff has access to the MCC through its keyboard inquiry device linked to the MCC computer; however, normally data and reports required by TASCOM are summarized and furnished by the transportation command.

b. The commander of the transportation command and his staff rely upon the MCC to obtain estimates of transportation lift requirements necessary to form and operate a transportation system and, during operation, to furnish estimates of the ability of the system to support tactical and logistic plans. As a major subordinate element of the transportation command, the MCC has direct access to the staff of the transportation command for coordination, liaison, and advice.

c. The TASCOM ACofS, movements, has staff responsibility for developing, publishing, and disseminating directives that clearly outline the procedures for assuring the smooth functioning of the transportation movements system. The actual preparation of the directives is usually accomplished by the transportation command ACofS, movements, and his staff. Typical reports prepared for the transportation service are contained in appendix B.

### **14. Relationships with Users of Transportation**

a. High-volume personnel movements in the TASCOM area are generated by the medical, military police, personnel replacement, and civil affairs activities. The primary shipping and receiving agencies for cargo are normally the terminals (water and air) which receive the volume shipments from CONUS and the field depots in the COMMZ rear area.

b. The ICC, personnel and administration center, and medical regulating activities submit their movement requirements to the MCC. The MCC takes necessary action to see that the requirements are fitted into the overall program in accordance with command priorities.

### **15. Relationships with the Transport Services**

a. The MCC provides the transport services with movement commitments and estimates of

future workloads. It frees transport service personnel of duties not concerned with mode and facility operations by dealing with users of transportation in behalf of the transport service. Since the MCC allocates movements to all modes of transport, it can allocate movements to the transport mode best adapted for those movements and can coordinate available modes to provide continuity of movement at points of transfer. To perform its mission, the transport service must keep the MCC advised of current and future capabilities of the transport service and must assist in reporting the overall progress of movements.

b. To carry out their mutual responsibilities, both formal and informal relationships exist between movements personnel and the mode operators. The formal relationships are maintained through the transportation command and generally consist of reports and plans exchanged between the two in accordance with command directives. These will normally cover capability reports, traffic analysis reports, and emergency reports (on occurrences which might cause curtailment of service over any portion of the transportation system) submitted by the mode or service operators.

c. Close working relationships must exist at all levels of the movements, transport, and services activities. The daily coordination of requirements for transport for specific movements, equipment spotting information, and actions resulting from increases or decreases of transport or service capability are types of actions normally handled by direct liaison between the operator and the transportation movement offices (TMOs) and users.

### **16. Other External Relationships**

#### *a. Area Support Command.*

- (1) The normal relationship between the MCC and the area support command is that of supporter and supported. The area support command's subordinate units are responsible for providing direct support to the MCC and its field TMOs in such areas as billeting, mess, maintenance, and personnel administration. Similarly, if units or activities of the area support command require transport or high-

way regulation assistance, such requirements are placed on the local TMO or regional TMO, as appropriate.

- (2) The area support groups may, in specific situations directed by TASCOT, assume control of all TASCOT functions in the group area. Such situations may arise during rear area security or damage control activities. When such action is directed, the senior officer of each TASCOT mission command located in the area assumes control of mission activities under area support group control. Thus a motor transport battalion commander may assume control of terminal service companies and TMOs in an area during the emergency. He would then be responsible to the area support group commander for all transportation command activities in the area, including movement control. During these emergencies, personnel and supply movements continue through the group area under group control to the adjacent area support group. Also during these emergencies, preselected stocks in both rear and forward depots are placed in movement by depots. The MCC and TMOs, in these instances, can be very helpful to the area commander. Their experience in movements management, coupled with their access to information on the location of all shipments en route and their knowledge of the locations of units, the transportation system, and road nets and conditions in the area, will enable the area group commander to more efficiently utilize available transportation in carrying out his mission.

*b. Medical Command.* In addition to its normal relationships with the medical command as a user of transportation, the MCC works with the medical command to develop train paths and schedules for ambulance trains and may be required to provide a liaison team to the command to assist in the movement plan-

ning required in conjunction with the evacuation of patients and the movement of medical units.

*c. Military Police.*

- (1) Military police units engaged in traffic control activities are used by both the MCC and the highway traffic headquarters. Certain military police traffic control posts (TCPs) are designated to perform highway regulation duties in conjunction with their traffic control functions. When instructed by the MCC or TMO, these TCPs carry out diversions, reassignments, and reroutings or hold in transit vehicles engaged in the transport of personnel or materiel. They report, through appropriate channels, the passing of all vehicles or convoys to the MCC. The MCC uses the passing reports to update its in-transit inventory file.
- (2) The military police place requirements on the MCC for the movement of prisoners of war. The MCC coordinates the movements including stops for meals, rest, and exercise.

*d. Petroleum Suppliers.* The MCC is responsible for planning, programing, and monitoring the movement of bulk or packaged POL by all available military and commercial transport capabilities, except pipeline. However, the planning of these movements must be accomplished jointly with the petroleum suppliers responsible for operation of the pipelines to insure that the most efficient use is made of all available capacity. This planning includes the determination of origin, destination, and mode for the various products; where facilities will be established to transfer products from one mode to another; where decanting facilities will be established to permit the movement of POL as a containerized product; and contingency actions to be followed in the event of disruption of any transporting service. To insure that all shippers and receivers are aware of the products they are to receive and the mode by which they will be delivered, pipeline movements are included in the manually prepared movement program.

*e. Air Force.* The relationships of the MCC



with the Air Force may be divided into three categories: the Air Force as a user of Army transport, the Air Force as the operator of an air line of communication (ALOC), and Air Force airlift elements attached to Army elements. These relationships, described below, do not affect the normal relationships or functions of TMOs or ATCOs (air traffic coordination office(r)(s)) described in chapter 7.

- (1) As a user of the Army transportation system, the Air Force normally stations a liaison team with the Army MCC. This team provides to the MCC the Air Force requirements for transport, diversion, or reassignment of personnel or cargo of Air Force interest being transported by surface transportation, either inter-theater or intratheater, and keeps the Air Force component commander advised of the status of surface movements of Air Force interest.

- (2) As the operator of an ALOC, the Air Force provides both intertheater and intratheater airlift. To coordinate the use of the Army-allocated portion of this lift, the MCC places an airlift coordination office(r) (ALCO) at the Airlift Control Center (normally located in the Air Force component command post). The ALCO is responsible for relaying and coordinating Army requirements for both channel and special mission airlift and for coordinating the diversion of air-transported personnel or materiel of Army interest.

- (3) When Air Force tactical airlift elements are attached to or placed under the operational control of an Army element, the relationships are the same as those described for the relationships with the transport services as outlined in paragraph 15.

## **Section IV. RELATIONSHIPS OF THE TRANSPORTATION MOVEMENT OFFICES**

### **17. General**

The transportation movement offices (TMOs) provide the interface between users, operator, and the movement control system. Each TMO is commanded by a movements officer. The mission of the TMOs is to assist the commander in the execution of the movement of personnel and materiel. To this end, they contribute to the development of procedures, documents, and practices to facilitate movements. TMOs are the common point of contact for users of transportation and the mode operators. They function in an expediting and coordinating role rather than an operating role and are vitally interested in monitoring traffic moving over the transportation system. When requested or directed, TMOs participate in shipment planning for the activities they serve. To carry out their responsibilities, the TMOs rely to a great extent on close coordination with the mode operating units and the users of transportation.

### **18. Staff Relationships**

When established, branch TMOs report to district TMOs, district TMOs to regional

TMOs, and regional TMOs to the movement control center (MCC). Normal relationships follow command channels between the staff of the MCC and the TMOs and generally concern only the transmission of directives and reports. Direct working relationships may be established for emergency or priority actions; however, when so established, the intermediate district or regional TMO is advised of such action.

### **19. Relationships with Users of Transportation**

The TMO is the primary point of contact with users of transportation. It acts in an advisory capacity to users in advance planning and coordination of documentation and the movement of materiel and personnel into the transportation system. The TMO receives requests from users for the transportation that has been allocated for their use by the movement program and arranges with the mode operators for the placement of transport equipment to meet programed requirements. The TMO is also the point of contact for nonprogramed movements. The establishment of a

close working relationship between TMO and user within guidelines and policies established by the command will facilitate the work of both.

## **20. Relationships with the Transport Services**

The TMO is the office from which the transport operating units (as distinguished from command headquarters) normally receive equipment spotting requirements and detailed information on programmed and nonprogrammed movements. The mode operators are normally instructed to refuse any shipments unless they receive a transportation release from the

appropriate TMO. Furthermore, they should not divert, reconsign, or perform other transit operations without authority from the TMO. Local procedures are established to assure the smooth functioning of the transit services offered to users. It is emphasized that the principal responsibility of the TMO is to place requirements on the mode operators for the movement of personnel and materiel. The TMO does not determine what routes will be followed (though this may be furnished by the highway traffic headquarters and relayed to a motor transport unit at the time the requirement is placed with it), nor what equipment will be used to accomplish the movement.

# **Section V. HIGHWAY REGULATION**

## **21. General**

Highway traffic regulation is described in chapter 6. Highway traffic regulation is accomplished by establishing a traffic headquarters with subordinate highway regulating points in the field to carry out the traffic regulation plan developed by the headquarters. The traffic control function performed by military police supports highway traffic regulation.

## **22. Organization of the Highway Traffic Headquarters**

The highway traffic headquarters operates under the control of the transportation command ACofS, movements, and is normally collocated with the MCC. A highway plans officer is the chief of the traffic headquarters, and other transportation and military police personnel are assigned to complete the staff of the headquarters. Representatives for other services are available when required for coordination

in matters of interest to their respective offices.

## **23. Highway Regulation Operations**

a. In the communications zone, highway regulation is normally restricted to the main supply routes and to certain essential feeder routes. These routes are designated controlled routes (a route, the use of which is subject to traffic or movement restrictions (STANAG 2041, app G)), and any unit or activity requiring use of the routes is required to obtain clearance for such use from the highway traffic headquarters.

b. Because of their limited requirement for highway regulation, area support groups in the theater army support command area do not normally have a highway regulation function. However, if highway regulation is required, the regional transportation movement office having responsibility for the area will furnish advice and assistance.

## CHAPTER 3

# FIELD ARMY SUPPORT COMMAND TRANSPORTATION MANAGEMENT SERVICES

---

### Section I. ORGANIZATION

#### 24. General

a. A movement control center (MCC) is established as a staff element of the field army support command (FASCOM) and of each of the corps support brigades to provide an agency for determining, coordinating, and analyzing transportation movement requirements and capabilities. These functions are essentially the same as those of the theater army support command (TASCOM) MCC but are limited by the echelon of command to which assigned and the resources available for employment.

b. The FASCOM MCC, as the senior movement agency of FASCOM, exercises technical supervision over the activities of the corps support brigade MCCs, thus carrying out the first principle of movements—that control of movements will be centralized at the highest level at which it can be efficiently exercised. In the case of the field army, it is the FASCOM commander who is responsible for commands providing integrated logistical support.

c. The organizations of the staffs, MCCs, and transportation movement offices (TMOs) of FASCOM and the support brigades are essentially the same, though differences in numbers of personnel and teams exist owing to differences in workloads of the units. For this reason, the remainder of this section applies generally to both FASCOM and the support brigades. Any differences in the two units will be delineated.

#### 25. General Staff Sections

a. The transportation functions of FASCOM and the support brigades are supervised by specialists assigned to the general staff sec-

tion of the assistant chief of staff (ACofS), movements. The primary duties of these specialists are similar to those outlined in paragraph 5 for the TASCOM ACofS, movements. These specialists also have the responsibility of providing transportation advice and planning for other general staff sections of the headquarters, as required.

b. The ACofS, movements, has general staff supervision of—

- (1) Transport mode operations.
- (2) Movements management, excluding bulk POL (petroleum, oil, and lubricants).
- (3) Terminal transfer operations.
- (4) Highway regulation activities, including providing the nucleus of the staff for and operating the command's traffic headquarters.
- (5) Provision of detailed data to support current and future plans for the development of the transportation system in the field army area.
- (6) Traffic control activities.
- (7) Classification of routes.

c. The ACofS, movements, in carrying out his responsibilities to the commander, performs the following duties:

- (1) Advises the commander on matters concerning effective utilization of the transport services and effective operations of those elements of the shipping and receiving services that have a direct bearing on the accomplishment of the commander's movement requirements.
- (2) Based on policy guidance from higher headquarters, develops movements

management policies for application to the command in which he is assigned.

- (3) Prepares implementing directives to carry out approved policies.
- (4) Recommends allocation of transport capability for use in rear area security and rear area damage control operations, if applicable.
- (5) (FASCOM) exercises staff supervision over the operations of the FASCOM transportation brigade and keeps advised of the status and operations of the corps support brigade truck battalions.
- (6) (Support brigade) exercises staff supervision over the operations of the corps support brigade's motor transport battalion and any other transport or terminal units which may be assigned or attached.
- (7) Exercises staff supervision over the MCCs operation (the MCC actually becomes an element of his staff).
- (8) Participates in tactical, logistic, and contingency planning as required. (Command and day-to-day planning for the employment of transport and/or terminal service units is a responsibility of transportation brigade (in FASCOM) and motor transport battalion (in support brigade) commanders.)
- (9) Performs liaison with appropriate U.S. and allied nation commands.
- (10) Establishes the command combined movements center.
- (11) Establishes the command traffic headquarters and exercises staff supervision over the command's traffic control activities.

*d. Priorities for routes and movements are established by the field army or corps G3/G4, as appropriate. These priorities are implemented by the ACofS, movements, through the MCC and the highway traffic headquarters.*

## **26. Movement Control Company (FASCOM and Corps Support Brigade)**

*a. General.* A movement control company

(FASCOM) is assigned to the FASCOM, and a movement control company (corps support brigade) is assigned to each corps support brigade. These units provide command and administrative supervision (but not operational control) of the command's MCC, highway traffic headquarters, and assigned and attached TMOs and highway regulating point operating teams. The movement control units permit centralized control of the following: (1) allocation of transport capability of the command to which assigned and (2) space on controlled highway routes in the field army service area or corps area, as appropriate. The movement control center and traffic headquarters elements of the movement control units have access to the centralized computer facility of the command and utilize the facility to integrate supply support and transport for the command.

*b. Mission.* The mission of each of the movement control units described in this paragraph is to—

- (1) Command and supervise attached or assigned units and teams engaged in movement control and highway regulation.
- (2) Provide movements management for movement of personnel and materiel (except bulk POL) within, into, or out of the area of responsibility.
- (3) Provide highway regulation services within the command's area of jurisdiction.
- (4) Maintain liaison, as required, with transportation elements of other U.S. forces and with allied and host nation transportation agencies.

*c. Organization.* The movement control company (FASCOM) (fig. 2) and the movement control company (corps support brigade) (fig. 3) are similar in structure. They are organized along functional lines with a headquarters and task elements. The senior movement control officer assigned to the MCC is also the unit commander. All elements of the company are attached to adjacent units for administrative support including personnel administration, supply, mess, and maintenance.

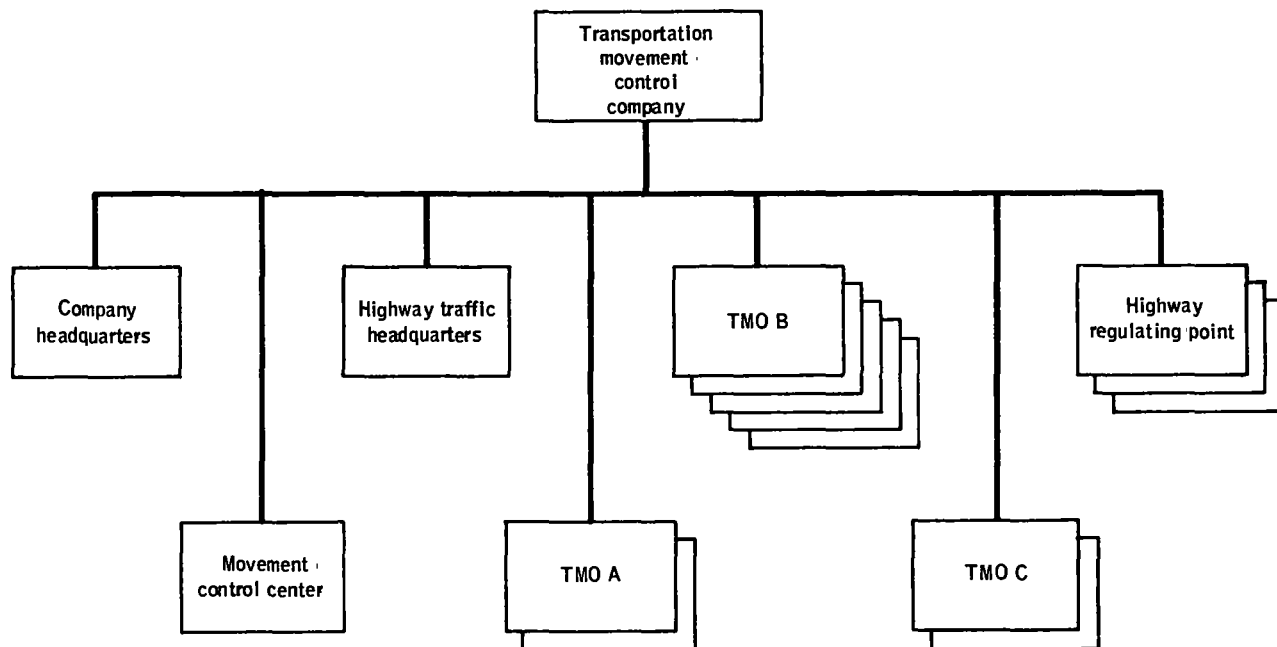


Figure 2. Transportation movement control company (FASCOM).

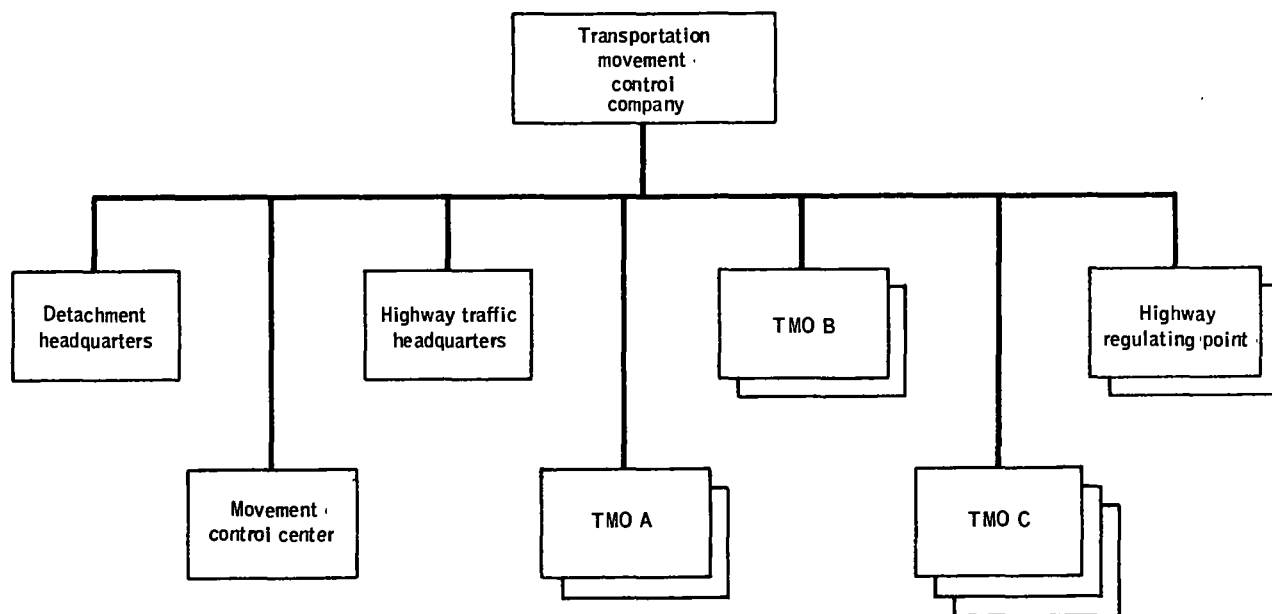


Figure 3. Transportation movement control company (corps support brigade).

(1) The company headquarters and the MCC are co-located. The senior movement control officer commands all attached units; however, operational control over the highway traf-

fic headquarters and the highway regulation point teams is maintained by the ACofS, movements. The administrative officer assigned to the MCC commands the company head-

quarters which is the housekeeping element and provides limited administrative support to all elements of the unit.

- (2) The MCC provides the organization for planning and monitoring the execution of the command movement program, advising on transportation movement matters, and maintaining information and records on the status of transportation movement activities throughout the command.
- (3) The highway plans officer of the highway traffic headquarters is second in command of the movement control company, in addition to being in charge of the highway traffic headquarters. The highway traffic headquarters provides personnel to plan and regulate highway traffic movements in the field army service or corps support brigade areas as appropriate.
- (4) TMOs A, B, and C are under the operational control of the MCC. They are employed at critical locations throughout the field army service area (or corps area, as appropriate) to coordinate and monitor the movement programs of the command.
- (5) Highway regulating point teams are under the operational control of the highway traffic headquarters. They are stationed at critical locations on the highway net to carry out the traffic regulating plan.

*d. Capabilities.* The movement control company is capable of providing a central organization and field offices necessary for centralized movement control and highway regulating services in support of a field army or corps, as appropriate.

*e. Location.* The MCC is an element of the staff of the ACofS, movements, but it is not necessarily located with the staff section. It is, however, located sufficiently close that trips to and from the command headquarters and the inventory control center (FASCOM) or supply control center (corps support brigades) are quickly accomplished by surface transportation. The highway traffic headquarters pro-

vides planning and coordination for both tactical and logistical highway movements. It is located near the MCC; however, its services are quickly available to the army or corps G3/G4 sections (as appropriate) through the availability of automatic data processing (ADP) equipment and advanced communications.

## **27. Movement Control Centers**

*a. General.* The MCC has primary responsibility for initiating and performing the necessary planning, programing, and regulative actions essential to transportation movements management in support of the field army or corps, as appropriate. As the focal point for these activities, the FASCOM MCC is responsible for coordinating the movement of TASCOM transport operating in the field army area, for coordinating the retrograde movement of cargo from the field army area, and for receiving and relaying information relative to the use of vehicles or containers employed in the intertheater transportation of cargo (for example roll-on/roll-off trailers and CONEX (container, express) containers).

*b. Mission.* The mission of the MCC is to provide transportation movements services for the command to which assigned. The emphasis at FASCOM and corps support brigade level is on providing effective combat service support of current operations. The MCCs are charged with assuring timely responsiveness and maximum use of available transport capability. They obtain the desired level of response and use principally through the integration and regulation of transport means and facilities.

*c. Organization.* The MCC is organized with a control section, a movement plans and programs section, and freight and passenger sections.

- (1) The control section consists of the senior movement control officer, the deputy movement control officer, the administrative officer, and the administrative and communications enlisted personnel of the center. The senior movement control officer is the operating head of the center and plans, supervises, and directs the activities therein. The deputy move-

ment control officer normally acts as the chief of the combined movement center, an activity established to coordinate command requirements with those of other commands and allied and host nations. (See paragraph 34 for a discussion of the functions of the combined movements center.)

- (2) The plans and programs section is responsible for developing, coordinating, publishing, and distributing the movement program and, as directed, for preparing movement plans and annexes in support of logistic or contingency plans. This section also recommends changes to the applicable computer programs to adapt them to conditions existing in the field army area. The actual changes to the computer program are made by programmers in the office of the command chief of staff.
- (3) The passenger and freight movement sections monitor the execution of the movement program and manually process those actions outside ADP machine parameters.

*d. Capabilities.* The MCC is capable of providing transportation movements management service in support of field army or corps movements and of receiving and relaying information on the status of controlled containers or vehicles.

*e. Location.* The MCC is located as outlined in paragraph 26 for the movement control units.

*f. Communications.* The communications available to the FASCOM and support brigade MCCs are essentially the same as those provided to the TASCOC MCC as described in paragraph 7. The primary difference is that, whereas the TASCOC MCC has its own computer and system for communicating with it, the FASCOM and support brigade MCCs share in the capability of the centralized computer center of the command. Information which is placed in the computer may go through a buffering device which permits the machine to receive information and hold it until such time as the information can be acted upon. The speed with which the ma-

chine will act on the information it receives from the MCC will be determined by priorities for machine use established by the commander and programmed into the computer.

## **28. Transportation Movement Offices**

The reason for establishment of transportation movement offices in the army service area, their mission, organization, capabilities, location, and communications are essentially the same as described for the transportation movement offices of the TASCOC movement control agency as described in paragraph 8. The major change is that the FASCOM movement control company does not have regional (RTMOs). Therefore, when it is necessary to divide the army service area into regions of responsibility, TMO A's perform the functions of RTMOs.

## **29. Combined Movements Center**

*a. General.* When U.S. Army forces are participating in a combined operation with the forces of other nations or are located or conduct operations in areas in which a status of forces or other international agreement between the U.S. Government and the host nation is in effect, the senior Army commander (theater army) normally directs the establishment of one or more combined movements centers.

*b. Mission.* The mission of the combined movements center is to coordinate the use of highway routes and to allocate common user transportation among and between the interested nations. It provides a common meeting ground where any conflicts between movement requirements of the interested nations can be resolved and where transportation movements and highway regulation procedures can be standardized. The combined movements center does not routinely become involved in day-to-day operations; such operations are carried out at the lowest possible level, normally by the field TMOs and RTMOs.

### *c. Organization.*

- (1) In the field army, the combined movements center is composed of members of the FASCOM MCC and highway traffic headquarters, liaison teams from the TASCOC MCC and highway traffic headquarters, repre-

representatives of the host nation's transportation movements organization, and transportation movement representatives of allied forces with whom operations are being conducted or who will require transportation support or access to routes in those areas of interest to the field army commander.

- (2) The host nation has a requirement to support its own forces, to support the civilian economy, and to maintain its industry in support of its own and allied efforts and thus has an interest in the allocation of trans-

portation resources and the use of the road network. However, unless specified by other agreement, the requirements of the field army are paramount in its area and the field army commander retains control over time and space usage of highways in the field army area. This control is exercised through the combined movements center.

*d. Location.* The combined movements center is located at a site designated by the field army commander. Normally, it will be in close proximity to the FASCOM MCC and highway traffic headquarters.

## **Section II. FUNCTIONS**

### **30. General**

The functions of the movement control centers (MCCs) of the field army support command (FASCOM) and the support brigades generally parallel those of the theater army support command (TASCOM) MCC. The functions are divided among the movement plans and programs, passenger, and freight sections in the same manner that they are divided among the respective divisions in the TASCOM MCC. Additionally, the freight and passenger sections of the FASCOM and support brigade MCCs carry out those functions that are performed in the TASCOM MCC by the special movement division.

### **31. Field Army Support Command Movement Control Center**

*a.* The FASCOM MCC implements movements management policies and regulations established by the FASCOM headquarters and, when so directed, establishes regulating policies and procedures. It prepares the FASCOM movement program, based on movement requirements submitted by field army and FASCOM agencies and on information from the TASCOM MCC as to the personnel and materiel that are being shipped from the communications zone (COMMZ) to the field army area.

*b.* In accordance with policies of the commander, the FASCOM MCC allocates the Army-wide transport capabilities of the FAS-

COM transportation brigade and those facilities of the TASCOM interzonal transportation service or of any other source allocated to FASCOM for its use. These facilities may, under certain circumstances, be composed of rail or inland waterway capability or may include a portion of the army allocation of intratheater Air Force airlift capability. The use of intertheater airlift operating into or out of the field army area will be coordinated with the TASCOM MCC through the combined movements center.

*c.* The FASCOM MCC is responsible for planning, coordinating, and monitoring all throughput shipments originating in the army service area from their origin to final destination.

### **32. Support Brigade Movement Control Centers**

*a.* The support brigade MCC has primary responsibility for implementing those portions of the FASCOM movement program which require shipment by support brigade transportation and for performing the necessary planning, programing, and monitoring essential to transportation movements management in support of the corps.

*b.* When preparing the support brigade movement program, the MCC includes those portions of the FASCOM movement program that pertain to shipments from installations within the corps area or that utilize trans-



port capability of the corps support brigade. However, most of the movements with which the corps support brigade MCC will be concerned will be movements which, because of the time element, cannot be shipped from origins in the army rear area or the COMMZ. The urgency of these movements requires that a flexible transportation system be maintained and dictates close liaison with the FASCOM and the field transportation movement offices (TMOs) since the air transport capability of the FASCOM will frequently be called upon to accomplish the movement. Though the FASCOM Army transport aviation units may be physically located in the corps area, the FASCOM MCC may retain allocation authority for their transport capabilities.

c. The corps support brigade MCC allocates the capability of transport units assigned or attached to the corps support brigade. The attached capabilities may include, under certain circumstances, truck units attached from the FASCOM transportation brigade for a particular operation. Interzonal transport of the TASCOM or Army-allocated intratheater Air Force airlift in the corps area may be made available on a mission basis by the FASCOM MCC after coordination with the TASCOM MCC. Normally, such transport will be used for retrograde movement of salvage materiel and for the evacuation of wounded, refugees, or prisoners from the corps area.

d. When the army rear support brigade is provided transportation over which it has allotment authority, movements management services will be provided to the brigade by the FASCOM MCC and its subordinate TMOs.

### **33. Transportation Movements Offices**

The general functions of TMOs in the TASCOM movement control agency as outlined in paragraph 10 also apply to the TMOs attached or assigned to the FASCOM and corps support brigade movement control units.

### **34. Combined Movements Center**

a. The combined movements center establishes the general procedures to be followed and the forms to be used (unless already specified by international agreement) in the

procurement of allied military transport capability, host nation civilian transport capability, and road space.

b. The following are general guidelines for U.S. forces participating in combined transportation movements and highway traffic regulation operations. In the application of the guidelines, due consideration is given to the logistic and tactical situation, the geography, and the capabilities of the transportation systems existing in the theater.

- (1) The MCC chiefs retain operational control over movement personnel assigned or attached to the center from their respective organizations.
- (2) The TASCOM and FASCOM MCCs and their field offices act as agents for one another in those areas where either one or the other, as applicable, is not present. Actions taken as an agent are coordinated with the responsible movement element as soon as possible.
- (3) Priorities established by the field army commander govern the movement of personnel and materiel of interest to the field army originating in areas not under the control of the field army commander. Such moves are executed by the appropriate agency of the combined movements center.
- (4) The TASCOM MCC is the normal agency through which U.S. requirements for host or allied nation rail transport assistance will be placed. However, for emergency movements by rail in the forward zone when no TASCOM field TMO is available, the FASCOM field TMO places requirements directly on the combined movements center.
- (5) The FASCOM MCC places requests directly on the host nation military forces counterparts within the combined movement units for highway transport support for combat support missions.
- (6) The FASCOM MCC places requirements on the TASCOM MCC for—

- (a) U.S. motor transport for combat support or combat service support missions when field army transport is insufficient to meet requirements.
  - (b) Host or allied nation highway transport for combat service support missions when there is insufficient field army transport to meet requirements.
  - (c) Air movement by allocated U.S. Air Force airlift.
- (7) Requests for clearance of highway movement originating and terminating within the field army area are

placed on the FASCOM highway traffic headquarters.

- (8) Requests for clearance of highway movement originating in one area (support brigade, FASCOM, or TASCOT) and terminating in another will be placed with the highway traffic headquarters responsible for the area of origin. That traffic headquarters will coordinate with the highway traffic headquarters responsible for any intermediate area and for the destination area and with the representatives of host nations through which the movement passes.

### **Section III. RELATIONSHIPS**

#### **35. General**

The movement control centers (MCCS) at the field army support command (FASCOM) and the support brigades are staff elements of their respective commands. As staff elements, they perform staff actions of planning, coordinating, expediting, monitoring, and recommending; they do not command. For this reason, their relationships with users of the transportation service and with transport and terminal service units are similar to those of the theater army support command (TASCOM) MCC with users and transport and terminal units in the communications zone (COMMZ).

#### **36. Relationships with the Theater Army Support Command**

Throughput of personnel and materiel from TASCOT ports, depots, and personnel replacement activities to general support and direct support activities in the army and corps areas and the division support commands requires that close working relationships be established with the TASCOT MCC and that movement procedures provide for a smooth interface of transportation activities. Formal interface is accomplished by directives and procedures published in the name of the theater or theater army commander and by military standard transportation and movement procedures (MILSTAMP). However, because of the short transit time elements involved

and the presence of large numbers of TASCOT vehicles in the army area, close technical cooperation and direct communication are necessary between all MCCs.

a. The FASCOM MCC participates in the TASCOT movement planning activity to the extent that—

- (1) The FASCOM MCC furnishes the priorities of the field army commander for consideration by the TASCOT MCC in planning the movement of personnel and materiel of interest to the field army originating in areas not under the control of the field army commander.
- (2) The FASCOM MCC determines and relays to the TASCOT MCC the capabilities of activities in the field army area to accept throughput shipments.

b. Communication between the TASCOT and FASCOM MCC is provided by association of their representatives in the combined movements center, by computer-to-computer links between the TASCOT MCCs computer and the FASCOM centralized computer facility and by telephone common user circuits of the theater operations Army signal command.

c. Throughput distribution of the bulk of the normal daily supply requirements to divisions and direct support units supporting nondivisional troops may necessitate the positioning of additional terminal transfer and

truck units in the army service or corps area. As required, the movement programing and reporting activities of the TASCOT and FASCOM will be coordinated.

### **37. Relationships Between Movement Control Centers in Field Army Area**

a. Because of the placement of primary field army responsibility for transportation movements management at the FASCOM, the FASCOM MCC exercises technical supervision over the movements management activities of the corps support brigade MCCs.

b. Normal movement programs published by the FASCOM will specify which cargo or personnel are to be transported by transport elements of the corps support brigade and which will be transported by the Army-wide transport service. Normally, corps support brigade capabilities will not be programed for support of elements outside the corps area, nor will the FASCOM movement program specify the mode or unit of corps support brigade transport to be used if more than one mode is available. On occasions when the requirements of a particular corps for the movement of personnel and materiel exceed the combined capabilities of the corps support brigade and Army-wide transportation service (for example, when one corps is heavily involved in a tactical effort which must be supported), the FASCOM MCC may program a portion of the lift requirement to be accomplished by the resources of another support brigade or it may recommend the temporary attachment of transport units from one support brigade to another or to the Army-wide transportation service. Such actions require the approval of the FASCOM commander.

c. Corps support brigade movement programs are coordinated with the TASCOT and FASCOM movement programs and are based on movement requirements received from the staffs or from support brigade supply and personnel replacement activities. Generally, the program will be short range in nature and directed primarily to the support of current and short-range plans.

d. Interface between the support brigade and FASCOM MCCs is provided through the movement programs, through procedures and

directives issued by the FASCOM commander, and through close working relationships between the MCCs. Communications are provided by computer-to-computer link between the computer centers of the support brigades and the FASCOM, by common user telephone and teletype, and by radio. Additionally, the FASCOM MCC normally provides a liaison staff to the support brigade MCC when planned operations indicate that extensive use of the Army-wide transportation capability will be required by the support brigade.

### **38. Relationships with Users of Transportation**

The relationships of the MCCs in the field army area with users of transportation are essentially the same as those outlined for the TASCOT MCC in paragraph 14.

### **39. Relationships with Mode Operators**

The mode operators in the FASCOM and support brigades are major subordinate commands of the respective headquarters. The general relationships described in paragraph 15 also apply to the MCCs in the field army area. The flow of transport capability information for planning purposes is specified by the commander and is usually from the transportation service command headquarters (FASCOM transportation brigade or support brigade motor transport battalion) to the MCC. Day-to-day operations, for example, are handled at operator levels.

### **40. Other External Relationships**

a. *Support Groups.* The support groups in the field army area do not have organic truck units for the movement of supplies or personnel in direct support of the units which they serve nor for the internal movement of materiel in warehousing operations. Thus, they secure transportation support through the transportation movement offices and MCCs for internal and local distribution and for general support activities. Priorities established by the commander will govern the allocation of available transport to the three types of activities.

b. *Military Police Units.* The relationships between military police units engaged in traffic control in the field army area and the MCCs at FASCOM and the support brigades

are the same as outlined in paragraph 16c for relations within the TASCOT area.

*c. Petroleum Suppliers.* In the field army area, the petroleum supply battalion is responsible for the distribution of bulk POL by pipeline and motor transport. Therefore, unless the FASCOM has an allocated rail capability including tank cars, the MCC will not enter into the programming of bulk POL. How-

ever, as the same types of truck tractors are used for the movement of the stake and platform trailers of the motor transport battalions and the tank trailers of the petroleum service, the MCC may allocate tractive effort to the petroleum service when priorities warrant and when, owing to maintenance or other causes, the petroleum service has an insufficient number of operable truck tractors.

## **Section IV. HIGHWAY REGULATION**

### **41. General**

Highway regulation is a responsibility of the commander having area jurisdiction; it is accomplished by planning, routing, and scheduling movements on the available road net in accordance with priorities established by the commander. Within the field army, highway regulation is accomplished by establishing traffic headquarters at division, support brigade, and field army support command (FASCOM) levels.

### **42. Organization**

The highway traffic headquarters at the support brigades and the FASCOM are elements of the movement control unit and operate under the control of the assistant chief of staff, movements, of their respective commands. Each of the headquarters contains a highway plans officer, a highway traffic engineer, a traffic control officer, and enlisted specialists for highway operations, traffic control, and movements. Representatives for construction, maintenance, and communication electronic support are provided to the traffic headquarters by the appropriate command when required for coordination in matters that are the primary responsibility of their respective offices.

### **43. Highway Regulation Operations**

*a.* The traffic headquarters conducts its operations in the name of the commander. Co-

ordination between traffic headquarters therefore generally parallels command channels but, to reduce reaction time, direct communication between adjacent headquarters is normally authorized.

*b.* The traffic headquarters depends upon information, recommendations, and services from other agencies. Information and recommended actions pertaining to personnel, intelligence, tactical and logistic plans, and civil affairs are supplied by the appropriate general staff section.

*c.* The overall plan for highway regulation is formulated by the traffic headquarters and is coordinated with other staff agencies as shown in figure 4. The extent of regulation exercised by the traffic headquarters depends on the amount of movement expected and the capacity of the road network. If little movement is anticipated, organizational control may suffice; if heavy movement is foreseen, the traffic headquarters must prepare movement instructions. The types of movements normally scheduled by traffic headquarters include, but are not limited to, convoys, oversize vehicles, overweight vehicles, and the road movement of troops on foot.

*d.* A comprehensive discussion of highway regulations, of the functions of a traffic headquarters, and of the forms and techniques used in highway regulation is contained in chapter 6.

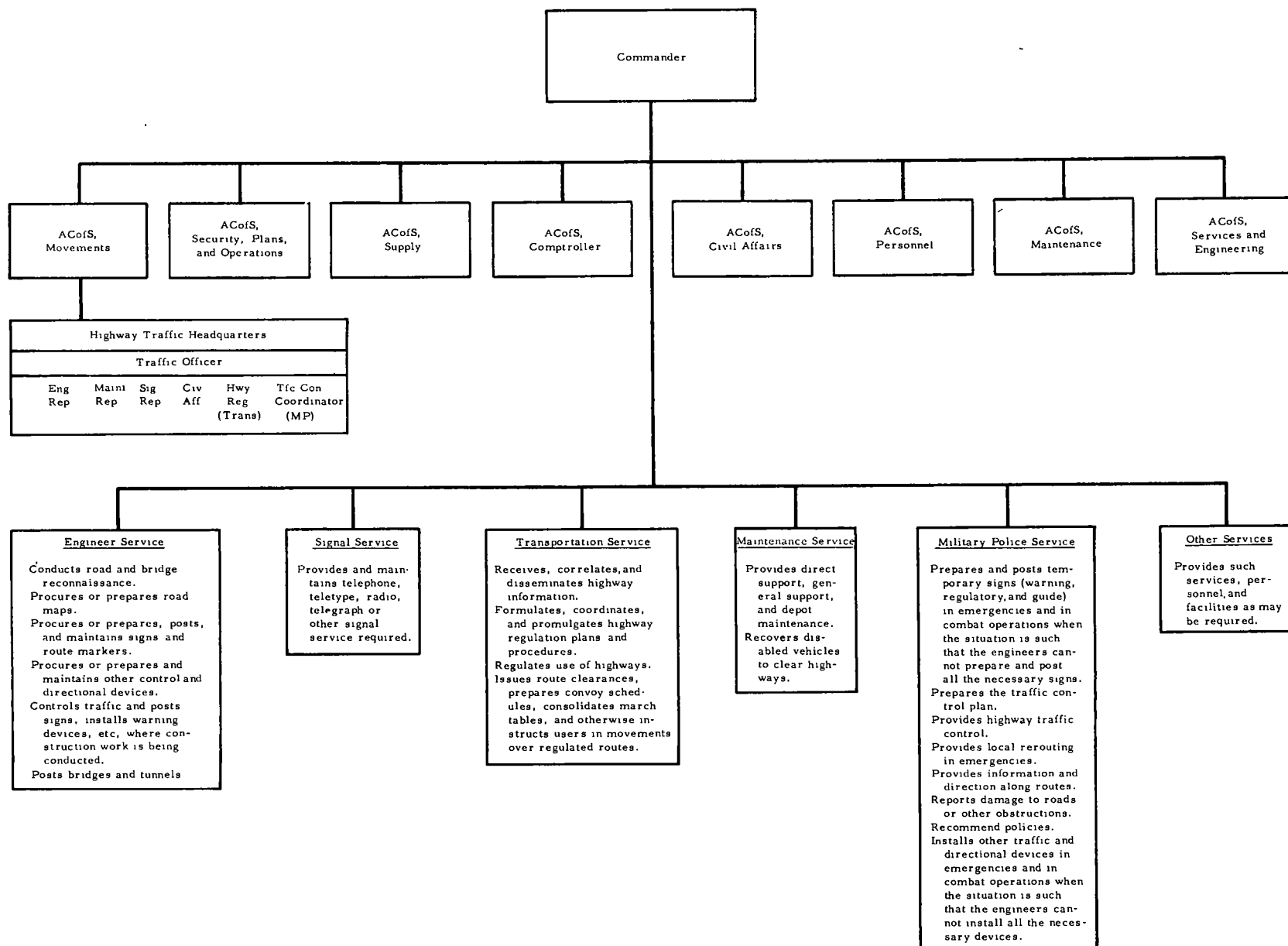


Figure 4. Coordination actions within a traffic headquarters.

## CHAPTER 4

### TRANSPORTATION MOVEMENTS IN A CORPS SUPPORT COMMAND

---

#### 44. General

When a corps is detached from the field army for a separate mission (separate corps) or a corps-size element is the extent of the forces in a particular area (independent corps), a corps support command (COSCOM) is formed. The corps support brigade organization readily lends itself to the formation of the COSCOM and is used as a nucleus for this organization. The support brigade headquarters is patterned after the FASCOM headquarters to provide a command organization for the COSCOM, and the field army or communications zone (COMMZ) type services, as appropriate, are attached as required to make the organization self-sustaining.

a. When the force is operating as a separate corps, it is assumed to have the status of a field army and reports to the theater commander. A COMMZ or similarly functioning organization also responds to the theater army commander.

b. When the force is operating as an independent corps, it is assumed to have the status of a theater army, and the COSCOM is responsible for all combat service support activities, including theater base.

#### 45. Organization

The organizations of the staffs, the movement control company (field army support command) (FASCOM), the movement control center (MCC) (FASCOM), the highway traffic headquarters, and the transportation movement offices (TMOs) were described in chapter 3. This basic organization remains constant whether the COSCOM is operating in support of a separate or an independent corps. The MCC is an element of the staff of the assistant chief of staff (ACofS), movements,

and the highway traffic headquarters operates under the supervision of that staff section. The building block principle upon which the movement control company is structured facilitates the addition or deletion of teams, as required, by modification TOE action to provide adequate field coverage of the COSCOM area and activities. When operating in an independent corps situation, the attachment of a TMO(s) to the MCC may be required to cover the additional planning, coordinating, and controlling actions inherent in this situation. Such actions include liaison with the continental United States (CONUS) transportation activities, representation on joint or combined boards or committees, port clearance planning, preparation and maintenance of the theater facilities and services guide, operation of CONEX (container, express) and trailer control activities, and preparation and distribution of theater publications pertinent to transportation movement policies and procedures and to documentation of shipments.

#### 46. Functions of the Movement Control Center

a. *In Separate COSCOM.* When operating in a separate COSCOM, the functions of the MCC are essentially the same as those prescribed for the FASCOM MCC (para 31). The MCC receives theater guidance for movements, prepares necessary implementing instructions for application of the guidance within the COSCOM, and monitors their application throughout the corps' area of responsibility. The COSCOM MCC bases its movement programs on those prepared by COMMZ and on supply and replacement requirements generated within COSCOM. Inasmuch as the COSCOM MCC is providing the movement control support which was handled by the support brigades' MCCs in the field army or-

ganization, it provides movements management services in support of divisions, as well as the direct and general support activities in the COSCOM area.

*b. In Independent COSCOM.* When operating in an independent COSCOM, the MCC is responsible for providing the total movements management services for the theater. In this capacity, it performs those total functions performed by the MCCs of the TASCOM, FASCOM, and support brigades in the field army/COMMZ organization. Normally, in this situation only a single movement program is prepared for the entire COSCOM. The program covers all personnel and materiel shipments in the theater and includes the Army-allocated portions of intratheater air and sealift provided by other U.S. forces or by host or allied nations. The MCC is also responsible for operation of the theater CONEX and trailer control activities, for coordination with CONUS base on programs for theater support, and for insuring a smooth interface of intertheater and intratheater movement procedures.

#### **47. Relationships**

*a. In Separate COSCOM.* When operating in a separate COSCOM, the relationships of the MCC and TMOs are essentially the same as those described for an MCC and TMOs in the FASCOM MCC (para 35-40). A variation exists in the relationships with petroleum suppliers, however, as in the COSCOM the distribution of bulk POL by highway is a trans-

port responsibility of the transportation brigade and a movement responsibility of the MCC. The relationship is therefore as outlined in paragraph 16d between the TASCOM MCC and petroleum suppliers.

*b. In Independent COSCOM.* When operating in an independent COSCOM, the relationships between the MCC and the users of the transportation service and external relationships are as outlined in paragraphs 14 and 16 for the TASCOM MCC. However as the MCC is an element of the staff of the ACofS, movements, and the terminal and transport operations in the COSCOM are carried out by the transportation brigade, a subordinate command of the COSCOM, the relationships with the staff and with the mode and terminal operators are as outlined in paragraphs 35 and 39 for the FASCOM MCC.

#### **48 Highway Regulation**

Highway regulation in the COSCOM is essentially as described in paragraph 43 for the FASCOM highway traffic headquarters. However, the COSCOM highway traffic headquarters is involved to a greater degree in tactical unit movements than is the FASCOM and is responsible for regulation in those areas which in the field army organization are responsibilities of both the FASCOM and the support brigade for highway regulation. Therefore, it is possible that highway regulation point teams may be attached to the traffic headquarters to provide the personnel required for prompt responsive action on a round-the-clock basis.

## **CHAPTER 5**

### **MOVEMENT PLANNING AND PROCEDURES**

---

#### **Section I. BACKGROUND**

##### **49. Army Logistics System**

The Army logistics system, to efficiently accomplish its mission of placing men and materiel where and when needed, must be planned and coordinated from its origin in the continental United States (CONUS) to its final destination in the theater. Replacements must be assembled into planeload lots for a single destination wherever possible. Cargo must be palletized or unitized to facilitate handling and must be packaged into lots suitable for delivery in the theater to direct support units. On arrival in the theater, the theater army support command (TASCOM) mission commands are responsible for continuing the uninterrupted movement of replacements and materiel forward to their respective destinations.

##### **50. Theater Flow of Supplies**

a. In routine day-to-day operations, rear area depots and terminals ship materiel on a scheduled and throughput basis directly to the combat zone. Such shipments are made up from operating stocks arriving in the theater or stored in rear area depots. To the extent that theater input exceeds theater demands for combat-essential items, reserve stocks are first accumulated in the rear area where they can be shipped in any direction demanded by the tactical situation. As the buildup of stocks progresses, the inventory control center (ICC) directs shipments of selected combat-essential items forward for storage in field or ammunition depots adjacent to the army rear. These supplies are earmarked as reserve stocks to be issued in emergencies.

b. The movements management system in

the theater is designed to facilitate scheduled and throughput supply distribution.

- (1) Scheduled supply is a system enabling suppliers to calculate quantities of essential items for using organizations and to ship these supplies periodically without requisition.
- (2) To achieve throughput goals, a high degree of interface is required among the supply, personnel, and transportation systems. The supply and personnel systems select, prepare for shipment, and clearly identify the ultimate destination of shipments before they enter the transportation system. The movements management system provides the mechanism for coordinating the activities of the supply, personnel, and transportation systems to assure the most effective utilization of available transportation resources.

##### **51. Use of Automatic Data Processing Equipment**

a. The movement planning and monitoring functions and procedures described in this chapter can be adapted to the use of automatic data processing (ADP) and are designed to operate under varying conditions of conflict in any theater. However, if the size of the theater does not warrant an automated movements management system or if the automated system is disrupted, the procedures described in this chapter, with the exception of maintaining in-transit inventory of shipments, can be applied to a manual movements management system. (See annex A, Interim Implementation of TASTA-70, for backup sys-



tems for computer or communication failures.)

b. The basic computer program is prepared in CONUS well in advance of the desired date of use. It contains a sequence of steps which the computer must take to get the desired results.

c. After the program is placed in the computer, the computer acts on data fed to it for resolution. These input data will include transport capability of the mode operators, installation loading and unloading capabilities, and movement requirements. However, as it is impossible to foresee precisely what transportation will be available where and when and what supplies or personnel will have to be moved, the responsible movement personnel must make judgments in these matters when they are beyond the machine capabilities, using both intuition and scientific weighing of alternatives as the situation requires and permits. Their judgments must be based not only on professional knowledge of the numerous aspects of the transportation system but also on an understanding of the interplay of closely related military considerations, such as the strategic and tactical situations, movement

characteristics, and current intelligence information.

d. Based on the programs fed into the computer and on input data received by it for resolution, the ADP system may perform, among other tasks, the following:

- (1) Preparation of cargo disposition instructions for inbound vessels.
- (2) Preparation of port clearance programs.
- (3) Preparation of movement programs.
- (4) Provision of an in-transit inventory of shipments en route.
- (5) Provision of a current inventory on status and locations of controlled vehicles or containers.

e. The application of ADP to movements management does not remove the requirement for local transportation movement offices. They are still responsible for local coordination among shippers, receivers, and mode operators; for handling movements not included in the capabilities of the computer program; for supplying input data to the computer; and for relaying information for highway regulation activities.

## Section II. MOVEMENT PLANNING

### 52. Movement Planning Process

a. The movement planning process, which results in the movement program, is the method by which the commander's requirements for the movement of personnel and materiel are accomplished. The three basic steps in the process are—

- (1) Developing the distribution pattern.
- (2) Developing and preparing the supply and personnel movement forecast.
- (3) Preparing, publishing, and distributing the movement program. (The movement program need not be issued as an entity but may be issued in extract form as outlined in paragraph 55.)

b. The movement program includes both forecasts of shipping requirements and forecasts of transport capability that will be avail-

able to the command. The movement program before authentication is distributed for coordination. (It is during this phase that the field army support command (FASCOM) movement control center (MCC) assumes that the field army commander's priorities (para 36a) are considered.) When so distributed to interested agencies, the movement program is used for guidance and information only and in no way authorizes shipments to take place. It is designed solely to keep the movement organization, mode operators, supply managers, and other interested agencies abreast of the evolving pattern of projected logistical activity. The basic steps in developing the movement program are—

- (1) Determination of requirements.
- (2) Analysis of capabilities.
- (3) Selection and allocation of modes.

- (4) Coordination and resolution of priority conflicts.

### **53. Developing the Distribution Pattern**

a. The distribution pattern for the theater army support command (TASCOM) is developed jointly by the MCC (for the transportation command) and the inventory control center (ICC) (for the supply and maintenance command). The development of the pattern begins when the TASCOM commander furnishes the general scheme for maneuver, the number and locations of troops to be supported, and, if appropriate, the phasing-in periods for these troops.

b. The TASCOM staff utilizes the mission commands and their automatic data processing (ADP) facilities to develop the number of troops and the supply requirements for the theater.

c. Intelligence data on transportation matters are carefully studied to obtain knowledge of the area in which operations will take place and to determine the characteristics and potential capabilities of the available lines of communications. Concurrently with this study, the mode operators of the transportation command determine the feasibility of moving supplies and personnel over various transportation nets. They also determine the amount and type of equipment required to accomplish these moves. They recommend the establishment of locations for transportation facilities and estimate troop requirements for operating and maintaining the respective modes of transportation.

d. The supply and maintenance command, based on advice and recommendations of the transportation command and on knowledge of supply requirements and disposition of forces to be supported, establishes supply and maintenance activities. These activities are oriented on the transportation system as the carriers of the greatest bulk are the fixed modes (rail and inland waterway) and normally the war-time construction of new rail lines or inland waterway routes is not feasible.

e. Once the transportation system has been designed and the supply and maintenance ac-

tivities have been established, the ICC determines what supplies are required for movement to forward units or activities. Together, the MCC and the ICC establish supply distribution patterns so that the resources of both the depots and the transportation system can be best utilized. In determining these distribution patterns, consideration is given, among other items, to the capabilities of the consignor and consignee to ship and receive by the various modes, their total capability, their respective geographical locations and their locations with respect to available transportation, and the capabilities of the various segments of the transportation system. These "most desirable" patterns are then used by the MCC as a basis for its movement program and are placed in the computers which serve the ICC and MCC. Therefore, when a supply requirement is received by the ICC, determination is made as to commodity availability and which depot or activity can best accomplish the supply action. The supply action is then relayed to the MCC by computer-to-computer link and to the shipping activity.

### **54. Time Period for Movement Program**

The movement program period varies with the stability of the situation and the ability of supply and personnel managers to forecast requirements with a reasonable degree of accuracy. The forecasts must be submitted sufficiently far in advance so that the transportation system and the supply system can adjust their respective resources to carry out the program. Since these forecasts will be rather limited in number, it is doubtful that the use of a computer will be required. The time to convert these estimates to machine language, process them, and print out reports appears excessive for this type of operation.

a. A desirable cycle for manual processing is a 14-day planning period for which there is a firm forecast of requirements for the initial 7-day period and a tentative forecast for the succeeding 7-day period. This method minimizes adjustments during the initial period and provides a more accurate overall basis for planning. Under this procedure, a new planning cycle is initiated every 7 days for the following 14-day period.

b. The availability of ADP systems for the stock management agencies, the personnel management agencies, and the MCC makes feasible the development of a movement program based on requirements rather than estimates.

c. The military police and civil affairs activities are primarily involved in the use of transportation for personnel moving rearward. Forecasts of these moves may be required only when it is anticipated that the moves will exceed the normal return capability of the modes.

## **55. Impact of Automatic Data Processing on the Movement Planning Process**

a. In a fully automated system, movement requirements are originated by the ICC and the personnel administration center and given directly to the MCC. This is in contrast to a manual system, where movement requirements are submitted through movement channels to the appropriate transportation movement office (TMO) serving a shipping agency. Under the automated system, the ICC advises the MCC as soon as a supply action is taken which involves a supply shipment from an activity of the command. The MCC determines the mode of transport and the capabilities of shipper and receiver to handle the shipment, allocates transport capability for the movement, and advises affected shippers, TMOs, and mode operators. In this case, no formal movement program is published and these extracts serve in its stead.

b. The success of the system outlined above depends upon the ability of the ICC to accomplish essential actions rapidly and accurately and upon the ability of the MCC to efficiently balance requirements with capabilities. Dependable ADP equipment and interconnecting communications must be available to all movements management agencies to make the system work.

## **56. Channels for Movement Capabilities**

Transport capabilities must be submitted by the operator to the MCC for planning purposes in accordance with published schedules. The forecasts of movement capability will normally be submitted to the MCC through

command channels. However, the daily revisions of capability information for programming will normally flow directly from the mode operator to the MCC. This channel is essential if the local TMOs, in the case of manual operations, and the computer, for automated operations, are to be capable of carrying out the movement program effectively. Accidents, equipment failures, operating conditions, and the speed with which the carrier's equipment is loaded and unloaded all affect the availability of equipment and capability. The variables involved in such changes can be estimated but cannot be programed into the computer except as they occur.

## **57. Content of Movement Requirement Information**

a. The content of movement requirement information will be specified by the command upon recommendation of the MCC.

- (1) Where necessary, a standard format is devised and used. Information contained in the format should include—
  - (a) *Materiel being shipped.* This is normally expressed in terms of the class of supply and the estimated short tons and measurement tons of the shipment. The movement programmers are not normally concerned with an inventory of specific items within a class of supply; however, items requiring special handling must be specified so that outstanding characteristics can be readily identified. For example, heavy lifts should be expressed in units, dimensions, and short tons of each lift. Items requiring controlled temperatures or environment must also be identified.
  - (b) *Personnel being transported.* Personnel are normally listed as troops, patients, civilians, prisoners of war, and such other categories as will assist the movement control office in selecting the mode of transportation.
  - (c) *Origin and destination.* This information should include both the specific shipping and receiving

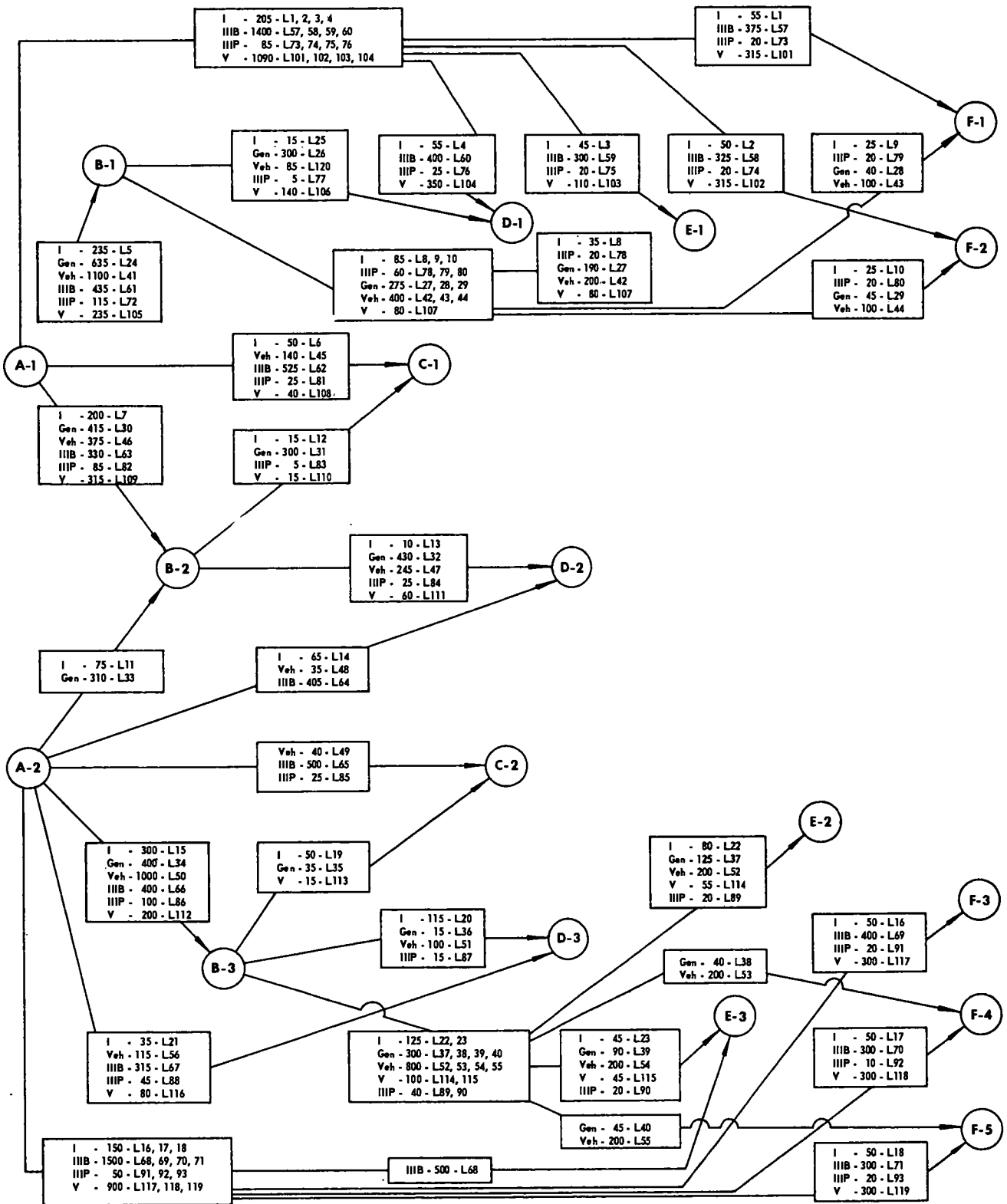


Figure 5. Requirements schematic.



**Figure 6. Rail Schematic.**

agency designation and location by name and map coordinates. Unit designator codes will be used. For example, a proper designation would be "AK4GA4 C&D Point Mannheim Kaefertal, German MV 605827."

- (2) Units requiring additional surface transport support to carry out a unit movement submit requests for movement in accordance with STANAG 2156, Transport Request and Reply to Transport Request (app J).
- (3) Units requiring air transport support to carry out a unit movement submit requests in accordance with STANAG 3093, Request Form for Air Transport (NARAT) (app N).

b. Submission of properly authenticated movement requirements to the MCC or TMO is sufficient evidence that the requirements are authorized. Transportation movement personnel will not question the validity of the requirement. However, they will question obvious errors in the requirement and will bring them to the attention of the proper authority. They will also question the movement of any requirements which will lead to a violation of the maximum-use principle of movements; for example, if one shipment calls for the forward movement of 100 tons of concertina wire while at the same time a retrograde requirements exists to move 110 tons of the same item.

## 58. Schematics

A schematic is a tool for more effective movement planning and management. It can be of use to personnel programing a computer and to those who are programing shipments manually. Its purpose is to portray total shipping requirements and available transport capabilities as they relate to the actual distribution system. One schematic is prepared for requirements, and a transport schematic is prepared for each available mode. Examples of these are shown in figures 5 and 6. The basic steps in developing schematics are described in *a* through *c* below.

*a.* The first step is to prepare a supply distribution net diagram depicting the relative

position (not necessarily to scale) of all origin and destination areas (circles on fig. 5) obtained from movement requirement forecasts. Then a listing of *daily* shipping requirements for each origin/destination area combination is prepared showing class of supply, tonnage, and the movement program line number. If forecasts are expressed as total program period tonnages, daily average requirements are obtained by dividing the total tonnage by the number of days in the program period. The list for each origin/destination combination is posted in an appropriate position between the indicated origin and destination.

*b.* The second step is to prepare a transportation net diagram for each available mode: rail, motor, pipeline, inland waterway, and air. This diagram includes those origins and destinations (circles on fig. 6) served by the mode for which it is prepared and appropriate mode capability information. Mode capability data are expressed in several forms: for rail and air, as total daily tonnage capacity between major terminals; for motor transport, as the daily ton-kilometer capability in a particular area or by segments of a line haul in relay type operations; and for pipelines, as the number of gallons throughput daily.

*c.* Using the requirements schematic, the final step is to select and allocate a mode for each shipping requirement (line item). First consideration should be given to allocating capability for the largest requirements moving the longest distances and evaluating movement priorities and shipment characteristics; primary emphasis is placed on using the full capability of each mode in relative order of economy. As each movement requirement is assigned to a mode, that requirement is added to the applicable origin/destination combination list on the mode schematic; at the same time, an appropriate deduction is made from that mode's capability. When all movement requirements have been assigned, the mode allocation information is transferred to the movement program. The schematic should be retained during the applicable program period and posted in a conspicuous place as it provides a readily available means for recording changes and for illustrating the effect of such

changes on the transportation system as a whole.

## 59. Mode Selection Guide

The movement manager uses the following basic guidelines in allocating the mode of transport:

*a. Provide service according to need.* It must be emphasized, however, that need is determined by established priorities and the nature of the shipment. In connection with the latter, an evaluation is made of the effect of shipment characteristics and other factors, such as security requirements and political considerations, on the provision of transportation service.

*b. Use the most economical mode for the complete movement.* Otherwise, use that mode's available capability as far forward as possible. The modes of transportation, their characteristics, and their most effective use are outlined in table 1.

*c. Whenever practicable, minimize or eliminate rehandling of cargo during transportation and avoid crosshauls and backhauls.* When available, mode combination services, such as trailer-on-flatcar afford an effective means of accomplishing this objective.

*d. Allocate all available transport equipment necessary to fulfill known requirements.* No transport equipment is reserved in anticipation of unforeseen requirements. Such requirements are met as they occur by allocating transportation in accordance with the commander's priorities.

*e. Promote conservation of transport by planning for—*

- (1) Immediate redeployment of excess transport equipment.
- (2) Use of returning vehicles.

## 60. Movement Priorities

Movement priorities are established in accordance with the desires of the commander. Their development is a staff responsibility of the command assistant chief of staff, movements. Movement priorities combine supply and transportation priorities to provide a basis for allocating transport capability and furnishing transportation service when requirements exceed capabilities. A movement priority may also define the type of transportation service (for example, the most expeditious mode that can accommodate the cargo regardless of economy factors).

*a. Implementation of movement priorities is a responsibility of the command MCC.*

Table 1. Mode Selection Guide

Order of economy	Most effectively utilized as	Capabilities	Limitations
Pack animals and human bearers.	A supplementary mode to extend surface transportation net over terrain impassable to other modes.	All tactical terrain; all-weather. <i>Pack animals:</i> For commodity restrictions, can transport approximately 250 pounds with a cargo density of more than 25 pounds per cubic foot. <i>Human bearer:</i> Can transport approximately 80 pounds subject to pack configuration.	Most inefficient means when terrain is trafficable to other surface modes.  Human bearers most wasteful of human resources.
Pipeline.	Primary mode for bulk liquids and solids suspended in liquid.	All-weather; few terrain restrictions; most economical and reliable mode for bulk liquids; relatively few personnel required for operation and maintenance.	Flexibility limited by immobile facilities; vulnerable to sabotage and enemy action; large construction tonnages required.
Water.	Primary over-ocean mode. Supplementary inland surface mode for movement of large quantities of cargo in bulk and heavy and outsize material.	All-weather; any commodity; most economical overall long-distance carrier; particularly useful for relieving other modes for more suitable employment.	Relatively slow; flexibility limited by adequacy of terminals, waterways, facilities, and channels; vulnerable to enemy action and difficult to restore.

Table 1. Mode Selection Guide—Continued

Order of economy	Most effectively utilized as	Capabilities	Limitations
Rail.	Primary inland mode for maintaining a sustained flow of large quantities of traffic over long distances.	All-weather; any commodity; most economical continuous line haul operation; greatest sustained ton-mile capability; a variety of specialized equipment and services.	Flexibility limited by fixed routes; rail line clearances restrict outsize movements; capability limited by availability of motive power; rail line highly vulnerable to enemy action.
Motor transport.	Supplementary mode for providing the connecting link which makes possible an integrated transportation system. It can also be employed effectively in scheduled line haul operations by the trailer relay system.  Primary mode for distribution operations and for logistical support operations in the combat zone.	Most flexible mode over trafficable terrain; practically all-weather (terrain factor important); increases flexibility of other modes; can transport nearly any commodity with a variety of specialized equipment for both on- and off-road movement.	Over-the-road operations affected by route interferences and by obstacles created by weather, terrain, or enemy action; sustained line haul operations over long distances uneconomical in terms of ton-mile output versus expenditure of manpower and equipment.
Air.	Complementary mode for providing expedited movement of mission-essential traffic.  Primary or major supplementary mode when terrain conditions reduce effectiveness of surface modes.  Scheduled operation is the most economical method of employment and produces greatest sustained ton-mile capability.	Greatest potential speed of delivery and most flexible with respect to terrain obstacles. When these factors are combined with substantial lift capability, air transport over long distances becomes more economically favorable.	Operational capabilities and effectiveness limited by climatological factors and trafficability of takeoff and landing areas. Relatively high ton-mile operating costs.

b. Users and transportation agencies are responsible for—

- (1) Implementation of priorities applicable to their respective activities; that is, materiel issue, personnel replacement, or transportation.
- (2) Adherence to time allowance for appropriate segment(s) of the order and shipping cycle.

## 61. Variations from the Movement Program

The movement planning process offers the commander a means whereby he can obtain maximum use of the movement capability. Although the program is based on estimates of requirements and capabilities, a high degree of accuracy is required for each period of the program. If it is found that the required de-

gree of accuracy is not being obtained, a check should be made to determine if the time span of the planning period should be shortened or if command action should be taken against those activities who flagrantly disregard the need for accurate estimates.

a. The commander issues guidelines concerning variations from the movement program. To illustrate the type of question covered by such guidelines, suppose that the movement program states that 100 tons of class I will move daily from point A to point B during a stated period of time:

- (1) Do exactly 100 tons have to be shipped each day?
- (2) Can 150 tons move one day and 50 tons the next?



- (3) Can 50 tons of class I and 50 tons of class II move?

b. Movement personnel may not make a decision as to whether a variation should be allowed within the movement program except within the guidance furnished by the commander. Any variations allowed must be—

- (1) Kept within the scope of the guidelines.
- (2) In accordance with sound movement principles.
- (3) Based on knowledge of the total situation (shipper, receiver, mode operator(s)) and the probable effect of any variation.

c. Because of their location and primary interest in the movement planning process, movement personnel are in a position to gather data to aid the commander in making a decision when a requested variation from the program is outside the guidelines within which the movement personnel must work.

## 62. Coordination of Movement Program

Installations in the forward areas receive shipments by TASCOT interzonal transportation, FASCOM Army-wide transportation, and corps support brigade transportation. It is therefore essential that all movements be closely coordinated and that movements information be promptly transmitted so that the capabilities of the receiving installations to unload are not exceeded. In view of the visualized volume throughput distribution, it follows that the TASCOT movement program is the primary program and that the FASCOM planning is based largely on knowledge derived from the TASCOT program as to volume, commodities, and destination in the field army area.

a. FASCOM supply resources are located in both the army rear area and the corps support brigade areas. The movement of supplies from these resources is planned by FASCOM and, in the case of supplies from the corps support brigade areas, may require the use of corps support brigade motor transport in order to accomplish the movement.

b. Within the field army, the MCC has knowledge of supplies and materiel that are

moving forward from TASCOT. If a transfer in carriers is necessary (for example, rail or trucks), the FASCOM MCC, in coordination with the TASCOT MCC, determines which cargo will be throughput on communications zone transportation and which will be transferred to field army (FASCOM) transportation. When the decision is made, the FASCOM MCC informs the appropriate modes, the transfer point activity, and the appropriate TMOs of the requirements.

c. The corps support brigade program is a derivative of the FASCOM program. Transportation of the support brigades will be primarily concerned with the transport of POL (petroleum, oil, and lubricants) and ammunition and with repair parts whose required delivery date precludes shipment from army rear or TASCOT depots.

## 63. Port Clearance Program

a. The port clearance program is a part of the TASCOT movements program but, for clarity in this manual, it is described separately. The preparation of a port clearance program follows essentially the same channels as does the rest of the movement program. Variations are chiefly in the sources of original information.

- (1) The terminal commander is responsible for the discharge of vessels in his terminals (port or beaches) and for the clearance of cargo from his terminal area. He has a TMO located in his area to provide interface between terminal operations and movements management functions.
- (2) The TASCOT MCC and ICC receive manifest information from the continental United States or other ports of origin. The ICC reviews the manifests and, based on command policy or direction, provides the MCC with changes to destinations of the manifested cargo.
- (3) The MCC determines the mode of transport for the cargo and provides the terminal operator with manifest information and cargo disposition instructions. The MCC also forwards any information pertaining to dis-

charge priorities as provided by the transportation command staff.

- (4) The terminal commander forwards his total requirements for transportation to the MCC to be used as transportation requirements in developing the port clearance segment of the intratheater movement program. When the port clearance program is developed, the terminal commander provides the TMO located in his area with specific transport requirements for the cargo to be cleared from his terminal.
- (5) The port clearance segment of the intratheater movement program is provided to the terminal operator,

the TMO at the terminal and destination, the consignees, and appropriate transport mode operators.

b. Many factors affect the rate of discharge of cargo from vessels; for example, weather, gear failure, labor shortage, tidal conditions, enemy action, or hazardous shipments requiring special safety measures or processing. It is therefore imperative that the port clearance program be as flexible as possible.

c. Shipments enter the intratheater in-transit inventory as soon as they are turned over to the carrier; it is therefore essential that reports of shipment be transmitted at that time. The TMO verifies that reports of shipment are sent when shipments depart the port areas.

### Section III. MOVEMENT PROCEDURES

#### 64. Maintaining In-transit Inventory

a. The basis for the in-transit inventory is contained in the report of shipment (REPSHIP). The report of shipment will normally be accomplished by the transmission of MILSTAMP (Military Standard Transportation and Movement Procedures) information. However, when operations are being conducted in the NATO area, the report will take the form of an advice of movement (AMOVER or AMOVMAT) as outlined in STANAG 2164 (app L). When operations are being conducted with British, Canadian or Australian forces in other than NATO areas, the report will be a REPSHIP as outlined in SOLOG Agreement 50 (app F).

b. After the REPSHIP is prepared by the consignor, it is transmitted simultaneously to the consignee, the movement control center (MCC), and other interested activities.

c. Each REPSHIP is included in an in-transit file and a cross-reference file. The in-transit file will maintain a record of shipments indexed by vehicle identification number. The cross-reference file is indexed in shipment identification number sequence and is used to gain entrance to the in-transit file when shipment numbers are known.

d. As the transporting vehicle passes certain designated reporting points en route,

status reports, in the format prescribed by the theater army support command (TASCOM) MCC, are transmitted electrically to the MCC. The status reports which will be required are as described below:

- (1) *Passing reports.* These contain the identification of a vehicle, the reporting point, and the date and time of the passing.
- (2) *Hold reports.* These will be submitted whenever vehicles are held without transfer of cargo. Reasons for delays will be included, along with passing report information.
- (3) *Diversion reports.* These will contain identification of vehicles, times, locations, and new destinations.
- (4) *Transfer reports.* These will be submitted whenever cargo is transferred from or to a vehicle except at origin or destination.

e. Completion reports will be submitted to transportation movement offices (TMOs) serving consignees. TMOs will send these reports to the MCC for use in updating the theater in-transit cargo file.

f. Shipments in the in-transit file, when completed, are automatically transferred to the historical file of completed movements,

and corresponding records are removed from the cross-reference file.

## **65. Passenger Movements**

a. Procedures for passenger movements depend upon the circumstances under which the passengers are being moved. Individuals and small groups of travelers are furnished written authorization by the local transportation officer or TMO. This authorization is in a format provided by the command and is devised for accounting purposes as well as for authority to travel. Unit movements and movements of 15 or more individuals normally require a transportation movements release (TMR). The primary reason for the release is to assure that suitable transport equipment is available for the movement and that arrangements are made along the route to accommodate the passengers.

b. Requests for the movement of personnel are submitted to the TMO in the same manner as for cargo movements and are programed when the requirements can be predicted in advance. If movement capacity is available locally, the TMO issues a release for the movement. If the movement requirements exceed the movement capability, priorities are established by the commander and required transport is requested through movements channels. Normally, all modes of transport are used for passenger movement. The mode selected for a specific shipment will depend on the priority of the shipment, the number and type of passengers to be moved, the distance to be traveled, and the tactical situation in the area into or from which the shipment is being made.

c. SOLOG Agreement 50 (app F) prescribes the format for a REPSHIP for personnel being moved. SOLOG Agreement 31 (app E) describes the forms and reports that are to be used by a troop train commander and delineates his responsibilities.

## **66. Evacuation of Patients**

a. The evacuation of patients from the forward units in the field army to the supporting hospitals or medical installations in the field army rear or communications zone (COMMZ) is a responsibility of the medical service. When long haul evacuation means are

required, as in the case of interzonal movements, transportation assistance is requested from commands possessing such capabilities. Interzonal movement will first be coordinated with the aeromedical evacuation control center. Requirements exceeding Air Force capabilities are then placed on the MCC. Normally, evacuation will be by air; however, ground means must be available when air evacuation capabilities are exceeded. Care and treatment en route are administered by medical personnel who ride in the conveyance.

b. The medical brigade in the field army support command (FASCOM) and the medical command in TASCOT furnish their supporting MCCs with evacuation requirements. These requirements include the number of patients by origin and destination. While such movements are not programed, this information is necessary in order that movement personnel can arrange rapid through transportation from the medical facilities in forward areas to those in the field army rear or the COMMZ.

c. Based on priorities, availability of the various modes, and locations, the MCC prepares and coordinates with medical regulating personnel plans for the evacuation and when plans are completed notifies the mode operators, the TMOs, and the MCCs. The TASCOT medical command and/or the FASCOM medical brigade notify medical agencies at origin, en route, and at destination. Normal procedures are then used to accomplish the movement and to work out the local details of the movement.

## **67. Nonprogramed Movements**

a. In the support brigade and the FASCOM (and to a lesser extent in the TASCOT), there will be a significant number of nonprogramed actions which the TMOs will be required to coordinate. These result primarily from the fact that it is not feasible to program all shipments from direct support units.

- (1) The support brigade will normally have a portion of its motor transport capability allocated to support of direct support personnel and supply actions and to essential rewarehousing

actions within the support groups' storage facilities.

- (2) The support brigades may be allocated a portion of the FASCOM transportation brigade air transport capability to accomplish nonprogrammed movements from direct support activities to supported units. When so allocated, the support brigade MCC normally retains allotment authority and places requirements with the aviation battalion to which the operating aviation companies are assigned. On nonprogrammed airlifts, operating coordination is conducted at local TMO-aviation company level.
- (3) The area support groups in the TASCOT are provided with motor transport units to accomplish direct support transportation missions but not for rewarehousing operations within the TASCOT depots. However, when such transportation is insufficient to accomplish the area support groups' requirements or when another mode of transport is required, the requirement is placed on the local TMO as a nonprogrammed action.

b. Requirements for inclusion in a movement program are forecast well in advance of the actual movement. During this period, shippers may have requirements placed on them that must move before the next program is compiled. If the requirements are transmitted by the inventory control center (ICC) directly to the MCC, the MCC will clear the requirements through the programming office in order that the requirements can be placed in their relative position in the movement program and thus maintain the benefits accrued by movement planning. If the movement requirement is entered into the system by an activity other than the ICC, TMR procedures as outlined in paragraph 68 are followed.

#### 68. Transportation Movement Release System

a. A TMR is the authority for movement. It authorizes dispatch of transport equipment,

verifies receiving capability, and identifies the specific movement during transport. In contrast, the movement program line number identifies an authorized movement and is the authority for initiating a transportation request.

b. Authority to issue TMRs is decentralized to local TMOs on an exception basis. Under this procedure, TMRs are issued to the extent of locally allocated capability. If a TMR cannot be issued, owing either to a lack of transport or to inadequate receiving capability, a local adjustment is made, if possible. Otherwise, the request is referred in turn to the regional TMO (RTMO) and, if necessary, to the MCC for action. Shipments requiring specialized equipment or special service are usually referred directly by the originating TMO to the RTMO or the MCC as appropriate.

c. A standing TMR may be issued by authorized TMOs to cover normal repetitive movements of specific items between specific points, thus eliminating the requirement for repetitive issuances of TMRs. The standing TMR may be used when the commodities, origins, destinations, and modes of transport are sufficiently constant to warrant this type of control. They are normally issued for a specific period, after which they are reviewed by the issuing office to assure that the terms remain valid. When required by changed conditions, standing TMRs may be revoked before their normal expiration dates. A standing TMR should not be allowed to serve as a device for circumventing the movement program.

d. A TMR is issued for all release-unit-quantity transportation requests. Less-than-release-unit shipments may be handled by several methods—

- (1) Consolidated by shipper and thus made eligible for a TMR.
- (2) Forwarded by shipper to the nearest consolidation and distribution (C&D) point, if available, for consolidation.
- (3) Held by shipper for pickup service provided in connection with an LTL (less than truckload) scheduled express operation.

- (4) Forwarded by shipper's organic transport.

e. Upon receipt of a transportation request, the origin TMO confirms transport capability and forwards the request to the destination TMO. In turn, the destination TMO confirms receiving capability, issues a TMR, and notifies the origin TMO. These actions must be accomplished expeditiously, and dependable rapid communication is essential. If a communication failure occurs or existing communication facilities are inadequate, the origin TMO issues the TMR based on his knowledge of receiving capabilities and advises the destination TMO as soon as possible. In those cases where a computer makes the determination that the receiving agency has the capability to accept and unload the shipment, the origin TMO assigns the TMR number and advises the destination TMO.

f. To provide ready identification of the shipment during transportation, the TMR assigns a shipment identification number which usually contains the information contained in items 8 (mode) and 10 (transportation control number of the TCMD (Transportation Control and Movement Document, DD Form 1384)) for the shipment, plus such other identification as the theater commander may direct.

g. The procedures outlined in e and f above can be accomplished by automatic data processing facilities if the origin TMO has access to an input device capable of communicating the information to the central computer and receiving the results of computer action on the input information.

## 69. Movement Instructions

The movement program allocates movement requirements to available movement capabilities and reflects priorities established by the commander. The detailed information contained in a movement program is limited. For example, it may state that 100 tons of class II will move daily from point A to point B by rail during a specific time period. It does not state such specific details as type of rail cars required for the movement, opening and closing times of the activities at point A and point B, number of cars that should be spotted

during daylight or during darkness, or other detailed information required to actually accomplish the day-to-day movement at installation level. Therefore, on receipt of the movement program, the local TMO, in coordination with the shipper and mode operator, issues movement instructions to cover specific information not contained in the movement program and to furnish details pertinent to the area or to the particular shipment. These instructions may be elaborate and in writing, or they may be oral and given over the telephone. A sample movement instruction follows: "Line item 128, movement program 15-21 September, TMR AK 6271R267, will be expedited. It will be covered with a tarp to prevent ready identification by casual observation. Loading will be done during daylight. Passing reports will be obtained from LeVas, Ogton, and Dennis. Upon arrival at LeSuyong, the 508th MP Company will provide a guard escort to accompany shipment through the Esplana providence. Shipment will be delivered to consignee during daylight hours."

## 70. Export Shipments

a. Shipments from the theater through surface ports are accomplished by a system similar to that required for CONUS-to-overseas moves. Planning for the movement of retrograde cargo will begin with the identification of retrograde items by the appropriate control center.

b. The TASCOT staff takes appropriate action to obtain an allocation of vessel space for the movement of the retrograde cargo. When the Military Sea Transportation Service has nominated vessels, the TASCOT staff informs the MCC of what vessels will carry which retrograde cargo from the theater. The MCC then prepares a plan for the movement of the retrograde cargo to the ports which have been selected by TASCOT. Because of the small staff at TASCOT, they may delegate to the transportation command authority and responsibility for carrying out the above described staff actions.

c. The requirement to keep the battle area policed-up may necessitate that the movement of scrap and salvage brass and vehicles

from the field army area to salvage activities in the COMMZ be accomplished as nonprogrammed movements without waiting for the formal cargo booking and vessel nomination procedures to be accomplished.

#### **71. Consolidation and Distribution of Small-Lot Shipments**

a. The handling of small-lot (less than release lot (para 4)) shipments in a theater of operations is a transportation problem of major proportions. As pointed out in paragraph 68*d* above, there are several methods by which small-lot shipments may be handled, among them movement through C&D points.

b. The operation of a C&D point is basically a matter of making management decisions on the method of shipment to be used to insure economical utilization of transport and to provide expeditious service to shippers. It brings together for movement in one vehicle or a series of vehicles movements en route to a common destination or a common terminal point along the route used by the transport service. By consolidating relatively small movements to form vehicle (air, highway, rail) loads, the movement of partially loaded vehicles is reduced to a minimum and maximum use is made of available movement capacity within certain limitations.

c. Within the theater, the freight C&D points are manned and operated by C&D point operating teams organized under TOE 55-500 and functioning under the supervision of an activity designated by the commander having control in the area where the C&D point is located.

d. Small lots of hazardous cargo (for example, explosives, gasoline, acids, or highly flammable or corrosive substances), items which might contaminate other cargo (for example, fertilizers), items which require protection from heat or cold (perishables), livestock, or classified or security cargo requiring continuous guarding will not be shipped through C&D points.

e. Shipping installations and agencies insure maximum consolidation of small-lot shipments by their shipping activity. They advise the C&D point serving their activity of small-

lot shipments, giving the same information required for a TMR. They promptly load, document, and dispatch organic transportation to the C&D point when authorized by the C&D point.

f. C&D points promptly receipt for and unload air, rail, or highway equipment making deliveries to the point. They select modes and issue TMRs for consolidated vehicle load shipments. They load, document, and release consolidated vehicle loads. They furnish consignees with timely advice about the arrival and availability of shipments. They maintain records reflecting the receipt and distribution of shipments.

g. To the maximum possible extent, consignees pick up shipments from C&D points. C&D points will make this movement (from C&D point to consignee) only when it is impracticable for the consignee to make the movement. When it is considered impracticable for either the consignee or the C&D point to make the movement, the local TMO will be advised. Consignees furnish early notification of expected arrival of high-priority or sensitive shipments.

h. When sufficient tonnage is not available to load a complete vehicle for an ultimate consignee or a single C&D point but the tonnage is of such proportion that backhaul to the consignee from a C&D point would be excessive, vehicles may be loaded for stopping in transit for partial unloading by one consignee. Shipments intended for unloading at intermediate points will be placed in the vehicle so as to permit unloading without disturbing the storage of other shipments.

i. The C&D system will work closely with a theater LCL (less than car (rail) (aircraft) (truck) load) operation if established. This system normally operates regularly scheduled hauls connecting all C&D point activities.

#### **72. Trailer and CONEX Control Activity**

a. The procedures for the receipt, port clearance, and onward movement of CONEX (container, express) containers or controlled vehicles used in intertheater transportation are the same as for general cargo except that the trailer/CONEX control activity in the TAS-

COM MCC is advised of the destination, consignee, and estimated time of arrival of the container at destination.

b. The control agency, in coordination with the freight movement division of the MCC determines the following in order of priority:

- (1) If any suitable retrograde cargo for CONUS (continental United States), including mail, is available at the theater destination of the inbound container or trailer.
- (2) If a CONUS retrograde lift exists at another theater installation that does not involve an excessive lateral or forward empty movement in order to utilize empty trailer or container space.
- (3) If a requirement exists for an intra-theater retrograde movement that would not unduly delay the return of the controlled equipment if it were used for the lift.
- (4) If the container or trailer should be returned empty to an appropriate terminal for loading with retrograde cargo for CONUS.
- (5) If the container or trailer should be returned empty to CONUS.

c. The determination as to further use of

the controlled equipment is forwarded by the control agency to—

- (1) The inbound destination TMO.
- (2) The inbound consignee.
- (3) The mode operator who will transport the container.
- (4) The consignor of retrograde cargo to be loaded.
- (5) The TMO serving the consignor of retrograde cargo.
- (6) The outbound terminal.
- (7) The TMO serving the outbound terminal.

d. Each terminal, consignor, and consignee is responsible for notifying the local TMO of each receipt and unloading and each loading and release (dispatch) of each controlled container that he handles.

e. The TMO relays each transaction to the container or trailer control agency at group headquarters.

f. Each mode operator or designated reporting point will submit in-transit reports as outlined in paragraph 64 for the in-transit inventory system.

g. The theater control agency keeps the appropriate CONUS control agency advised of the status of controlled equipment in the theater.

## CHAPTER 6

### HIGHWAY REGULATION

---

#### 73. General

a. Highway regulation is the coordination of the actual use of a road net by vehicles, personnel, and animals to meet military operational requirements. The basic tool of the commander for accomplishing highway regulation is the highway traffic headquarters and its subordinate highway regulating point teams in the field. These units were described in preceding chapters. The extent of regulation exercised by a traffic headquarters depends on the amount of movement expected and the capacity of the road network. Types of movements normally scheduled by traffic headquarters include convoys, oversize or overweight vehicles, vehicles moving by infiltration, and troop movements on foot.

b. The automatic data processing capabilities of the computers at the theater army support command (TASCOM) movement control center and the centralized computer centers at the field army support command (FASCOM) and the support brigades are employed in the following areas of highway regulation:

- (1) Collation of general route information and traffic information.
- (2) Operational planning information, including the preparation of march tables and critical point graphs.
- (3) Provision of highway regulation situation data.

#### 74. Terminology

The following terms are frequently used in highway regulation. Certain designated terms have been specifically defined in NATO standardization agreements (STANAGs) and in AR 320-5.

a. *Control Point*. A position along a route at which men are stationed to give and re-

ceive information and instruction for the regulation of traffic (AR 320-5).

b. *Open Route*. A route for the use of which no movement credit (*g* below) is required (STANAG 2151, app H).

c. *Controlled Route*. A route the use of which is subject to traffic or movement restrictions (STANAG 2151, app H).

- (1) *Supervised route*. A roadway over which control is exercised by a traffic control authority by means of traffic control posts, traffic patrols, or both. A movement credit is required for its use by a column of 10 or more vehicles or by any vehicle of exceptional size or weight.
- (2) *Reserved route*. A controlled route the use of which is—
  - (a) Allocated exclusively to a particular authority or formation, or
  - (b) Intended to meet a particular requirement; for example, a route reserved for evacuation.
- (3) *Dispatch route*. A roadway over which full control, both as to priorities of use and the regulation of movement of traffic in time and space, is exercised. A movement credit is required for its use by any independent vehicle or group of vehicles, regardless of number or type.

d. *Critical Point*. Any point along a route where interference with a movement may occur (AR 320-5).

e. *Military Road Network*. Includes all routes designated in peacetime by the host nations to meet anticipated military movements and transport movements, both allied and national (STANAG 2151, app H).



*f. Military Road Maneuver Network.* The road system required by a commander for the conduct of a specific operation and for the required logistical support of that operation (STANAG 2151, app H).

*g. Movement Credit.* The time allowed to one or more vehicles to move over a supervised, dispatch, or reserved route (STANAG 2154, app I).

*h. Movement Number.* A number which is allocated at the same time as the movement credit by the authority organizing the movement. This number will identify the column during the whole of the movement (STANAG 2154, app I).

*i. Traffic Control.* Direction of traffic to meet military requirements through on-the-spot guidance, analysis, information, investigation, studies, and enforcement.

## **75. Organization of Highway Traffic Headquarters**

*a.* All matters pertaining to highway traffic regulation are centralized in the highway traffic headquarters, an element of the command's movement control unit, under control of the assistant chief of staff, movements.

*b.* The traffic headquarters depends upon information, recommendations, and services from other agencies. The overall plan for highway regulation is formulated by the traffic headquarters and coordinated with other staff agencies as shown in figure 4.

## **76. Functions of Highway Traffic Headquarters**

The functions required of a traffic headquarters may vary among commands. They generally include but are not limited to, the following:

*a.* Maintaining a situation map of the military maneuver road network (or military road network, as appropriate) showing current data on obstructions, detours, defiles, capacities, and surface conditions.

*b.* Implementing established priorities for highway movement in accordance with the commander's instruction.

*c.* Receiving requests (proposed itineraries) for highway routing and for schedules of movements from units within its area of jurisdiction.

*d.* Consolidating itineraries and road movement tables (STANAG 2041, app G), scheduling highway movement, and issuing movement credits as necessary.

*e.* Establishing and issuing traffic circulation maps.

*f.* Making necessary changes in routings, schedules, and priorities as dictated by the situation and informing unit or convoy commanders of the action (through command channels when possible, otherwise through highway regulating points or traffic control posts).

*g.* Receiving, recording, and disseminating (as required) information from other traffic headquarters concerning highway movements into its area of jurisdiction.

*h.* Coordinating movements terminating outside its area of jurisdiction with other traffic headquarters.

## **77. Highway Regulation Planning**

### *a. General.*

- (1) A highway regulation plan is a staff plan, which may be oral or written, concerning the capabilities of the existing road net to handle the traffic that must move thereon. Information derived from this plan is disseminated to the user by a traffic circulation plan or order and usually appears in the form of an overlay.
- (2) The highway regulation plan is initiated well in advance of actual operations and is prepared to conform with the size of the command; the road network; the logistical situation; and the mission, composition, and disposition of tactical units. Planning must be fully coordinated with other staff agencies and among all echelons of commands concerned.
- (3) A highway regulation plan must be adaptable to changes in the situation. If traffic is light, this may present little difficulty; however, when traffic is heavy and tightly scheduled,

each adjustment may necessitate additional adjustments. If the plan is extensive, numerous calculations are involved and the plan tends to lose flexibility; if limited, the necessary control may be lacking. A balance must be found that provides the degree of control required by the commander, while permitting all possible flexibility and responsiveness to change.

*b. Planning Information.* The information required for highway regulation planning includes—

- (1) Information regarding operational plans for the command (including civil officers' plans); policies, priorities, and restrictions imposed by higher headquarters; and plans for logistical support of the command.
- (2) General route information—surface or pavement type, alinement, surface and width of shoulders, location and characteristics of bypasses or detours around limiting physical features and potential hazards, highway network distances, driving times, and highway capabilities. Alternate routes are considered, as well as critical points along all routes where ambush or other enemy action might be encountered.
- (3) Traffic information—traffic density and anticipated volume by vehicle type; variations in the traffic flow over sections of routes during specific periods; the need for traffic patrols; and the location of sensitive areas such as potential bottlenecks, intersections requiring control, or railroad crossings requiring guards.
- (4) Terminals and other facilities—location and characteristics of supply points, depots, service stations, tractor-trailer relay points, turnarounds, off-road parking areas, bivouac areas, and evacuation or hospital facilities, with consideration for access from major routes and the capabilities for receiving, loading, unloading, and providing maintenance and service for motor transport.

- (5) Availability of communications equipment.

*c. Sources of Information.* The information required for planning is generally derived from the following sources:

- (1) The assigned mission, which may be a separate logistic mission or an extension of the tactical mission.
- (2) Current estimates, the administrative order, and administrative plan(s).
- (3) Reconnaissance as thorough as the situation and time permit. Preliminary information concerning the road network is generally obtained from maps, aerial photographs, local traffic authorities, intelligence reports, and transportation intelligence studies. This information is verified and supplemented by ground reconnaissance and, when practicable, by aerial reconnaissance. Ground reconnaissance parties may be composed of engineer and/or transportation personnel. The route reconnaissance overlay, furnished by the engineer officer, provides detailed information regarding the characteristics of the road net. (For an example of an overlay, see FM 5-36.)

*d. Contents of the Traffic Circulation Plan.* The traffic circulation plan (figs. 7 and 8) reflects the road net that is planned to be used and maintained and shows how it is to be used. It may be as brief or as detailed as required. The following information is normally included:

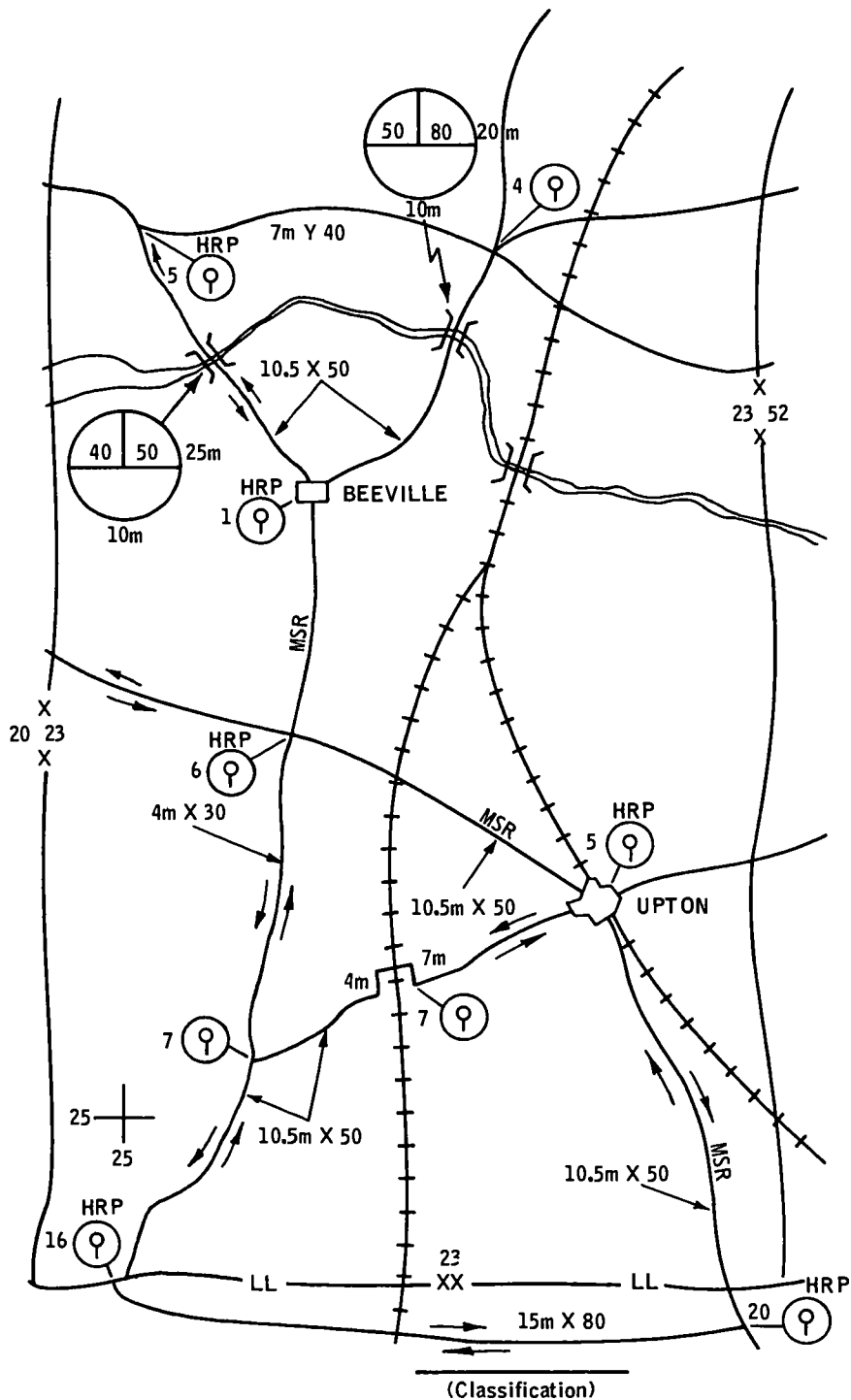
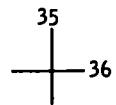
- (1) The most restrictive route features and route designations.
- (2) Direction of movement.
- (3) Location of boundaries, units, highway regulating points, traffic control points, and principal supply points and depots.
- (4) Major geographic features and light line(s), if applicable.

*e. Standing Operating Procedures (SOPs).* Detailed directives concerning procedures to be used in highway traffic regulation are contained in the command SOP and the highway traffic headquarters internal SOP.

(Classification)

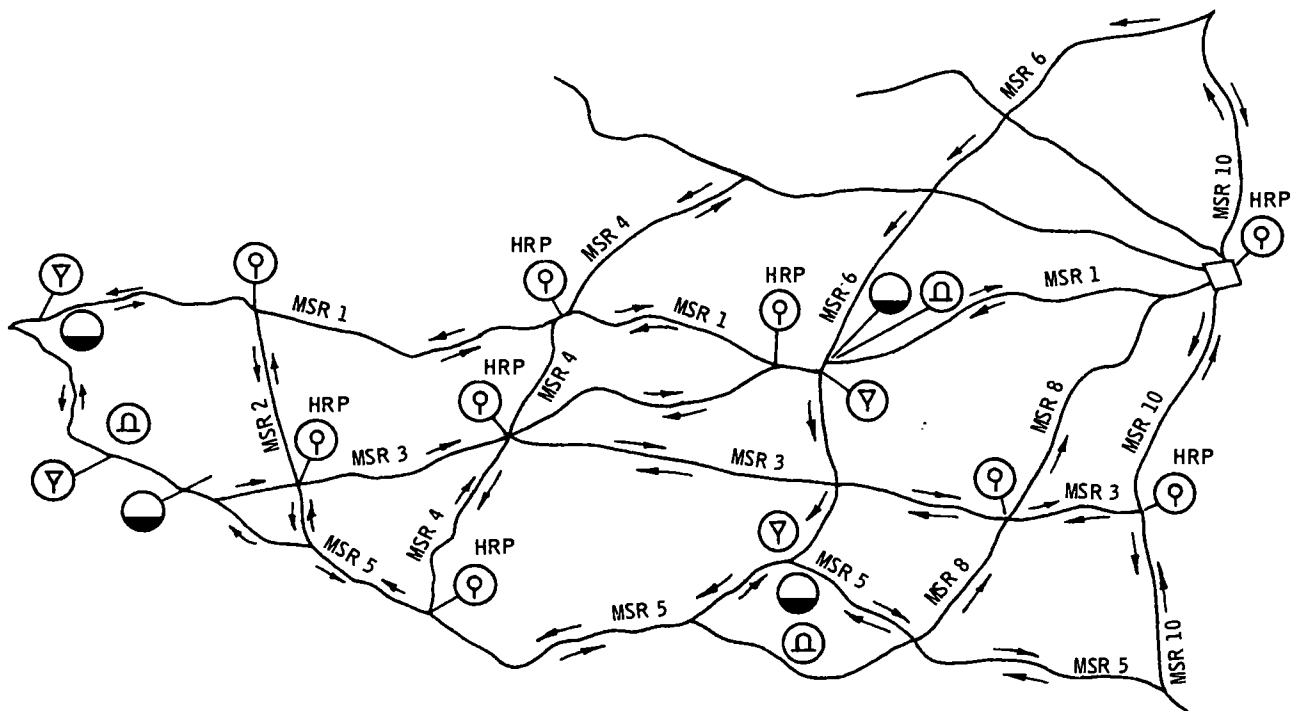
BEEVILLE (RH2835),  
UNITED STATES  
151200 Aug 19\_\_  
MH 41

Annex A (Traffic Circulation and Control) to ADMINO 14  
Reference: Map, UNITED STATES, 1:100,000, UPTON Sheet



(Classification)

Figure 7. Sample traffic circulation plan, army area.



Copy No. 2  
TASCOM  
Fontainebleau (DP 7762), France  
Annex A to Admin O 14  
Reference: Map, France, Sheet 305, 1:1,000,000

Figure 8. Sample traffic circulation plan, TASCOT area.

## 78. Management of the Plan

a. Management includes all measures taken to insure effective implementation of the highway regulation plan. The transmission of clear, concise instructions to the commanders of all road movements and the distribution of pertinent information to all control personnel must be timely and thorough. The mechanics of this phase can be simplified by inclusion of highway traffic regulation procedures in the command SOP and development of an internal SOP for traffic headquarters.

b. The information included in SOPs should be routine in nature and not subject to frequent change. Concurrence of all interested staff agencies must be obtained before publication. Instructions and information regarding the following matters may be appropriate for publication in SOPs:

- (1) Rate of march and maximum permissible speed.

- (2) Frequency and duration of halts.
- (3) March discipline.
- (4) Special rules of the road.
- (5) Methods for handling stragglers and disabled vehicles.
- (6) Procedures for obtaining road clearance or movement credits.
- (7) Reports and reporting procedures.
- (8) Gaps between vehicles and between serials.
- (9) Controls required; for example, use of guides, flags, and markings.
- (10) Identification of highway regulating and traffic control personnel by armbands or other means (STANAG 2159, app K).

## 79. Traffic Routing

a. Routing is the planning of highway movement over designated routes. Three funda-

mentals governing the planning of movements over designated routes are balance, separation, and distribution.

- (1) Balance is the matching of vehicle characteristics with characteristics and limitations of available routes; for example, routing heavy, cumbersome, or outsize equipment over a route with grades and curves within the capabilities of the equipment and with bridges of adequate capacity and width.
- (2) Separation is the allocation of non-conflicting routes to concurrent movements.
- (3) Distribution is the allocation of as many routes as possible for the movement of traffic to reduce traffic conflict, to prevent deterioration of road surfaces from the concentration of heavy traffic, to effect vehicle dispersion, and to decrease the time required to complete the movement.

b. The following principles should govern the routing of traffic:

- (1) Route traffic from its origin by way of predetermined intermediate locations to destination.
- (2) Assign highest priority traffic to routes that provide the minimum time distance.
- (3) Consider the capabilities of roads and bridges for sustained operations when assigning movements to routes.
- (4) Separate motor movements from foot and animal movements and slow motor movements from fast ones by assigning different times for each in accordance with their respective march capabilities. When necessary, arrange for assignment of civilian traffic to separate routes to insure freedom of movement for essential military traffic.

## 80. Traffic Scheduling

a. Traffic scheduling is the coordination of times for road movements along routes. Scheduling is necessary in order to—

- (1) Give priority to units in accordance

with the commander's directives and, when scheduling the movement of several units, to units moving to more distant positions.

- (2) Minimize delays, conflicts, and congestion by insuring that traffic flow never exceeds the capacity of the most limiting feature (most severe bottleneck) of the route and by reducing peak traffic by spreading the flow.
- (3) Provide detailed regulation of special or high-priority individual movements.
- (4) When air superiority is not established, promote security and passive defense by scheduling movements during hours of darkness.
- (5) Restrict traffic to road capabilities to permit necessary highway maintenance.
- (6) Maintain cognizance of all convoys so that any time they can be re-routed, diverted, used to meet emergencies, or held to permit the passage of priority movements.

b. In planning a large-scale road movement, many of the schedule computations become complicated and repetitious. These computations can be simplified by—

- (1) Preparation and use of conversion tables for changing U.S. common to metric distances, number of vehicles to time length, and distance to time (table 2).
- (2) Standardizing as many variables as possible. For example, if all wheeled vehicles that are not overweight or oversize can be diverted to use the same rate of march on a certain class of road, scheduling is simplified and the route is used efficiently.

c. Road movements may be scheduled by the methods discussed in (1) through (4) below.

- (1) *Infiltration schedule.* An infiltration schedule is a vehicle dispatch rate assigned to a unit for a specified period. Vehicles or small groups of vehicles, after dispatch, proceed independently to their destinations over a prescribed route. By assigning appropriate rates of dispatch to dif-

Table 2. Metric Conversion Table

Kilometers to miles (km $\times$ .621 = mi) (km $\div$ 1.609 = mi)	Miles to kilometers (mi $\times$ 1.609 = km) (mi $\div$ .621 = km)
1 = .62	1 = 1.61
2 = 1.24	2 = 3.22
3 = 1.86	3 = 4.83
4 = 2.48	4 = 6.44
5 = 3.10	5 = 8.04
6 = 3.73	6 = 9.65
7 = 4.35	7 = 11.26
8 = 4.97	8 = 12.87
9 = 5.59	9 = 14.48
10 = 6.21	10 = 16.09
20 = 12.42	20 = 32.18
30 = 18.63	30 = 48.27
40 = 24.84	40 = 64.36
50 = 31.05	50 = 80.45
75 = 46.58	75 = 120.67
100 = 62.10	100 = 160.90

ferent units using the same route, average traffic flow is held within desired limits. For example, two vehicles may be dispatched every 5 minutes the first hour and every 10 minutes the second hour.

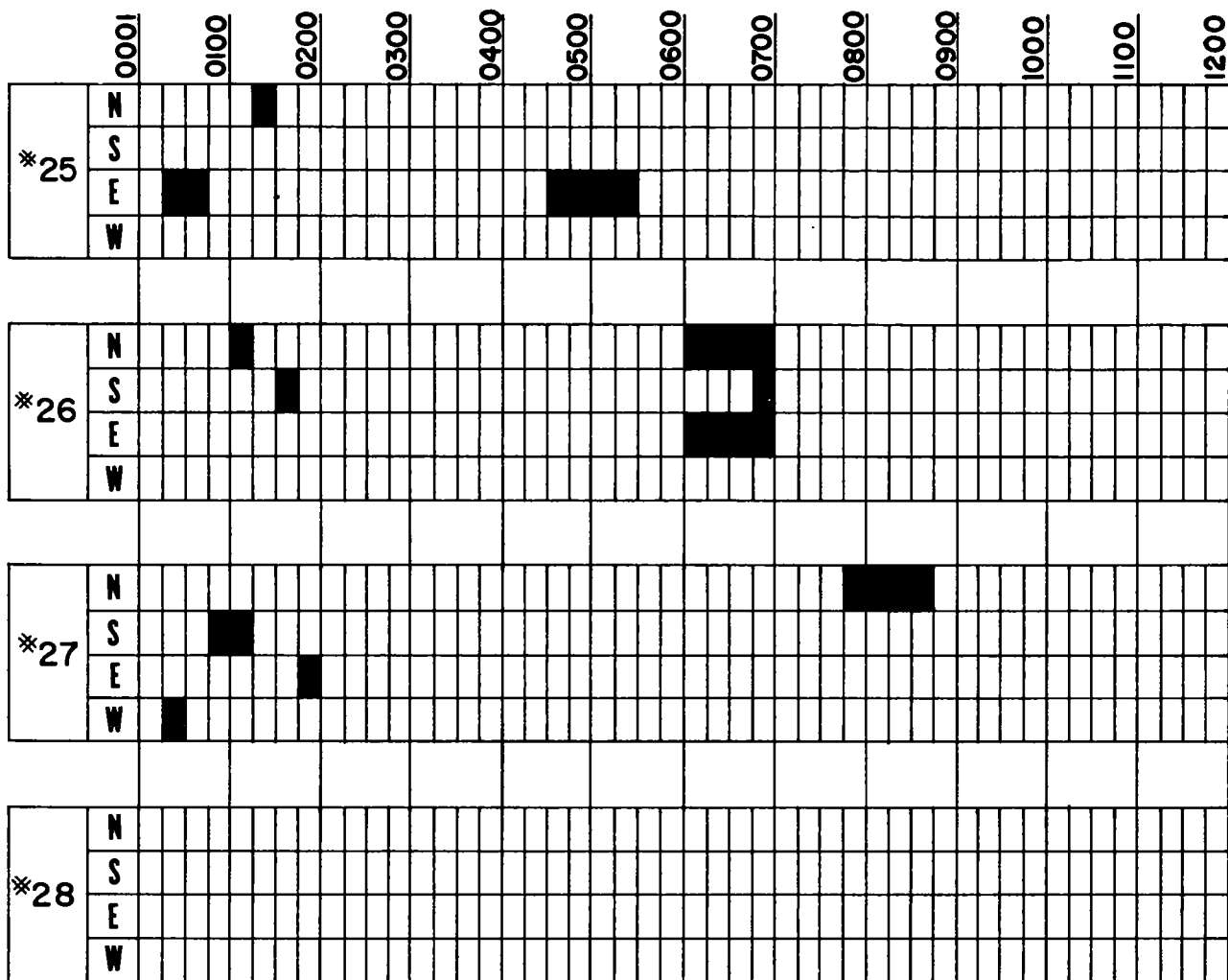
(2) *Location schedule.*

(a) A location schedule minimizes congestion and prevents clogging of the traffic stream by assigning non-conflicting times for arrival and departure to different units at a particular location. The location may be a city boundary, detour, intersection, or other critical point. A location schedule may also be applied by assigning specific times for movement in one direction; for example, at a particular intersection, unit A may be scheduled to arrive at 1000 and to clear at 1015, unit B to arrive at 1020 and to clear at 1030, etc. Or northbound movements might be scheduled to proceed through a defile every even hour and southbound movements every odd hour. Location scheduling may be simplified and graphically portrayed by use of the critical time and point graph (fig. 9).

(b) The critical time and point graph offers the traffic headquarters a more flexible and comprehensive

system for scheduling movements and checking requests for scheduling than does the march graph (para 82). It consists of a separate graphic chart for each selected critical point. These charts are divided into four sections representing a 24-hour period.

- (c) To use the critical time and point graph, the period of occupation of each numbered critical point is determined from the schedules of units using the road net during the period shown. As this information is plotted, conflicts become apparent. Separate columns may be identified by symbols or colors instead of by shading as shown in the example. In order to obtain a complete graphic presentation of movements, the critical time and point graph should be used in conjunction with the traffic circulation plan.
- (3) *Column schedule.* The column schedule indicates the arrival and clearance times for individual movements at specific points along a prescribed route of march. This schedule is used for the movement and is an aid to the unit commander in exercising unit control. Movement instructions often take the form of march graphs or road movement tables approved by the appropriate traffic headquarters.
- (4) *Route schedule.* The route schedule is used to apportion time to individual movements proceeding along or intersecting given routes. Certain routes may be designated as controlled routes, and a march graph may be prepared for each. The routes selected may be main supply routes, routes that will carry the greatest volume of traffic as indicated by traffic analysis, or routes selected on the basis of need for coordination. For example, in planning for a special operation, the routes described in all proposed itineraries submitted for approval for movement on a given day may be plotted in a single overlay. The route(s) over which the greatest



Example: Critical points 25, 26, and 27 are occupied at various times from 0001 to 0200 by miscellaneous small convoys. A large convoy traveling east will occupy critical point 25 from 0430 until 0530. It will arrive at critical point 26 at 0600 where it will turn north and occupy the intersection until 0700. Between 0745 and 0845 it will occupy critical point 27.

Figure 9. Critical time and point graph.

number of convoys move should then be selected as the dispatch route(s). This method graphically portrays the progress of each convoy (for example, a change in the rate of march is readily apparent). The route schedule is limited in scope as, by itself, it provides no control over movements to and from the dispatch route.

d. The following are axioms for guidance in scheduling highway movements:

(1) Intra-area movements are scheduled

and a movement number is assigned to the unit by the traffic headquarters of the command having area jurisdiction.

(2) Inter-area movements are coordinated between areas concerned. The traffic headquarters in the area where the movement originates assigns the movement number. Where inter-area movements conflict and cannot be resolved by the traffic headquarters concerned, the commander having overall juris-

diction is advised through the appropriate general staff section and is requested to determine the priority of movements.

- (3) A round trip scheduled for completion within 24 hours is treated as a single movement. When more than 24 hours are required to complete a round trip, the return trip may be treated as a separate movement requiring a new movement number.
- (4) A movement in one direction only, regardless of the number of days involved, is treated as a single movement and retains the same movement number to destination.
- (5) March units within a column may be identified by adding a letter behind the movement number.
- (6) Approved schedules and assigned movement numbers are furnished the provost marshal so that he may provide necessary traffic control within his capabilities.

## 81. Procedures

Whereas the foregoing paragraphs of this chapter have been primarily concerned with the interior workings of the traffic headquarters, the following procedures pertain primarily to other agencies:

### *a. Request for Convoy Clearance.*

- (1) Before beginning a road movement over a route requiring a movement credit, the unit must submit a request for clearance through prescribed channels to the traffic headquarters within whose area the movement originates.
- (2) DD Form 1265 (Request for Convoy Clearance) is a dual-purpose document serving as either a request or an authorization for movement, or both. It is used by the requesting agency desiring to initiate a movement via highway and by the traffic headquarters to grant clearance and to initiate a movement via highway and by the traffic headquarters to grant clearance and to issue instructions for the road movement. Information to complete this form is supplied by the unit requesting the movement. Depending on the urgency

of the requirement, the information contained in the form may be transmitted orally, electrically, or in writing.

### *b. Granting the Movement Credit.*

- (1) After receipt of the request, the traffic headquarters, if possible, schedules the movement at the time and over the route requested by the unit. When the move cannot be scheduled at the requested time or on the requested route, the requester is immediately notified and an alternate time and/or route(s) are arranged.
- (2) After final coordination and approval, the traffic headquarters issues the necessary movement credit and movement number for the convoy plus any additional required information. This authorization is returned to the requesting agency through the same channels used in the request.

*c. Issuing Priorities.* Priorities are issued on the basis of urgency or critical need. Generally, when conflicts occur between movements having the same priority, forward-moving traffic has priority over traffic moving to the rear; forward-moving loaded vehicles have priority over empty vehicles moving in any direction. Priorities are established on the basis of the commander's requirements to meet the military situation and can be expected to change from time to time.

*d. Emergency Operations.* Changes in the tactical situation, damage to roads, or traffic congestion may require adjustments of traffic routing and scheduling.

- (1) If a breakdown or serious interruption of the traffic plan can be anticipated, alternate plans should be prepared to meet the emergency. These plans may involve rerouting, re-scheduling, and relocation of control and regulation personnel.
- (2) Traffic emergencies that cannot be anticipated require prompt solution in the field. Military police, in cooperation with highway regulating personnel assist column commanders in taking immediate action. These field agencies (highway regulating



points, traffic control posts, military police motor patrols, and highway regulating point patrols) effect local emergency routing, giving due consideration to established highway routes and schedules, and report such routing to the traffic headquarters and to highway regulating points in the immediate area. Extensive re-routing is accomplished only on order of the traffic headquarters.

- (3) On receipt of advice from the field, progressive adjustments of traffic plans can be made by the traffic headquarters. Changes in the plan are communicated to the field regulating and control elements and to other affected agencies as soon as possible so that the modified plan can be implemented locally.

*e. Control and Communications.* The effectiveness of highway regulation depends to a major extent on the organization of staff and field personnel and the communications available for coordination and for transmission of instructions, orders, and reports.

- (1) The organization of personnel for highway regulation is based on 24-hour operation of the highway regulating points and the military police traffic control posts designated to perform highway regulation functions. These points are located at intervals along the route(s) so that progress of vehicles can be reported and followed and movement schedules adjusted as required. Locations should be selected with care. Each highway regulating point should be located where a definite requirement for control can be anticipated. Truck terminals, transfer points, crossroads, or key routes to or from port or depot complexes may be advantageous locations. It may be necessary at certain selected points to provide off-road parking for convoys in order to delay the onward movement of low-priority convoys while those of higher priority are allowed to pass. These off-road parking areas should permit dispersion and provide

concealment from aerial observation. The teams to operate highway regulating points are organized and equipped to—

- (a) Report on convoys and other elements arriving at and clearing the point so that progress may be reported and their rates of advance adjusted as required.
  - (b) Receive, correlate, and disseminate traffic and operational information and make reports on current highway conditions and changes as they occur.
  - (c) Transmit orders from higher headquarters to passing units or organizations.
  - (d) Make diversions and effect changes in priorities of traffic as directed.
- (2) An adequate system of communications must connect the traffic headquarters with highway regulating points and traffic control posts. To insure effective coordination of supervision and control, all control personnel, including column commanders, must be kept abreast of traffic conditions and changes affecting the operation. Organic communications equipment, the operations communications net, the area communications system, and liaison are combined for effective communications under all conditions. Army aircraft, when available, may be effectively utilized for both communications and control.

## 82. Preparation of a March Graph

A march graph is used to portray the movement of a vehicle or column(s) over a controlled road or road net in order to avoid conflicts in schedules and routings. An example of the procedures used to prepare a march graph follows:

*a. Scheduling the Head of the Column* (fig. 10). The first movement to be plotted on this graph is to start at Roland at 0400. It will proceed to Dundalk at a rate of march of 20 miles (32 km) in the hour. The distance to be traveled (100 miles (160 km)) can be determined from the strip map and the mileage scale at the left of the chart. The time re-

quired to move from Roland to the destination (time distance) at the scheduled rate of march is 5 hours. The point at which the lower end of the diagonal line begins on the graph (0 miles, 0400 hours) indicates the start point and the starting time of the convoy. The point at which the upper end of the diagonal line ends on the graph (100 miles, 0900 hours) indicates the destination and time of arrival of the head of the column at that point. The diagonal line between these two points represents the scheduled progress of the head of the column as it travels along the route of march (indicated by the strip map paralleling the distance scale).

*b. Scheduling the Tail of the Column* (fig. 11). Unless the march column or element is very short, both the head and tail of the column should be plotted on the graph. This is accomplished by determining the time length of the column (the amount of time it takes the column to pass any given point on the route of march), computing the time the tail will depart from the start point and its time of arrival at destination. A diagonal line between these two points (parallel to the line representing the head of the column) is drawn on the graph. These two diagonal lines (representing head and tail) may then be joined at the origin and destination to form a block representing movement of that column over the road. In the example shown, the time length of the column is 1 hour. Thus, the tail will clear Roland at 0500 and will arrive at destination at Dundalk at 1000. Figure 11 also illustrates some of the planning and operational data available through analysis of the graph.

*c. Scheduling Several Columns Over the Same Route.* Road movement graphs provide the means for scheduling several columns or serials over the same route. A highway regulation officer, or the commander of an organization which is moving in several elements (serials, march units, etc.), can prepare a graph for a given period or a given group of movements. Then, through information received from highway regulation personnel, traffic control personnel, convoy commanders, and other control personnel on the ground, he can maintain an accurate record on the graph as the various elements proceed along the

route. Pencil shadowing, colored pencils, crayons, ink, or tape may be used to designate various elements and to indicate schedules, priorities, actual progress, etc. Changes and adjustments in the operation may be made on the graph as the various columns progress along the route of march. Figure 12 shows a road movement graph prepared for a particular group of movements. If these movements were to proceed as scheduled, they would not interfere with each other and there would be no requirement for adjusting any schedules or for changing the graph. However, situations may arise at any time during an operation which might necessitate adjusting schedules and require replotting on the graph. Figure 13 shows the graph for the movements as it might have been completed after certain operational changes occurred. The assumed changes reflected in the graph in figure 13 are listed in (1) through (5) below.

- (1) *Column A.* Column A scheduled to move from Roland to Dundalk at a rate of march of 20 miles (32 km) in the hour completed its movement as scheduled.
- (2) *Column B.* Column B consisted of three serials. It was originally scheduled to move from Mt. Royal to Tavi-stock at a rate of march of 15 miles (24 km) in the hour. However, it received a change in orders directing that it continue without delay to Avery, the noon meal to be fed upon arrival at destination. The change was plotted on the graph, the column commander was informed, and the move was completed according to its new orders.
- (3) *Crossroad traffic.* On the original road movement graph (fig. 12) information was plotted concerning a laterally moving column which would cross the north-south route at a crossroad 6 miles (9.6 km) north of McClean and block it from 1330 to 1400 hours. This move was not identified as a serial but was shown on the graph as a line blocking the north-south route during the stated period. When column B was rescheduled to its new destination (fig. 13),

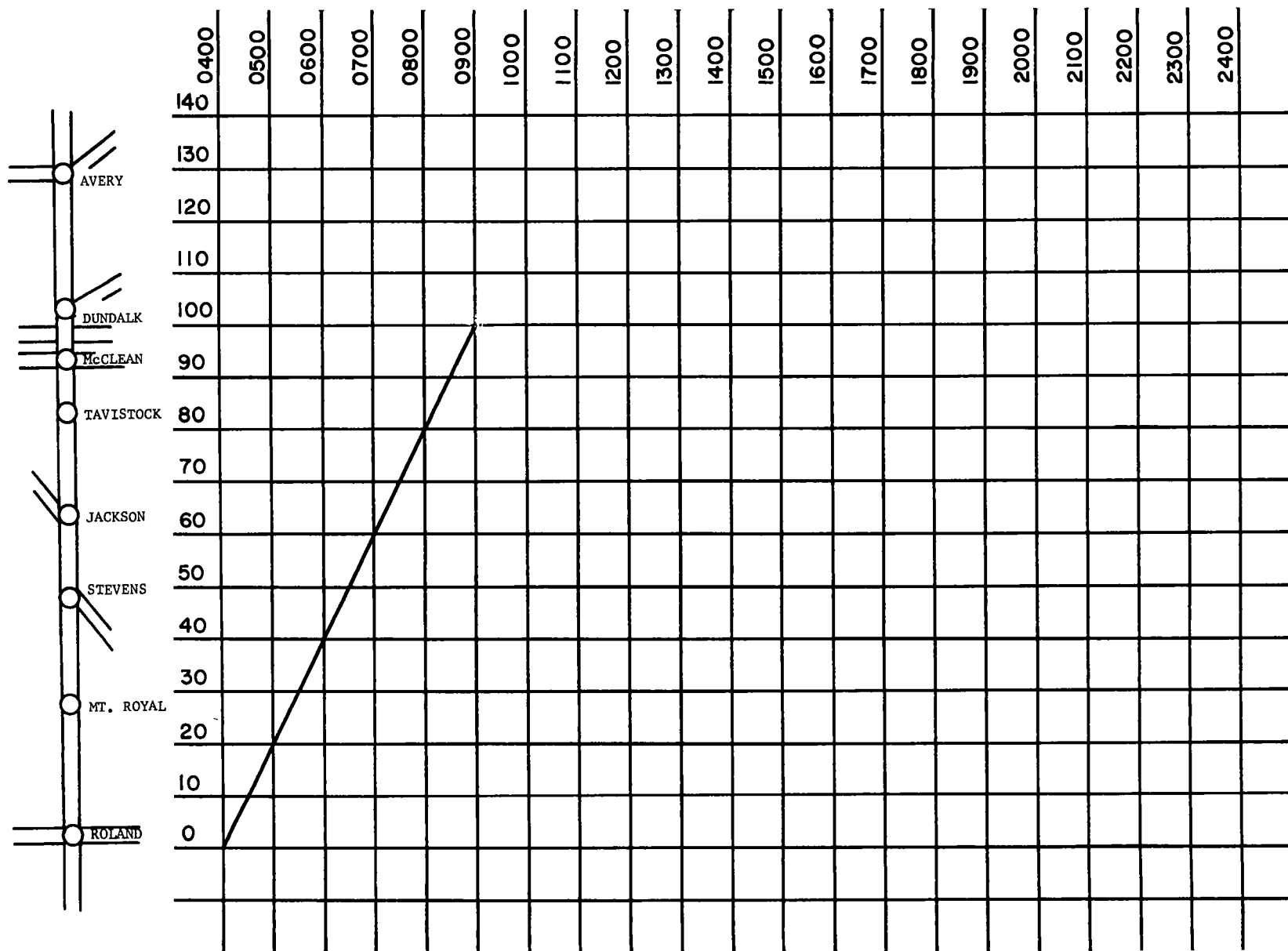


Figure 10. Plotting the head of the column.

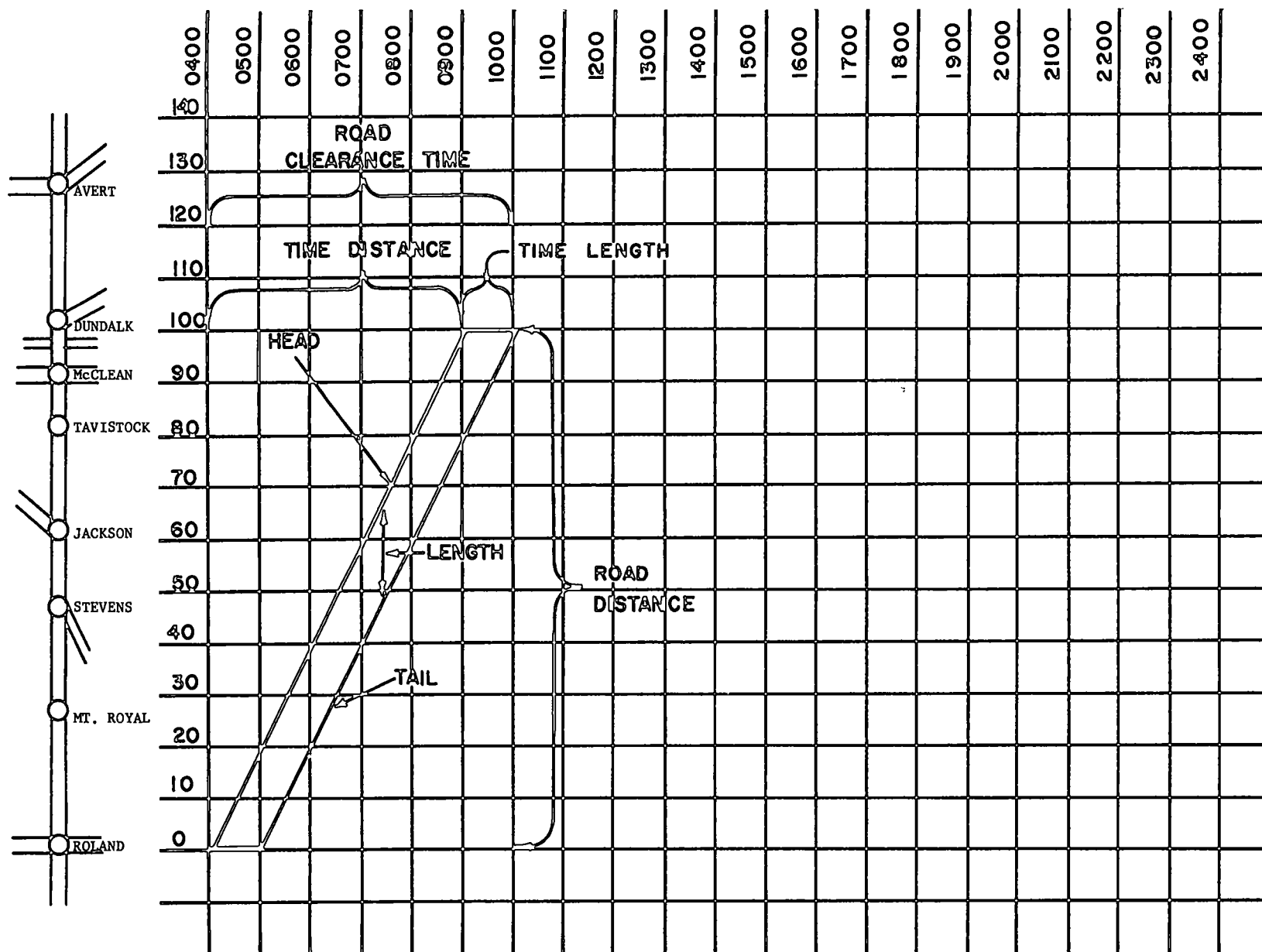


Figure 11. Plotting the tail of the column.

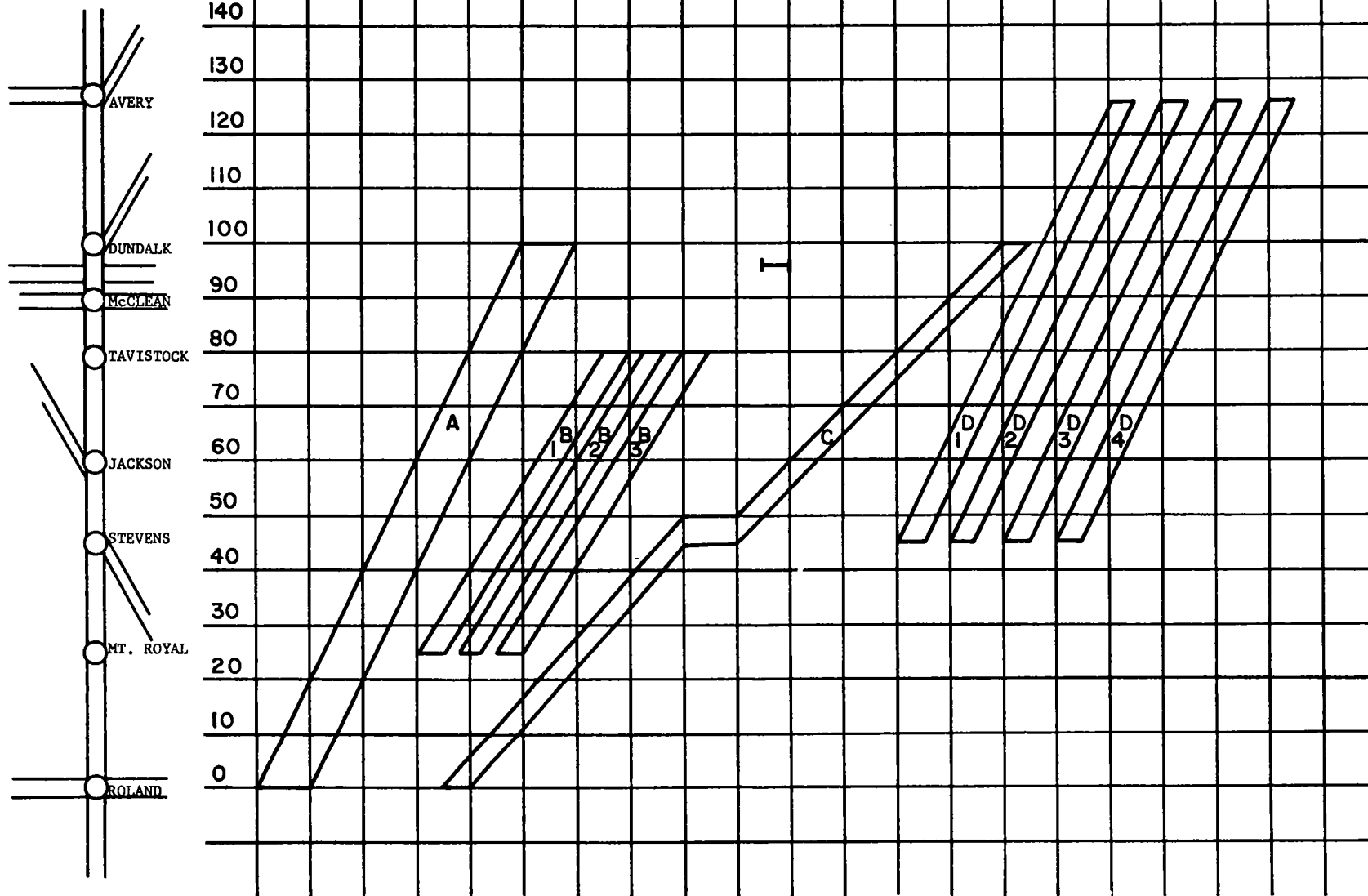


Figure 12. Plotting several columns over the same route.

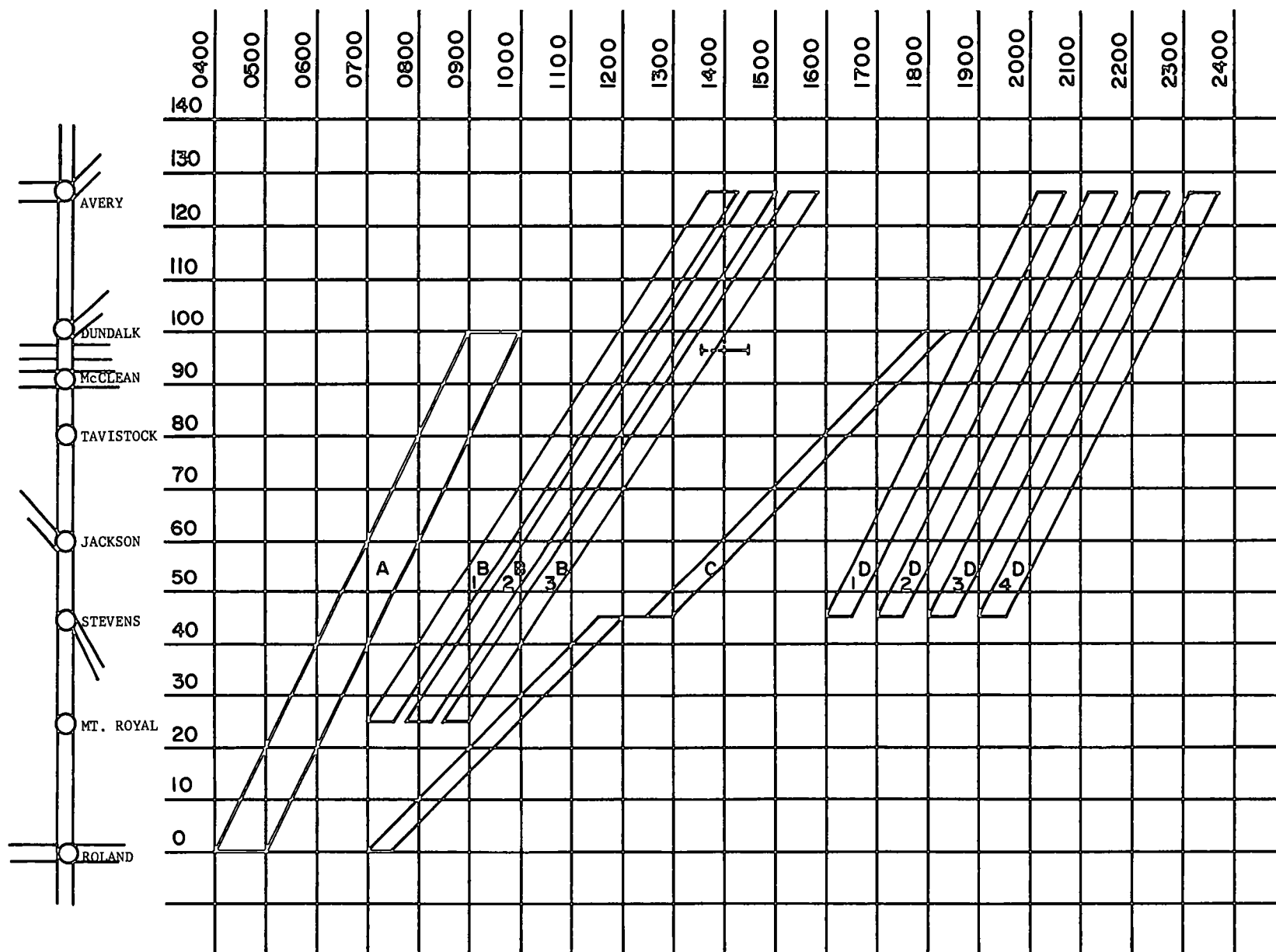


Figure 13. Completed graph, reflecting operational adjustments.

it was determined that there would be a conflict between the third serial of column B and the lateral movement. Since it was not considered feasible to break up the formation of column B and a check of priorities showed that the lateral movement had the lower priority, the lateral movement was halted for one-half hour to allow the third serial of column B to clear the intersection. The lateral movement then arrived at the crossroad at 1400, approximately 15 minutes after the last vehicle of the third serial of column B cleared the intersection. The dotted line in figure 13 indicates the originally scheduled crossing of this lateral movement; the solid line shows its rescheduled crossing time.

- (4) *Column C.* Column C was scheduled to move from Roland to Dundalk at a rate of march of 10 miles (16 km) in the hour and to make a 1-hour noon halt along the road (after passing

Stevens). At about 1045, traffic conditions deteriorated rapidly owing to the retrograde movement of engineer heavy equipment coming onto the route at Jackson and leaving it at Stevens. To alleviate this condition, it was decided to halt column C at 1130 at the intersection in Stevens and to have the convoy more off the road into a parking area adjacent to the highway regulating point at that location. Then after the noon meal and after passage of the engineer convoy, column C would proceed to destination. This required minimum schedule adjustment. (Note the method of plotting an off-the-road halt (fig. 13) as compared to a halt on the road (fig. 12).)

- (5) *Column D.* Column D, consisting of four serials, scheduled to move from Stevens to Avery at a rate of march of 20 miles (32 km) in the hour, completed its march as scheduled.

## CHAPTER 7

### TRANSPORTATION MOVEMENT OFFICES PROCEDURES AND DUTIES

---

#### 83. General

a. The duties to be performed by each transportation movement office (TMO) will depend on the immediate situation. Some of the duties usually performed by the TMO at the various locations are contained in SOLOG Agreement 31 (app E), and additional duties are outlined in (1) through (20) below.

- (1) Assists in the preparation of plans for expeditious handling and loading of freight movements.
- (2) Advises the next higher movement office of the ability of shippers to originate and receive movements.
- (3) Based on information from the daily installation situation and other reports, informs the next higher TMO or movement control center (MCC) of the progress of movements.
- (4) Acts to correct congestion or conditions which reduce the movement capacity of available facilities. When action requires more than the delegated local authority, recommendations are referred to the next higher TMO or headquarters.
- (5) Assures that movements are accomplished by the means and in the priority designated by movement programs or other directives.
- (6) Receives requests from shippers for transport capacity to meet movement requirements.
- (7) Allocates movement capability to shippers to accomplish movement requirements, including nonprogramed requirements for which local release is authorized by proper authority.
- (8) Submits to the next higher TMO or MCC requests for transport capacity to accomplish movements not contained in movement programs or other directives and for which local release has not been authorized.
- (9) Determines through movement channels the ability of consignees to accept shipments.
- (10) Prepares and distributes movement instructions to shippers and transport services to insure that activities are coordinated in the accomplishment of movements.
- (11) Coordinates the arrival and spotting of transport equipment for loading and unloading at the time and place mutually agreeable to the shipper and the transport service.
- (12) Determines compliance with established packing, marking, and documentation procedures. (Special requirements for documentation for intratheater movements in NATO areas are contained in STANAG 2166 (app M).)
- (13) Provides such advice and supervision as may be required to accomplish efficient and expeditious handling, loading, and unloading of transport equipment.
- (14) Insures, as far as practicable, that transportation equipment or convoys of equipment are loaded for one destination with a single class of supply.
- (15) Arranges for and coordinates escorts and communications for shipments of classified materials as required.
- (16) Arranges for and coordinates en route bivouacs, rations, services, and resupply for movements, as required.
- (17) Notifies the destination TMO of any



information pertinent to the movement which may assist the consignee in receiving the movement.

- (18) Enforces embargoes and priorities which have been established by proper authority.
- (19) Advises installations of impending arrival of movements listed in movement programs or other directives.
- (20) Regulates movements inbound to or outbound from the installation or area by granting or refusing clearances to local installations originating or receiving movements.

b. A local TMO may serve several shipping agencies, and each agency may make many shipments each day. The TMOs will work around the clock during hostilities but during peacetime may use only a skeleton staff during those periods when shipping activities are not working. The busiest times will normally be when the requests for transportation for the following day's shipments commence to arrive and are being processed. For instance, at 0800 hours daily many requests for transportation are being received. The requests are numbered and logged, and the requirement for each mode is determined. The modes are then contacted. For example, rail is contacted and informed that shipping point A has a requirement for a certain number and type of cars to be moved to a specific destination; likewise, shipping point B, and so forth. Negotiation then takes place, such as, "We are short of boxcars; can some of this material be loaded on gondolas?" "The shipment moving to D cannot be carried today because the track is bombed out; it will be ready tomorrow." And so it continues until complete arrangements are made. Meantime, the same type of negotiation goes on for the other modes of transport. The information is assembled and passed on to the respective shippers, informing them of the amount, the time, and spotting position of equipment for the following day's work. In large areas it may be necessary to hold equipment meetings, with the TMO presiding and the mode operators and the shippers presenting their operational situation and airing their troubles or problems.

c. Consideration should be given to the time

reports of shipments (REPSHIPS) go forward. They alert the consignee and must arrive in sufficient time for him to take the necessary preparatory action. For example, reports of air shipment, when the air move takes only 2 hours, should be simultaneous with the takeoff of the craft.

#### **84. Movement Activities at Origin**

a. *General.* The primary duty of a TMO located at a point where a movement originates is to coordinate, within the framework of the movement directives, with the users of transportation, the transport operator, and the MCC staff responsible for the allocation and management of movement capacity. These TMOs assure that the relationship between users of transportation and transport operators is coordinated so that the programs, directives, and policies of the commander are complied with and maximum use of movement capability is obtained. To insure the successful performance of the transportation mission, shippers must request transportation through the appropriate TMO. Transport services must provide movement capacity only when authorized to do so by the appropriate TMO.

##### *b. Requests for Transportation.*

- (1) Requests for transportation should be submitted as far in advance of the desired shipping time as possible. Cutoff times for requests may be established by the responsible commander, after which no requests will be accepted for routine movement on the following day. Within the specified period, normally 0800 for rail and 1500 hours for highway, the shipper submits his requests for transportation to the designated TMO. The format for the request will be specified by the MCC and, in accordance with STANAG 2156 (app J), the request must contain all the information necessary to allow the TMO to—
  - (a) Determine the most suitable means of transport in relation to the requirements and the actual transport available (if the means (mode) is not specified in a movement program).

- (b) Decide what action is necessary to implement the movement.
- (2) The TMO will verify the request for accuracy, check it against the movement program, and forward necessary information to the selected mode operator serving the area.
- (3) The carrier will designate a specific unit of transport to make the move and will notify the TMO of the day, the hour, and the number of units that will be spotted. The TMO will then furnish a reply to the requestor, using the format prescribed by the MCC. The prescribed format must contain, as a minimum, that information specified in paragraph 8 of STANAG 2156 (app J).
- (4) When the transport has been loaded, the shipper will notify the TMO and release the transport for movement in accordance with movement procedures for the area.
- (5) The carrier will notify the TMO of the actual time the shipment departed the terminal.

*c. Report of Shipment for Freight.* Immediately after a shipment starts to move from its point of origin, a REPSHIP is prepared by the consignor and dispatched to the consignee. Information copies of the REPSHIP are forwarded to the MCC, the TMO at origin and destination, and other interested agencies. The REPSHIP is prepared as outlined in paragraph 64.

## 85. Movement Activities En Route

### *a. General.*

- (1) Once a shipment begins to move, one or more of the following actions may take place. The shipment may be—
  - (a) Consolidated.
  - (b) Stopped in transit.
  - (c) Held in transit.
  - (d) Diverted.
  - (e) Reconsigned.
  - (f) Transferred.
  - (g) Traced.
  - (h) Expedited.

- (2) Movement personnel are not operators in the sense of physically diverting a shipment. They are the monitors of the traffic moving over a system. They request the transport services to divert shipments, and the diversion and necessary redocumentation is accomplished by the transport service.
- (3) Transit servicing, such as stopping in transit, holding, diverting, and reconsigning, by agencies unfamiliar with the transportation situation can create congestion, confusion, and waste of movement capability. All requests for such action must be made through TMOs, which in turn notify the MCC, either via the computer system or by conventional communications. The MCC, with its access to the computer and by properly coordinating activities with all concerned, can insure free flow of movements to destination.

### *b. Transferring.*

- (1) The operation of a transfer point is a responsibility of the commander operating the transportation system being utilized. As an example, terminal transfer units of the theater army support command (TASCOM) transportation command may be employed in the field army area to transfer cargo from rail to TASCOM trucks in connection with TASCOMs responsibility to deliver cargo to the direct support units in the corps support brigades and to division support commands. The principal reasons for the establishment of a transfer point are—
  - (a) Termination of the line of communication provided by one mode of transport, making transfer to another mode necessary to continue the movement.
  - (b) Interruption or absence of a through route because of—
    - 1. Varying gages of railroads.
    - 2. Damage to route or facilities along the route such as rails, bridges,

- canal locks, or airfield traffic control facilities.
- 3. Limitation of weight or size (vertical or horizontal) on roads, railroads, and bridges.
- 4. Temporary disruption of service by enemy action.
- 5. Inclement weather resulting in blocking or rendering the use of the original mode too hazardous.
- (c) Further forward movement by original mode considered inadvisable due to proximity of enemy forces.
- (d) Reduction of capacity at a point along a line of communication, making necessary the transfer of the excess load to another mode of transport.
- (2) Once a shipment has started movement, transferring permits it to flow from origin to destination without additional action on the part of the consignor. Strategically located transfer points increase the overall movement capability of the transportation system and provide locations where transit services such as holding in transit or diversion may be easily accomplished.
- (3) Movement personnel do not operate transfer points, but they will normally be located at intermediate points in the theater of operations where diversion or change in movement priority will be accomplished or where close supervision is required to prevent congestion. They will be available to coordinate the movement aspects of the operation.
- (4) A transfer point is a modified shipping and receiving agency from the following viewpoints:
  - (a) When the consignor ships through a transfer point, the movement program will have designated the transfer point. When the shipment has departed the consignor, a report of shipment is forwarded to both the consignee and the transfer point. The estimated time of arrival to the consignee is based

on the time taken to move through the transfer point and on to ultimate destination.

- (b) Upon receipt of the REPSHIP the transfer point prepares for the receipt and outshipment of the traffic. As did the original consignor, the personnel at the transfer point submit a request for transportation. This request may be a consolidated request for the day's anticipated activity. The transfer point forwards a REPSHIP to the consignee upon departure of the shipment from the transfer point.

#### *c. Tracing.*

- (1) Tracing is the procedure for locating a shipment en route or for confirming the forwarding or delivery of a movement. Except for baggage, tracing actions are initiated in accordance with the provisions of part IV, SOLOG Agreement 31 (Revised) (app E). Tracing actions for accompanied baggage transported by air are initiated as outlined in STANAG 3344 (app O).
- (2) In a computer-based system, based on information contained in the movement check/standard tracer (SOLOG 31, app E), the TMO relays necessary information to the computer serving the MCC. The computer determines the approximate location of the shipment, based on the latest passing report or other source of information and relays such information to the mode operator. The computer may also be programed to direct the mode operator to take transit action as per instruction *p* in the movement check/standard tracer. In either a computer-based or manual system, the mode operator determines the exact location of the shipment and either takes transit action and advises the TMO of action taken or advises the TMO of the next location where transit action can be taken and of the estimated time of

arrival of the shipment at that location. If transit action has been accomplished, the TMO notifies the originator of the movement check/standard tracer of the action. If action is still required, the TMO advises the next location where transit action can be accomplished and then notifies the initiator of the movement check/standard tracer.

*d. Expediting.*

- (1) Expediting is of primary importance when a shipment is urgently needed at destination and when delay is apt to occur on the lines over which the shipment is to move. As each expedited shipment is a disruption of the normal movement of supplies, all requests for expediting shipments should be processed ICC/MCC channels to eliminate abuse of this type of service.
- (2) Expediting should begin before the shipment is actually moved so that it can be packed, marked, loaded, and routed to take advantage of the fastest transportation schedules. The movement planner can arrange for shipment by priority transportation, and carriers can monitor the shipment en route to make sure that it travels at maximum speed. Movement personnel should place on the REPSHIP sufficient identification so that each TMO along the line can assure that the shipment is not unnecessarily delayed. Expedite shipments should be clearly marked so that transport services personnel will easily recognize them.

## **86. Movement Activities at Destination**

*a. Receiving, Unloading and Releasing Transport.* Activities at destination of a shipment consist of receiving, unloading, and releasing the transportation equipment. The TMO coordinates the activities with the consignee and issues instructions to the consignee on the disposition of the equipment. The unloaded transport equipment may be used for retrograde shipments or released to

the transport service, or, if it is controlled equipment, disposition is made in accordance with instructions received from the MCC.

*b. Assistance to Consignee.* The effectiveness of the transportation service is reduced when receiving installations become congested and are unable to unload arriving shipments promptly. The transportation movement officer insures that movements are not forwarded to an installation in excess of capability of the installation to unload and clear from the loading area. This may include advising receiving personnel on ways to increase traffic handling at the site and on preparation of plans for unloading and clearing operations.

## **87. Duties of Air Traffic Coordinating Offices**

*a. General.* Scheduled air line of communication operations require timing and precision in loading and unloading aircraft. Both the cargo and the aircraft are critical items. To insure timely movement of cargo and personnel and to facilitate efficient use of aircraft, airlift operations and related activities must be closely coordinated. Accomplishment of this objective is the primary task of transportation movements officers stationed at air facilities. These personnel are designated air traffic coordinating officers (ATCOs).

*b. Relationships.* ATCOs normally function under the operational control of the MCC. In this case, the ATCOs are responsible for maintaining a continuous and orderly flow of traffic into and out of the airlift system. Their actions are governed by command movements management policies and procedures and by allocations contained in the command's movement program. ATCOs perform the same functions in an independent Army air transportation system under policies established by the Air Force airlift command. In both instances, close working relationships are essential among ATCOs, TMOs, other air terminal elements, and aircraft operating elements.

*c. Functions.* In carrying out their essential responsibilities of coordinating and expediting, ATCOs provide a single point of contact for all matters relating to the procurement and

use of air transportation service. They perform the following major functions:

- (1) Control and coordinate the flow of traffic into the airlift system. Traffic flow is based on flight schedules and availability of opportune airlift. Control is normally exercised through an air movement release system based on policies, priorities, and allocations established by the responsible commander. Within prescribed limits, adjustments are made to meet local conditions. Significant variations from programed or scheduled requirements are referred to the command MCC for resolution. Coordination may include any or all of the following actions:
  - (a) Maintaining current information on flight schedules and other pertinent flight operations data.
  - (b) Maintaining current knowledge of the status of terminal receiving, warehousing, and loading facilities.
  - (c) Determining shippers' loading capabilities and shipping schedules.
  - (d) Arranging for pickup of shipment if motor transport is available for that purpose; otherwise, informing shippers of desired delivery time. Also, arranging for on-site pickup by aircraft under appropriate conditions.
  - (e) Assisting the terminal transfer element as required to facilitate expeditious loading and unloading of aircraft.
- (2) Arrange for diversion of traffic from air to surface to prevent or relieve air terminal congestion as required or as directed by competent authority.

## **88. Duties of Rail Transportation Officers**

*a. General* In large transportation terminals, in major cities, in areas where the density of U. S. forces does not warrant the establishment of housekeeping type organizations, and at such other locations as the ap-

propriate commander may specify, TMOs may be assigned responsibility for performing the duties of rail transportation officers (RTOs). The RTOs are concerned with facilitating the movement of passengers and freight through the area in which they are stationed by furnishing information and by coordinating with local carriers.

*b. Relationships.* RTOs normally function under the operational control of the MCC, but have close working relationships with other military facilities in the area and, when employed in a U.S. forces area, with the local area commander. They coordinate closely with local carriers and normally have office space in the passenger terminal area of the carrier.

*c. Functions.* In carrying out their essential responsibilities of coordinating and expediting, RTOs provide a point of contact with all carriers and travelers in their area. In addition to the normal TMO functions, they may perform any or all of the following:

- (1) Custody of, accounting for, and issuing transportation requests, warrants, or tickets for travel on commercial or military conveyances.
- (2) Furnishing travel information and obtaining passenger accommodations for persons traveling on official business in military or commercial carrier equipment.
- (3) Maintaining familiarity with schedules, services, facilities, rates, fares, and charges of commercial carriers and providing such information to U.S.-sponsored travelers.
- (4) Operating a consolidation and distribution facility in conjunction with an LCL (less than carload lot) service of the carriers in the area. When assigned this function, additional personnel and equipment from TOE 55-500 must be authorized.
- (5) Arranging for messing and billeting of in-transit personnel.
- (6) Obtaining schedules for special military trains.
- (7) Arranging for provisioning of military passenger trains originating in or transiting the area.

- (8) Preparing passenger manifests.
- (9) Providing conductors for military trains.
- (10) Assisting arriving personnel through

customs and immigration at rail ports of entry or at commercial water ports of entry where no U.S. terminal unit is stationed.

# ANNEX A

## INTERIM IMPLEMENTATION OF TASTA-70

---

### Section I. GENERAL

#### 1. Purpose

The use of automatic data processing equipment (ADPE) in connection with movement control and highway regulation will be accomplished by a gradual transition from manual to computer operations, taking place over a period of several years. The purpose of this annex is to describe interim procedures that may be used during the time beginning with the TASTA-70 (the administrative support, theater army, 1970) implementation and continuing until such time as sufficient ADPE and associated communications become available to incorporate movements management and highway regulation in the combat service support system (CS<sub>3</sub>) of automatic data systems for the army in the field (ADSAF). It also provides backup procedures for equipment or communication failures.

#### 2. Interim Capabilities

a. The organizations described in this manual are capable, when augmented by appropriate communications teams, of functioning under either a manual or an automated system. However, when operating under a manual system, responsiveness in two areas will be degraded.

- (1) Responses to command queries on the status of movements (or such other reports or information as the commander may desire) will require a greater time to assemble and relay manually than if ADP facilities were used. Replies will therefore be slower and on an "as of" status rather than a current status. The additional time required to prepare the responses

will depend on the nature of the requested information.

- (2) Response times to requests for in-transit services (diverting, tracing, expediting, or holding in transit) for shipments are largely dependent on whether an automated system, with the in-transit shipment inventory capability, is used or whether manual procedures must be followed. A more detailed discussion of response times and their effect in shipments is contained in section III.

b. It is estimated that at the theater army support command (TASCOM) an automated movement system would require the daily transmission of 2,096,000 characters and a 3,750,000 character memory storage. The cost of such a computer and communications system precludes their purchase and installation during the interim period described above. However, ADPE currently in theaters can and should be used during the interim period. Such use will facilitate movement control operations and provide a desirable (but less complete) indoctrination for Army personnel in data processing systems. A comparison of existing ADP systems and their potential application to movements management during the interim period is contained in section II.

#### 3. Computer Information

In any discussion of computers, it must be remembered that a computer is not an electronic brain. It can add, divide, multiply, and subtract (by a system of addition), and it can tell whether one number is equal to, greater than, or less than another number and whether a number has a positive or negative

value. However, to accomplish any particular function, the computer must be told what to do, step by step, instruction by instruction. These steps or instructions make up the computer program. The program must be fed into the computer in specific terms that the computer is capable of understanding. These terms constitute the "language" of the computer. As various nations of peoples speak different languages, so do various types of computers. In other words, all computers are not capable of "talking" to each other. This is the situation that exists today in various theaters and one which will be remedied when the computer system discussed in this manual is installed. By standardizing computers and languages, the movement control center (MCC) computer will be capable of "talking" to the computers of the inventory control center, the personnel administration center, and other MCCs and probably to all systems in the theater and to primary computer systems in the continental United States.

#### 4. Current Status

At the time this manual was written, there were in U.S. Army, Europe (USAREUR) and U.S. Army, Pacific (USARPAC) punchcard machines and several types of computers (programed in different languages) performing portions of the movement functions. For example, in USAREUR computers are used for checking on past transportation performance, for determining requirements for pas-

senger transportation, and for programing transportation service workloads. Punchcard machines are used for processing materiel release orders, preparing transportation control and movements documents (TCMDs), and preparing vessel manifests and hatch lists.

#### 5. Time Schedules

The schedule date for completion of a military ruggedized ADP system (programing, equipment procurement, systems installation, and "debugging") for movement control and highway regulation in theaters of operation is 1975. During the interim period, maximum use will be made of the capabilities of existing and planned ADP equipment and programs.

a. In the Seventh Army in Europe an ADPS for highway regulation, forecasting movement requirements, scheduling highway movements, and monitoring highway movements is planned for completion during 1972.

b. In USARPAC, an ADPS with the capabilities outlined in *a* above is scheduled for completion during 1973.

c. During 1954 the ADPs for the TASCOC MCC is to be completed in both USAREUR and USARPAC.

d. Subsequent to 1974 all systems will be expanded to cover—

(1) The total movements and highway regulation functions outlined in this manual.

(2) The various mode and terminal operations.

## Section II. CURRENT AND INTERIM PROCEDURES

#### 6. Port Clearance Planning

##### a. Current Procedures.

- (1) Punchcard transportation control movements documents (TCMDs) are forwarded by transceiver or airmail from the continental United States (CONUS) shipping activities to CONUS water terminals. These TCMDs identify the shipper, consignees, port of embarkation (POE), commodity, weight, and cube.
- (2) At the POE, TCMDs are used to plan onward movement of the shipments, to process shipments through the

terminals, to prepare mechanized cargo manifests, and to satisfy date requirements for internal operation reports.

- (3) Depending on automatic data processing equipment (ADPE) capabilities, cargo manifests or the punched cards used in preparation of the cargo manifest are transceived or airmailed to the port of discharge.
- (4) Cargo manifests or cargo manifest cards are received at the overseas ports in advance of the materiel and



are used for planning vessel discharge.

- (5) Copies of the manifest are mechanically prepared for local distribution. Information contained in the manifest is used for the preparation of hatch lists, discharge papers, and TCMDs.
- (6) When the vessel discharge plan (4) is prepared, the movement control center (MCC) is notified. The MCC then makes determination of the mode of transport to be employed for each line item of the manifest and determines the capability of the consignee to accept the shipment by the mode and on the ETA (estimated time of arrival) date. The MCC then notifies the discharging port and the transportation movements office (TMO) serving the port of the mode to be employed.
- (7) TCMDs are used as vehicle waybills or shipping documents for onward movement to the ultimate consignee.

*b. Interim Procedures.*

- (1) Steps (1), (2), and (3) of current procedures (*a* above) remain unchanged.
- (2) Cargo manifest cards are received by the MCC. The MCC obtains from the inventory control center (ICC) any changed destinations, determines the mode of transport for each shipment, and through use of the ICCs ADPE prepares the movement program, hatch lists, and advance TCMDs for consignees.
- (3) Dependent on ADPE available, the MCC transceives or sends by courier the manifest information and hatch lists to the port and mails advance TCMDs to consignees.
- (4) The POE uses the manifest information and hatch lists in planning vessel discharge and coordinates with the local TMO for placement of transport equipment used to move cargo through the port. The TCMDs are used for vehicle waybills or shipping documents for onward movement to the ultimate consignee.

## **7. Passenger Movements Planning**

*a. Current Procedures.*

- (1) Requirements for passenger movements are submitted from activities and major commands to the MCC. These requirements are in hard copy format and contain information such as organization, funds, rank, grade, dependents, date travel required, and other movement data. Requirements are submitted on a unit and an individual basis. The number of hard copy formats received and the number of personnel requirements varies with the military situation. This volume of input also depends on the number, frequency, and type of requirements—that is, unit or individual—subjected by the agencies and major commands.
- (2) The MCC consolidates and tabulates total requirements by period and by category and applies requirements to movement programs. It makes allocations to airlift and sealift to meet commitments. All internal operations are manual.
- (3) Reports in hard copy format containing information pertaining to movement program requirements are forwarded to the Military Airlift Command (MAC) and the Military Sea Transportation Service (MS-TS). Agencies and commands are notified by hard copy as to the type of move scheduled. This information is used to prepare movement orders, to schedule airlift and sealift, and to plan long and short range program requirements.

*b. Interim Procedures.*

- (1) Requirements for passenger movements are submitted on a monthly basis from activities and major commands to the MCC. These requirements are in punchcard format and contain information such as origin, destination, funds, sex, rank, grade, dependents, date travel required, and other movement information.

- (2) The MCC, using ICC ADPE tabulates the requirements by period and category and places the requirements in the movement program, including the mode of transportation to be used.
- (3) Copies of the program are furnished MAC and MSTs for scheduling airlift and sealift and for planning their own short range programs.
- (4) Updated punchcards are furnished TMOs, activities, and major commands for preparation of movement orders and arranging for inland transport to the aerial or sea POEs.
- (5) Punchcards are furnished to POEs for use in preparing vessel or aircraft manifests by ADPE.

## 8. Freight Traffic Routing

*a. Current Procedures (USAREUR).* At the present time computers are used only in an after-the-fact operation to summarize and audit manual procedures.

- (1) Hard copy freight warrants (AE Forms 67B and 68B adapted for multinational use) and waybills (DD Form 1384) are prepared by installation transportation officers and mailed to the MCC. From these documents, data are coded and key punched daily. Data include such basic facts as origin, destination, border crossing points, number and type of conveyances, weight, commodity, and surcharges.
- (2) Cards are subjected to an intensive audit and then converted to a transaction tape. A master distance table<sup>1</sup> is maintained on tape, and the transaction tape is matched to the master distance table through combination of origin, destination, and (on international shipments) border crossing point.<sup>2</sup>
- (3) Kilometers are converted to miles and kilograms to short tons for subsequent calculation of short ton miles. For commercial traffic, line haul cost is calculated with rate and rated weight derived from a master

rate table (tape file<sup>3</sup>). Costs are converted from local currency to dollars, and the records for each shipment are complete.

- (4) From the completed shipment records, the month's traffic is summarized in a series of printed recurring reports structured for comprehensive analysis. The report formats are subject to change; therefore, traffic is generally shown in terms of short tons, short ton miles, and cost, sequenced by flow, type funds, and/or commodity, within mode.

*b. Interim Procedures.* The interim procedures for freight routing will depend largely on the availability of computer time and adequate communications. The program to be used by the computer will require little change.

- (1) Punched card copies of materiel release orders (MROs) are received by the MCC from the ICC. Normally, these will be delivered by courier four times each day.
- (2) The punchcards are received by the MCC, and a determination of mode to be used for each MRO is made and punched into the card. (The availability of the various modes at origin can be determined by computer if sufficient storage, programing, and time are available.)
- (3) The cards are processed through the computer, which compares them against the master distance table to determine the border crossing point and distance.
- (4) Information contained on the MRO punchcard, together with the border crossing point, identifies the move-

<sup>1</sup> The master distance table consists of some 90,000 combinations of origin, destination, and border crossing points, with the distance in kilometers for each combination. This is updated monthly with the addition of about 100 combinations.

<sup>2</sup> In Europe, the border crossing point used for a particular commodity determines the tariff for the commodity. Thus, it may be monetarily advantageous to use a longer route and take advantage of the lower tariff than a more direct route with a higher tariff.

<sup>3</sup> The master rate table consists of about 10,500 combinations of weight and distance with applicable rates assessed by country, mode, commodity, and class of service. This table is updated when changes in tariff rate structures occur. Each such change may entail from 200 to 500 transactions for the updating process.

ment requirement. It is relayed to the origin and destination TMOs by radio or TWX (teletypewriter exchange).

- (5) As a bookkeeping transaction, the MRO punchcard with distance and

border crossing point can be compared with the master rate table for determination of costs of the shipment and for comparison with the carrier's invoice when submitted for payment.

### **Section III. EFFECT ON THROUGHPUT**

#### **9. Transit Servicing**

As stated earlier, the procedures outlined in this manual are adaptable to either manual or computer operations with the exception of maintaining as in-transit inventory of shipments (para 64). This lack of an in-transit inventory of shipments requires that, until the computer system are described in paragraph 5 of this annex are installed in theaters of operations, the transit servicing (para 85) of cargo and/or transporting vehicles must be accomplished manually. The manual procedure increases the time required to carry out this transit servicing from seconds or minutes to hours or even days.

a. Certain of the nationalized railroads of Europe do not keep car record books. Therefore, if a car is set out of a regular train for any reason or fails to make scheduled connections, the location is determined only after telephone calls or other communications with the individual stations and yard checks are made. Under these conditions, a 24- to 36-hour reaction time must be considered as normal. If a transfer operation (rail to truck) is involved in the shipment, time may be even longer. In commercial highway operations, the same general conditions prevail, though to a lesser degree.

b. In a military highway or rail operation, each railway station or trailer transfer point, as appropriate, keeps a record of all vehicles (rail or highway) received or dispatched, together with the time of the action, the appropriate train or convoy number, and the destination of the vehicle. Additionally, yard checks are made periodically to verify the accuracy of the car (trailer) records. Again though, the manual tracing action to locate the transporting vehicles before performing

any transit servicing action is a time-consuming "call and check" method.

#### **10. General Cargo**

Insofar as scheduled resupply and throughput of most commodities is concerned, the problem of transit servicing seldom arises and the delay inherent in a manual system is acceptable. However, the delays will probably not be acceptable in the resupply of ammunition and essential repair parts, both of which are subject to wide fluctuation as to amount and unit(s) or types.

#### **11. Repair Parts**

Essential repair parts will normally be scheduled for air movement both from the communications zone (COMMZ) to the field army support command (FASCOM) and within the field army area. The short transit time of the air mode will normally preclude many requirements for in-transit servicing that would arise if the slower rail or highway modes were employed. Should a requirement for change of destination occur, it will normally be accomplished by reconsignment rather than diversion.

#### **12. Class V**

a. The routine air movement of conventional class V is not feasible within the current time frame owing to the limited airlift available within the theater and the high volume (weight) of ammunition expended by the modern army. Therefore, the transit time for conventional class V from COMMZ to the field army area must be considered as 3 to 5 days, depending on the theater. When the additional (manually processed, as class V resupply is not yet automated) order and processing time (3 days) is added to the transit times, it becomes readily apparent that from the time an ammunition supply point (ASP) issues class

V until it will be replenished from the COMMZ through conventional requisitioning, issuing, and transportation procedures, 6 to 8 days have elapsed. As it is not possible for a unit to determine in advance the total amount or type of class V that it will expend in any particular combat operation, it is manifestly impossible for a unit to place demands 6 to 8 days in advance to replenish all stocks that may be expended. Some minimum daily expenditures can be determined on a basis of history, and estimates of future requirements can be developed as a result of fire support plans for future operations. Generally, however, units (particularly artillery units) will be unable to forecast their class V requirements sufficiently in advance to depend primarily on direct resupply from the COMMZ.

b. To overcome the problems outlined above during the period until automatic data processing systems are fully applied to ammunition resupply and to movements (including maintaining an in-transit shipment inventory), the procedures in (1) through (4) below may be applied.

- (1) The ammunition general support units will be informed of the requirements of the ASPs which they support. These general support units will also be included as information addressees on REPSHIP for each class V shipment into their areas of responsibility. They will be responsible for maintaining information on incoming shipments by vehicle or car number, convoy number (if applicable), and the contents of each ship-

ment, including size, amount, and type of ammunition.

- (2) When rail transport is available to ASPs (direct support units), the ammunition supply service will identify for delivery by rail to the ASPs those items which can be identified either as minimum daily expenditures or known buildup supplies.
- (3) If rail transport is available only to general support units and there is sufficient capacity to move all class V by rail, the shipments outlined in (2) above will be consigned to the general support units. In this case, the general support unit is responsible for physically handling the cargo and arranging with the local transportation movements office (TMO) for onward movement.
- (4) Each motor transport unit (convoy or individual truck) carrying class V from the COMMZ to either general support or direct support units in the field army area will be required to report to the last highway regulating point (HRP) before the general support unit where diversion can be economically accomplished. Prior to arrival of the vehicle or convoy, the ammunition general support unit is responsible for notifying the TMO serving the general support unit of any diversion requirements (general support to ASP and vice versa) by truck and convoy number. The TMO will contact the mode operator to carry out the requested diversion.

## **Section IV. BACKUP FOR ADPE OR COMMUNICATIONS FAILURES**

### **13. Types of Failures**

Before determining the type of backup system to be employed for a particular systems failure, the nature of the failure must be described. These can be—

- a. Unplanned local power outages of short duration.
- b. Planned local power outages of short duration.
- c. Unplanned local power outages of prolonged duration.

d. Electronic or electromechanical ADPE (automatic data processing equipment) failure.

e. Nonavailability of electronic or electromechanical ADPE due to displacement.

f. Disruption of normal communications of short duration.

g. Disruption of normal communications of prolonged duration.

h. Destruction of the ADP center.

## 14. Decisions To Use Backup System

a. Each type of failure requires a decision as to whether or not to use the backup capability. This decision is based, among other factors, on the following:

- (1) The probable duration of the failure or disruption.
- (2) The degree to which the system is degraded by the failure.
- (3) The effect the failure is having or will have upon the mission of the supported forces.

b. The supplies within the transportation system (actually on transport or processed material release orders (MROs) included in the movement program and in the hands of origin transportation movements offices (TMOs) constitute a separate set of factors for consideration. At any given time there are, depending on the theater, the following amounts of supply in the transportation system:

- (1) Three to five days of resupply en route from the communications zone (COMMZ) to the field army area.
- (2) Two to three days (or more) of resupply in the form of processed MRO's in the COMMZ which have not been loaded on transport and dispatched to the field army area.
- (3) En route and in-process supplies (variable amount) from general support units in the army service and corps support brigade areas to direct support units.

## 15. Probability of Failure

a. All electronic and electromechanical ADPE is subject to failures. The exact time of failure and type of failure cannot be predicted precisely; however, the movement of ADPE (and its consequent outage during movement) can be planned. Within the current state of the art, the mean time between failures for ADPE is in excess of 1,000 hours and the mean time to repair ADPE is less than 1.5 hours.

b. From a statistical standpoint, it is possible for all ADPE or all communications (landline or landline and radio) to fail simul-

taneously, though such probability is extremely remote.

## 16. Backup Systems for Remote Devices

The problem of remote device failure or non-availability during displacement can be solved by rerouting messages to an alternate device, by using alternate devices to communicate within the system during the period of non-availability, or by deferring messages during the period of movement. An interruption of normal communications between remote devices and the computer center can be overcome by the following:

a. Transmission or card decks or taped information by courier.

b. Using telephone, teletype, or radio or transmit necessary information, with input/output information prepared in required format at the computer or input/output device, as appropriate.

c. Holding in abeyance input/output transmissions until communications are restored. This last procedure should be adopted only if it is known the interruption will be of short duration.

## 17. Communications Backup

a. Disruptions to communications of short duration will normally have little influence on the movement control section of the combat service support system (CS<sub>3</sub>) for automatic data systems within the army in the field (ADSAF). The supplies within the transportation system and those being processed for movement (para 14b above) will provide sufficient continuity and a working base for a 24 to 36-hour period. Should such an interruption occur, the primary effect will be on the in-transit shipment inventory system. To reinstate the system, the movement control center (MCC) should provide in its standing operating procedures (SOP) that—

- (1) When an interruption occurs, origin, passing, and destination reporting locations will continue to compile information required by the system and will prepare necessary punch-cards or tape for transmission to the central computer facility when com-

munications are restored. It is important that such transmissions carry a time indicator.

- (2) After each 3 hours of continuous communications outage, "passing," reporting stations will file in the office passing reports by car or truck number. These filed reports will not normally be subsequently transmitted for inclusion in the shipment inventory system although they may be required for statistical summaries or other reports.
- (3) Based on the estimated time of arrival (ETA) contained in the advice of shipments previously furnished, destination TMOs will query the movement control center (MCC) as to the status of any shipments which have not arrived within 3 hours (air), 8 hours (highway), or 12 hours (rail) after their ETA.

b. When communications which have been disrupted for more than 3 hours are restored, the origin reporting station will be given first access to the computer to report shipments dispatched since the start of the disruption. Destination reporting stations will be given second access to the computer to report receipts since the start of the disruption. After these transmissions are complete, "passing" stations will resume reporting on a current basis. These procedures will permit a sequential flow of information to the computer and will preclude numerous unnecessary checks of input information rejected by the computer. Otherwise, passing or arrival reports of shipment could be fed into the computer before the basic information of the shipment (contained in the report of shipment) was received. The report would be rejected by the computer and would require manual processing as an exception to the computer program.

c. When communications are disrupted for prolonged periods, the transmission of information to and from the computer can be by any of the methods described in paragraph 16 above. If a courier service is established, it should contact each TMO at least twice daily to pick up and deliver essential information

in the form of tape or punchcards, as appropriate. This service will permit the programming of movements to be handled by the computer though it will increase reaction time of field TMOs and transport mode operations. During periods of prolonged disruptions to communications, it will not be feasible to maintain an in-transit shipment inventory. To provide for this contingency, joint SOPs should be established among the MCC, mode operators, and supply activities to provide for implementation of procedures similar to those described in paragraph 12 above.

## 18. Computer Backup

a. In discussing computer backups, certain salient assumptions must be made.

- (1) The movement control activities will share the CS, ADPE facilities at support brigade, field army support command and corps support command.
- (2) All ADPE used by the CS, will be identical and interchangeable.
- (3) It will not be necessary to employ the backup facilities and procedures for all ADPE failures. As noted above, a limited degradation of facilities of ADPE failures of short duration can be accommodated within the movement control system.

b. As all ADPE is interchangeable within the CS, during a prolonged disruption of computer service at the support brigade level another support brigade provides backup. A program repertory and periodic memory dumps from the primary computer will be transmitted by courier to some relatively invulnerable point in the brigade area for storage. When required, they will be transmitted by courier to the backup of ADP center. The remote devices which communicate to each ADP center must be switchable to all alternate ADP centers.

c. A support brigade computer will be designated as the backup for the FASCOM computer in the manner described in b above.

d. In the theater army support command, the computer of the personnel administration

center and the MCC are alternates for each other. Each contains the program repertory of the other, and memory dumps are handled as described in *b* above. Additionally, the memory

dump of the MCC computer can be printed in a form usable as the base point for manual procedures in the event of total loss of computer capability.

## **APPENDIX A**

### **REFERENCES**

---

#### **1. Army Regulations**

AR 55-10	Military Standard Transportation and Movement Procedure (MILSTAMP)
AR 55-22	Allocation of Transportation Space
AR 55-166	Utilization of Cargo Transporters in CONEX Service
AR 55-355	Military Traffic Management Regulation
AR 310-3	Military Publications: Preparation, Coordination, and Approval
AR 320-5	Dictionary of United States Army Terms
AR 320-50	Authorized Abbreviations and Brevity Codes
AR 725-50	Requisitioning, Receipt, and Issue System
AR 740-32	Responsibilities for Technical Escorts of Chemical, Biological, and Etiological Agents

#### **2. Field Manuals**

FM 5-36	Route Reconnaissance and Classification
FM 11-20	Signal Operations, Theater of Operations
FM 11-21	Tactical Signal Communications Systems, Army, Corps, and Division
FM 19-2	Military Police Support in the Field Army
FM 19-3	Military Police Support in Communications Zone
FM 19-25	Military Police Traffic Control
FM 21-5	Military Training Management
FM 24-1	Tactical Communications Doctrine
FM 54-1	The Logistical Command
FM 54-3	The Field Army Support Command
FM 54-4	The Support Brigade
FM 55-6	Transportation Services in Theaters of Operations
FM 55-8	Transportation Intelligence
FM 55-15	Transportation Reference Data
FM 100-5	Field Service Regulations: Operations
FM 100-10	Field Service Regulations: Administration
FM 100-27	U.S. Army/U.S. Air Force Doctrine for Tactical Airlift Operations
FM 101-5	Staff Officers' Field Manual: Staff Organization and Procedure
FM 101-10-1	Staff Officers' Field Manual: Organizational, Technical, and Logistical Data—Unclassified Data
FM 101-40	Armed Forces Doctrine for Chemical and Biological Weapons Employment and Defense

#### **3. Tables of Organization and Equipment**

TOE 11-500	Signal Service Organization
TOE 55-2	Headquarters and Headquarters Company, Transportation Command
TOE 55-4	Transportation Movement Control Agency



TOE 55-6	Transportation Movement Control Company (FASCOM)
TOE 55-7	Transportation Movement Control Detachment (Corps Support Brigade)
TOE 55-52	Headquarters and Headquarters Company, Transportation Composite Group
TOE 55-62	Headquarters and Headquarters Company, Transportation Brigade
TOE 55-500	Transportation Service Organization

#### **4. Forms**

DA Form 1322	Daily Installation Situation Report
DA Form 1598	Record of Comments on Publications
DD Form 6	Report of Damaged or Improper Shipment
DD Form 1265	Request for Convoy Clearance
DD Form 1348-1	DOD Single Line Item Release/Receipt Document
DD Form 1384	Transportation Control and Movement Document
DD Form 1385	Cargo Manifest
DD Form 1386	Cargo Manifest Summary (Water)
AE Form 67-B	Freight Warrant
AE Form 68-B	Freight Weight

#### **5. International Agreements**

SOLOG 27	Principles and Policies of Movements
SOLOG 30	Movements—General
SOLOG 31	Movements Duties in the Field
SOLOG 50	Traffic Dispatch Advice
STANAG 2041	Operational Road Movement Orders, Tables and Graphs
STANAG 2151	Road Network—Definitions and Characteristics
STANAG 2154	Definitions and Regulations for Military Motor Movements by Road
STANAG 2156	Transport Request and Reply to Transport Request
STANAG 2159	Identification of Movements Personnel and Offices
STANAG 2164	Advice of Movement
STANAG 2166	Movements and Transport Documents Used for Movements by Ship
STANAG 3093	Request Form for Air Transport (NARAT)
STANAG 3344	Procedures for Tracing and Disposing of Baggage (BAGLO/TROBAG)

## APPENDIX B

### REPORTS AND PUBLICATIONS FOR TRANSPORTATION MOVEMENTS

---

#### 1. Installation Capacity Report

The format for the installation capacity report is prescribed by the theater army support command (TASCOM) or the field army support command (FASCOM) commander, as appropriate. It is submitted by each shipping or receiving activity at the time the activity is organized, and changes are submitted as they occur. The report normally contains the information outlined in *a* through *i* below, and is transmitted through command channels to the movement control center (MCC) serving the area in which the activity is located.

*a.* Name and consignee code.

*b.* Location of installation by map coordinates and by reference to named or numbered streets if in a town or city, or by reference to state, national, or main supply routes and distances between readily identifiable locations.

*c.* Telephone number, TWX (teletypewriter exchange, commercial) call sign, and APO address.

*d.* Summary of shipping and receiving facilities for freight and passengers by air, highway, rail, and waterway, as appropriate. This summary should include all facilities for each service. For example, waterway would include the length of piers or quays, location, depth of water, types and capabilities of cargo handling equipment, open storage, warehouses, types of commodities which can be handled, lighter facilities, and tons or barrels of commodities that can be handled per day.

*e.* Heavy lift capabilities by type and maximum lift capacity normally available; if these are peculiar to a specific mode, this is indicated.

*f.* Availability of facilities for receipt of

cargo containers (for example, CONEX (container, express)) for each mode of transportation.

*g.* If appropriate, capability to handle class A and B explosives.

*h.* Passenger destinations to be shown on transportation requests for air, rail, or highway movement.

*i.* Any other information as to capabilities or limitations that would influence the receipt or shipment of cargo at the facility.

#### 2. Daily Installation Situation Report (fig. 14)

Installation commanders are responsible for the preparation and submission of the daily installation situation report (DA Form 1322) through command channels. A copy of the report is furnished the transportation movement office (TMO) serving the installation. The report covers the current status of movement and transportation equipment originating or terminating in an activity and is normally prepared as of 1800 hours daily, by mode.

#### 3. Facilities and Services Guide

The facilities and services guide is developed and prepared by the MCC. It is distributed to all agencies concerned with procuring and furnishing transportation service.

*a.* The guide normally contains the following information for each shipping, transshipping, or receiving activity:

- (1) Name, location, and type of installation.
- (2) Available communication facilities.
- (3) Serving TMO—designation, location (relative to the indicated installation), and available communication facilities.
- (4) Cargo handling information—oper-

DAILY INSTALLATION SITUATION REPORT (FM 55-22)				TYPE OF CONVEYANCE <input type="checkbox"/> RAIL <input type="checkbox"/> BARGE <input checked="" type="checkbox"/> TRUCK		TO: DTMO K-Slautern						FROM: (Reporting Agency) Kaiserslautern Post						24-HOUR PERIOD ENDING TIME DATE 1700 28 March 1966					
INSTALLATION DESIGNATION AND LOCATION a	SERVICE AND CLASS b	DN HAND START PERIOD c	RE-CEIVED d	INBOUND				RECON-SIGNED h	DN HAND END PERIOD				AWAIT-ING PLACE-MENT m	DN HAND START PERIOD n	RECON-SIGNED o	LOAD-ED p	OUTBOUND				EMPTYES		REMARKS w
				UNLOADED		AUTH g	24 HR OR LESS i		OVER 24 HR j	OVER 48 HR k	TOTAL l	FORWARDED					AUTH s	ON HAND END PERIOD t	RE-QUIRED u	AVAIL-ABLE v			
				QUANTITY								QUANTITY											
				UNITS e	TONS f							UNITS q									TONS r		
AK4B19 Kaiser-slautern	I	4	7	9	126	L-41	1	1	0	0	1	2	3	1	2	5	56	L-181	1	5	4		
	II & IV	2	1	3	28	L-80	0	0	0	0	0	0	1	0	1	1	10	L-190	0	1	0		
	Pkg III	0	1	1	14	L-62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

SAMPLE

\*Column (c+d) - (e+h) = Column i  
\*\*Column (n+o+p) - q = Column t

TYPE NAME, GRADE AND TITLE OF PERSON AUTHENTICATING REPORT  
R. W. CLARK, Captain, Post Transportation Officer

SIGNATURE  
*R. W. Clark*

DA FORM 1322  
1 MAY 55

Figure 14. Daily installation situation report.

ating hours, maximum capacity of materials handling equipment, commodity restrictions if any, and loading and unloading capabilities (short tons per day) for each mode or combination of modes. If facilities are available to handle special commodities, such as bulk POL (petroleum, oil, and lubricants), class A and B ammunition, or perishables, specific information as to handling and storage capabilities is included.

- (5) Passenger service information for unit and group movements and for individual travelers.
- (6) Rail service—designation and location of railhead, type and availability of service, and track facilities and capacities within the installation and at the railhead.
- (7) Motor transport service—route number of the highway serving the installation, type and availability of service, and facilities for parking, loading, and servicing vehicles.
- (8) Air service—designation and location of nearest air facility with respect to indicated installation and type and availability of service; availability and marking of helipad within the installation for the receipt and shipment of personnel and cargo.

b. Similar information is provided for other transport mode services if available.

#### **4. Transport and Travel Regulations**

Normally, the TASCOC commander is responsible for publication of transport and travel regulations for the theater or the theater army. These regulations supplement Joint or Army regulations for transportation documentation requirements and procedures and for packing, packaging, marking, and labeling shipments.

a. *Transportation Documentation.* Transportation documentation requirements for the

theater are usually developed and published by the TASCOC MCC for the TASCOC commander, based on military regulations and on international agreements with host and allied nations. The documents developed are those instruments needed to control supplies while they are moving over the transportation system and may include freight waybills, travel warrants, transportation control and movement documents, and military freight warrants. The documents may be bilingual or multilingual and may duplicate, in part, the information required in U.S. forces forms. However, such duplication is necessary to obtain transportation support and to provide for reimbursement for such support when furnished to or by U.S. forces. Disputes between shippers and transport mode operators pertaining to documentation are referred to the local transportation movement officer who, in his capacity as intermediary between shipper, receiver, and carrier, will take action to obtain clarification. Transportation movements personnel are authorized to refuse to release shipments which are improperly documented as such shipments are potential problems to the transportation system.

b. *Packing, Packaging, Marking, and Labeling.* Like transportation documentation, the theater requirements for packing, packaging, marking, and labeling are based on regulations of U.S. forces and of host nation transport mode operators. Normally, the requirements will be contained in official publications of the host nation regulatory agencies and in the theater transportation and travel regulations. Compliance with theater regulations governing packing, packaging, marking, and labeling is a responsibility of the shipping activity commander. Transportation movement officers are available to offer advice and assistance to assure that theater regulations are met. Violations of such regulations should be reported promptly by either carrier or consignee using DD Form 6 (Report of Damaged or Improper Shipment) or such other form as is prescribed by host nation transport operators.

**APPENDIX C**  
**SOLOG AGREEMENT 27**  
(Revised)

---

DETAILS OF AGREEMENT  
PRINCIPLES AND POLICIES OF MOVEMENTS

(Studies C17, C19, C35 and C36)

General Remarks

1. Standard terminology is not essential to this study.
2. Any standard terminology applicable to this study which later may appear to be desirable may be forwarded directly to the Military Agency for Standardization Terminology Coordinator for standardization consideration.

SOLOG Agreement

PART I—PRINCIPLES OF MOVEMENTS (C17)

The ABC Armies agree that the principles of movements are:

1. Control of movements will be centralized to the highest level at which it can be adequately exercised.
2. Movements will be regulated.
3. Movements will be fluid and flexible.
4. Maximum utilization will be made of carrying capacity.

PART II—MOVEMENTS \* RELATIONSHIPS (C19)

The ABC Armies agree that:

1. The relationships between Movements\* and the transport services will be:
  - a. Movements\* will decide the mode of transport necessary to implement the movements program.
  - b. Movements\* will allocate traffic by tonnage and destination.
2. The relationship with transport users will be:
  - a. Movements\* will be the agency to which all users of transport will go to obtain transport space.
  - b. Movements\* will be the intermediary between transport users and transport services, except local and/or internal hauls.
3. Movements\* will decide, in accordance with Movements Plan, what will be moved, where it will be moved, when it will be moved, and the mode of transport, but not how the selected transport service will operate.\*\*

### PART III—MOVEMENT EMBARGOES (C35)

It is agreed among the ABC Armies that:

1. "Movement Embargoes" be adopted as the tripartite term for restrictions temporarily placed on traffic into and/or out of installations to permit clearance of or prevention of congestion.
2. Movement embargoes be placed only by authority of the commander cognizant of the effect of an embargo on overall logistical problems.
3. Movement embargoes be implemented through Movements\* Staff channels.

### PART IV—MOVEMENTS PRIORITIES (C36)

It is agreed among the ABC Armies that:

1. Movements Priorities are the order of precedence of movements within assigned allocation.
2. Overall policy for priorities is expressed by the theater command.
3. Movements personnel \* interpret this policy and disseminate the necessary information to accomplish movements by means of detailed movements programs and instructions.

\* The Q Movements Staff in the British Army.  
The Transportation Movements Staff in the US Army.

\*\* In the case of British Road Movement, the Movements\* Staff may issue instructions regarding routes, timings, etc.

(Annexes A-D to appendix C have been prepared by US forces to amplify the content of the original SOLOG.)

ANNEX A TO APPENDIX C  
CENTRALIZATION  
SOLOG 27

1. Example

a. Figure 15 represents a transportation system which passes through sections of the theater army support command (TASCOM). AB represents the main line. OC represents a feeder line. Point O represents a transfer point. Line AOB has a capability of 1,000 tons a day. There is a requirement to move 1,000 tons a day from A to B. If an attempt is made to move traffic from C through O to B while the authorized requirement of 1,000 tons a day is moving from A to B, the following are some of the difficulties that could arise:

- (1) Nonfulfillment of the authorized move from A to B.
- (2) Congestion at point O.
- (3) Congestion along lines OA and OC.
- (4) Nonfulfillment of the move from C to B.

b. It is evident that the commander at point C should be instructed not to ship to point B when the total of AOB and CO traffic exceeds the capacity of the OB line. If these commanders are located under separate commands, such instructions should come from that echelon which has control of both commands. Furthermore, the commander authorizing the move from A to B must be in a position to assure that the instructions are carried out so that line AB will remain clear while the move is being executed. To do this adequately, control must be centralized at that level of command which has jurisdiction over the shipping and receiving points using the line and the transport service organizations operating the line. That echelon of command is the TASCOM headquarters. Additional study of this principle indicates that the commander authorizing the move from A to B should assure that the transport elements which form the line AB have the capability to carry the traffic and that the transportation services

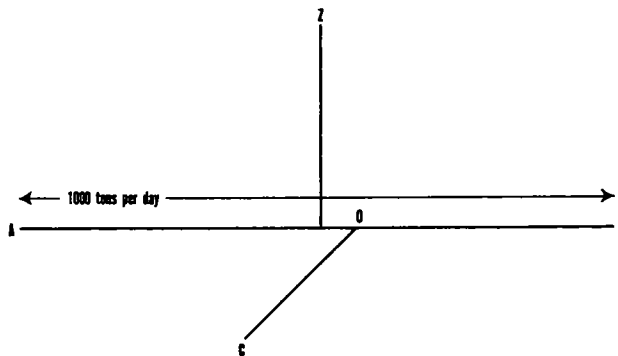


Figure 15. Centralized control.

contributing to the system are coordinated so as to form a transportation net which will offer maximum through service from origin to destination.

## 2. Guidelines

In the implementation of this first principle of movements, commanders are guided by the following:

*a.* The commander responsible for the operation of a transportation system will be at that level of command where he can coordinate the activities of the services and users in such a manner as to form an integrated transportation system for the command.

*b.* The commander responsible for the operation of a transportation system will secure the means necessary for movement and will have control over the manner in which the movement capability will be used.

*c.* Transportation movement management organizations and their subordinate field offices will be employed where necessary to assist other personnel engaged in the performance of transportation duties.



## ANNEX B TO APPENDIX C

### REGULATION

#### SOLOG 27

##### 1. Example

Figure 16 represents a transportation system. In this system each of the shipping points A, B, C, and D has a requirement for shipment to E of 1,000 tons during a week's period. The capability of the terminal at O is 1,000 tons daily. The capability of each line, AO, BO, CO, and DO is 1,000 tons daily. If A, B, C, and D each shipped its requirement on the same day, there would be a congestion throughout the system. However, by regulating the moves and having each of the shippers A, B, C, and D ship on separate days or ship 250 tons on each of four different days, the requirement can be met. This regulation must be directed from a central headquarters as indicated in the explanation of the first principle of movement. The regulator must plan well in advance how to use the available capability; he must assure that an integrated system is formed, and he must publish concise information to the participants in the system which will clearly indicate how the system is to be used.

##### 2. Guidelines

In implementing this second principle of movements, commanders are guided by the following:

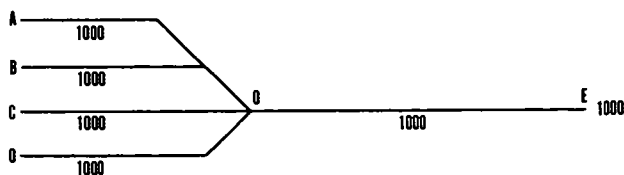
a. Independent use of a transportation system will not be made by participants of the system.

b. The movement of traffic over a transportation system must be programmed to the maximum extent possible.

c. A system for accomplishing nonprogramed movements will be devised and disseminated by the commander operating the transportation system. This is particularly true within the field army where the requirement for transporting nonprogramed shipments increases as the combat service support effort moves toward the division area. (Combat service support is all of the logistic and administrative support services performed in the theater, including those performed by units that have a dual combat support, combat service support mission.)

d. Priorities for movement will be established by the commander responsible for the activities of the users.

e. Requests for the use of a transportation system will be made through transportation movement channels.



*Figure 16. Regulation.*

*f.* Rules, regulations, and procedures governing the preparation, loading, documentation, and unloading of traffic will be established jointly by the transport services, users, and movements management agencies and will be promulgated through command channels by the commander responsible for the activities of participants in the system.

ANNEX C TO APPENDIX C  
FLUIDITY AND FLEXIBILITY  
SOLOG 27

1. Example

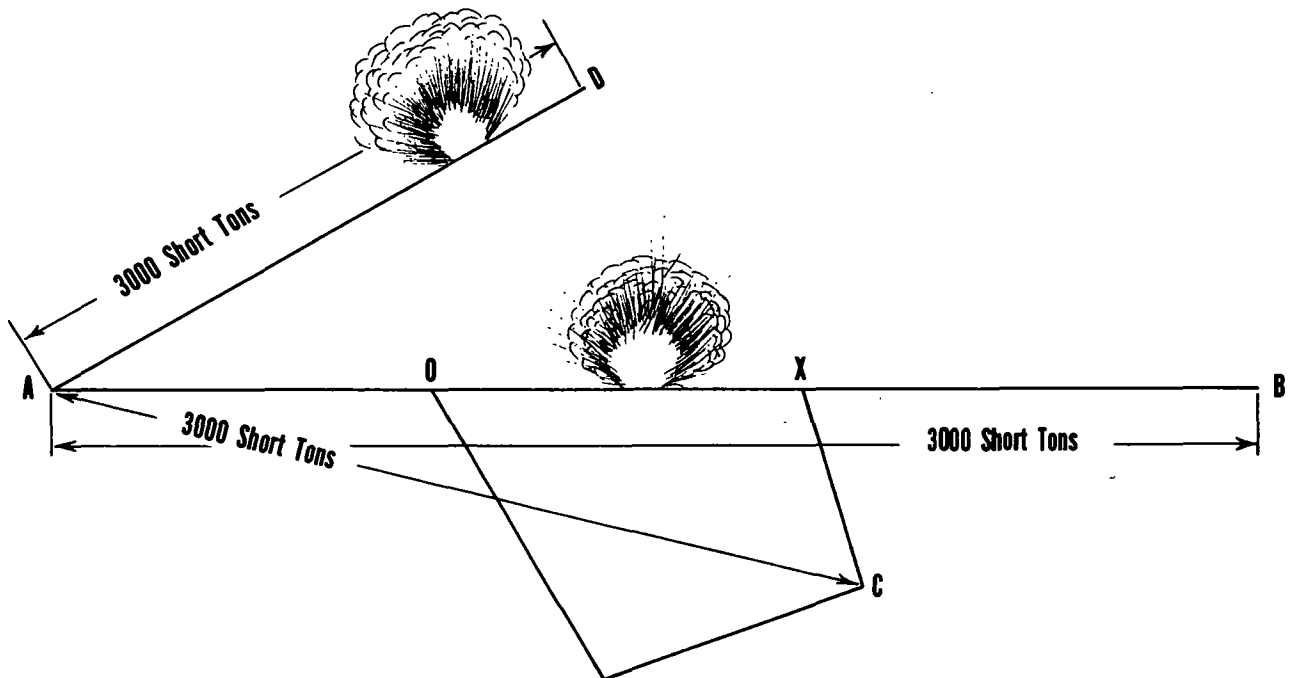
Figure 17 represents a transportation system. There is a requirement to move 1,000 tons a day from A to D, A to B, and A to C. The capability of each line is 3,000 tons. The capability to ship at A is 3,000 tons. The capability of each receiving point is 2,000 tons. It is evident that supplies can flow from origin to destination without interruption: the system is fluid. If the line OX were destroyed, the system would be flexible enough to maintain fluidity by directing the flow of supplies over AOC and AOCXB. However, the system is not flexible from the standpoint of moving supplies to D because if the lines from A to D were destroyed, fluidity would be lost since there is no way (in the example) to keep supplies moving to D.

2. Guidelines

In implementing this third principle of movements, commanders are guided by the following:

a. Shipments will not be initiated until it has been determined that movement capability exists throughout the transportation system to effect continuous movement to destination.

b. Transportation users and services at origin, en route, and at destination will notify movement personnel concerning any factors which will adversely affect the fluidity or flexibility of movements.



*Figure 17. Fluidity and flexibility.*

## ANNEX D TO APPENDIX C

### MAXIMUM USE

#### SOLOG 27

##### 1. Example

Figure 18 represents a transportation system. There is a rail line from A to C. The segment of track from A to B can carry 4,000 tons of cargo during a 24-hour period. The segment of track from B to C can carry 2,000 tons. The situation indicates that it is not feasible to increase the capacity of this track. Point C can receive 4,000 tons daily. Thus, because of the limitation between B and C, only half of the movement capability at C is being utilized. In order to improve the situation, a highway haul might be established from A to C with a truck unit that has an available carrying capacity of 1,000 tons over this distance. This will result in an increase of the total movement to C to 3,000 tons, and thus only one-fourth of the capability of C will be idle. However, one-half of the available carrying capacity of the rail unit AB will still be idle. By the establishment of a rail-truck transfer point at B and the use of this same truck unit to haul 2,000 tons from B to C instead of 1,000 tons from A to C, there will be 4,000 tons flowing into C; thus there will be no wasted capability at C. There will be 4,000 tons moving from A to B; thus the equipment of the transport services will be used efficiently.

##### 2. Guidelines

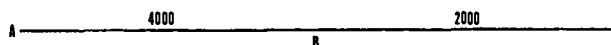
In implementing this fourth principle of movements, commanders are guided by the following:

a. Unnecessary transshipment and rehandling of supplies will be minimized. By moving supplies as far forward as practicable by one means of transport, intermediate supply installations will be bypassed. This supports the throughput concept discussed in paragraph 50.

b. Backhauling will be kept to a minimum. This is important because of the relatively austere transport capability and number of supply handlers and terminal transfer personnel authorized in the theater.

c. Crosshauling will be eliminated whenever possible. The demands for road and rail space by allied nations in the theater army support command area and for tactical and nontactical moves in the field army area make this a particularly important requirement.

d. Turnaround time will be kept to a minimum. A transport service has the primary role of moving persons and things. The efficiency of the mode depends upon maintaining a favorable ratio of traveltime to loading and unloading time. In addition, the requirement to reduce congestion and vulnerability places emphasis on this principle in the combat zone.



*Figure 18. Maximum use.*

*e.* Loss and damage will be kept to a minimum. Lost or damaged cargo increases the requirement for transportation to provide a replacement. A damaged item of transport equipment represents lost transport capability and an increased requirement for manpower and repair parts supply to restore it to operable condition.

## APPENDIX D

### SOLOG AGREEMENT 30

---

#### DETAILS OF AGREEMENT

#### MOVEMENTS—GENERAL

(Studies C22, C25, C27)

##### General Remarks

1. Standard terminology is not essential to this study.
2. Any standard terminology applicable to this study which later may appear to be desirable may be included in an amendment to this agreement or may be agreed through the Terminology Coordinator, MAS.

##### SOLOG Agreement

##### PART I—Movements Armbands (Study C22)

1. The ABC Armies agree that a need exists for a standard armband in movements activities.
2. It is agreed that the standard armband will be lettered with the letters "MOV." This will be a white band 16½" long and 3½" wide with the letters "MOV" in black letters 1" high in a 3" block. It will have four dome fasteners 1" apart.
3. It will be worn in accordance with the uniform regulation of the country concerned.
4. It will be worn by personnel assigned to Movements Groups or detachments. In the British Army Q, Movements Staff officers will wear normal staff armbands.

##### PART II—Designation and Identification of OC Troops (Train) (Study C25)

1. It is agreed that the ABC Armies will adopt standard signs for the officer commanding the troops. These signs will be approximately 18"x24", with background color white and with the letters "OC TROOPS (TRAIN)" in black as shown on attached Appendix A.
2. It is also agreed that similar sign will be adopted with the letters "MOV Train Staff" to identify the compartment of the Movements Personnel assigned to the train. See Appendix B.

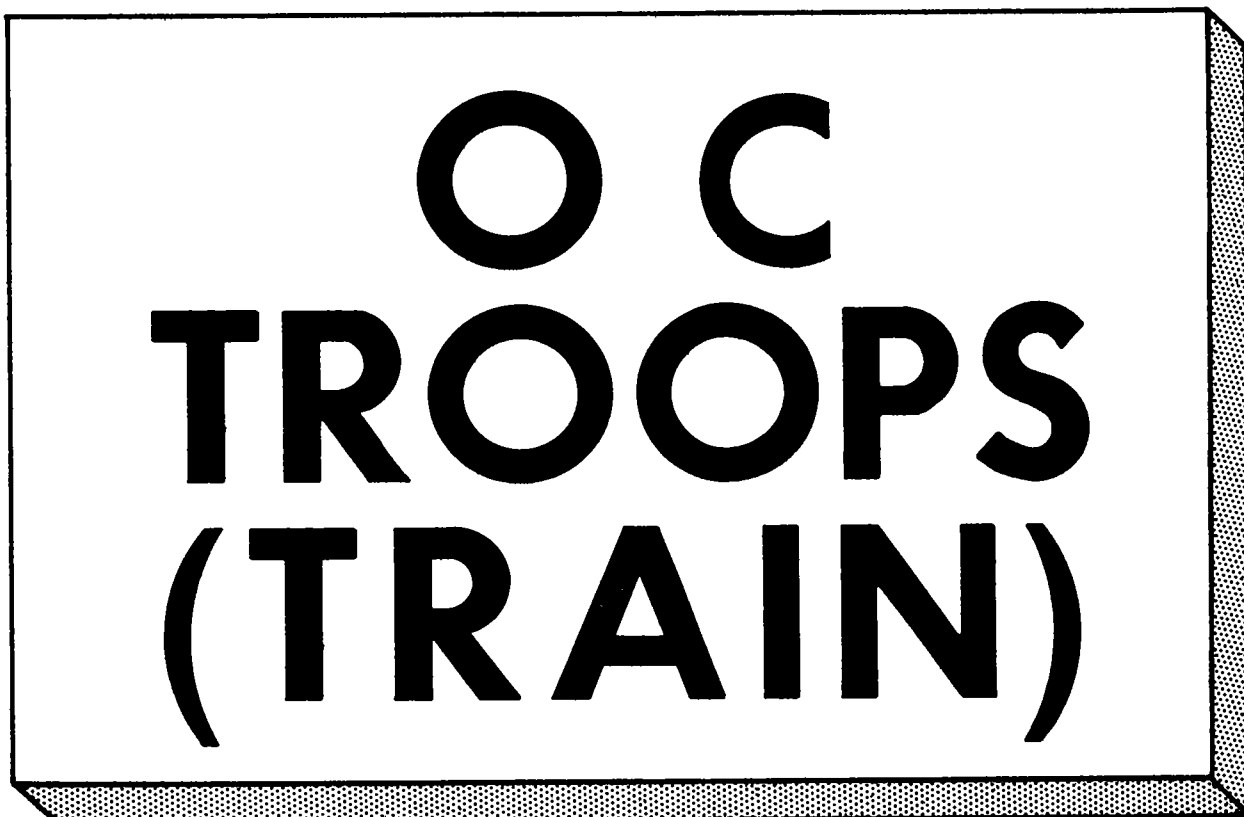
##### PART III—Movements Office Identification (Study C27)

1. It is agreed that the ABC Armies will adopt a standard Movements Office Identification.
2. It is further agreed that this identification will be a rectangular sign with the lower part to have a white background with the letters

"MOV" in black. The upper part will have a black background with the geographical location of the office in white.

3. It is also agreed that the inclusion of additional wording may be made after the letters "MOV" to identify further the specific task of movements detachment. (Example: MOV-MFO to identify a Military Forwarding Organization.)

NOTE: The above identification applies to the Movement Control unit or detachment offices and not to the Movement Staff offices, which will be marked in accordance with regulations laid down for marking headquarters at which Movements Staffs are located.



**1/4 Actual Size**





**MOV  
TRAIN STAFF**

**1/4 Actual Size**

*Appendix B to SOLOG Agreement 30.*

## APPENDIX E

### SOLOG AGREEMENT 31

---

#### DETAILS OF AGREEMENT

#### MOVEMENTS DUTIES IN THE FIELD

The Armies of the United States, United Kingdom and Canada agree to the following:

#### PART I—STANDING INSTRUCTIONS OC TROOPS (TRAIN) (STUDY C40)

1. The term "OC Troops (TRAIN)" will be adopted. However, the term "OIC Troops (TRAIN)" may be used by United States Forces, when desired.

2. In movements involving small units or casual personnel, the movement personnel at entrainment station appoint "OC Troops (TRAIN)," unless this officer has been appointed by higher headquarters.

3. The duties and responsibilities of the "OC Troops (TRAIN)" will include but not be limited to the following:

##### a. During Entrainment:

(1) Submits movement orders and/or authority to movements personnel.

(2) Insures by checking with Movements Control personnel that troops, baggage, vehicles and other equipment are loaded according to Movement Instructions.

(3) Informs troops of location of "OC Troops (TRAIN)" compartment and medical facilities, if available.

(4) Appoints one or more officers or NCO's as assistants and/or car commanders who will be appointed for every car.

(5) Makes inspection of train facilities, arranges for security, and completes "Train Inspection Report" with movement control personnel and a railway representative.

##### b. En route

(1) "OC Troops (TRAIN)" is at all times responsible for sanitary arrangements, the discipline and protection of the men on the train and will conform to instructions given by movements personnel or railway operating personnel. Operation of the train is the responsibility of railway personnel.

(2) Discipline—Enforces orders prohibiting:

(a) Detraining without permission.

(b) Throwing anything out of windows.

(c) Leaning out of windows or doors.

- (d) Marking or writing on railway equipment.
- (e) Unauthorized use of inflammable equipment.
- (f) Damaging railway equipment.
- (g) Violation of security regulations.
- (h) Waste of water in lavatories.
- (i) Riding anywhere on trains except where authorized.
- (j) Interference with railway operations.
- (k) The use of intoxicating liquors during the journey.
- (l) The unauthorized possession of live ammunition.
- (3) Current standing instructions in the event of sickness, death or absence without leave will be observed.
- (4) He will comply with all instructions received en route.

**c. During Detrainment**

- (1) Insures by checking with movement control personnel that troops, baggage, vehicles and other equipment are unloaded according to Movement Instructions.
- (2) Completes "Troop Inspection Report" and any necessary documentation.

**PART II—TROOP TRAIN INSPECTION REPORT (STUDY C50)**

The standard Troop Train Inspection Report contained in Appendix "A" will be adopted.

**PART III—MOVEMENTS DUTIES IN THE FIELD (STUDY C47)**

Movements\*\* Personnel will be located in areas where personnel and/or freight movements originate, terminate or are diverted or re-consigned. They will perform the following functions:

- 1. Establish and maintain close relationship with service installations, i.e., depots, etc., and representatives of transport services in the area.
- 2. Maintain current information including location of local units, installations and depots, movement requirements, changes in movement capabilities, and status of the local transport situation.
- 3. Consolidate non-programed movement requirements of local units, installations and depots, and arrange for transport services in connection therewith.
- 4. Supervise execution by users and operators of the movement program and/or movement instructions issued by the Movements Staff \*.
- 5. Insure efficient use of transport capabilities allocated by the Movements Staff \*.
- 6. Prepare plans when required for local employment of transport.
- 7. Effect reconsignment and diversion instructions as required by appropriate authority.
- 8. Preclude congestion by recommending to the Movements Staff \* the establishment of priorities and/or embargoes or other appropriate actions.
- 9. Take necessary action upon receipt of:
  - a. Information regarding the arrival and dispatch of traffic.
  - b. Requests for information concerning the movement of traffic, losses/discrepancies, etc.
- 10. Advise local commanders on movement matters.

11. When required arrange itineraries, reservations, and the issue of the necessary travel documents for individuals and small groups.\*\*\*

12. Insure adequate movements documentation.

13. Insure that all ordered security measures concerning movement of personnel and freight are complied with.

14. Perform such other movements\*\* duties as may be prescribed by proper authority.

- \* Q Movements Staff in the British Army.  
Transportation Movements Staff in the US Army
- \*\* Movement Control in the British and Canadian Armies.  
Transportation Movements in the US Army
- \*\*\* Movement Control in the British and Canadian Armies.  
Installation Transportation Officer in the US Army

#### PART IV—MOVEMENT CHECK/\*\*STANDARD TRACER (STUDY C54)

1. After a consignment enters the transportation system, within a theater of operation, the capability must exist for locating it at any time in order that it can be expedited, diverted, reconsigned or held intransit when occasioned by changes in the tactical or logistical situation, or of locating it in the event it is missing or does not reach its destination within a reasonable period of time. A standardized form is required for transmitting data to movements \*\*\* personnel in the field so they can assist in locating consignments. This form to be known as a \* Movement Check/\*\*Standard Tracer.

2. The \* Movement Check/\*\*Standard Tracer normally will be prepared by the consignor or consignee and furnished to the local movements\*\*\* office who will in turn contact the transport service (s) involved in the move. The transport service will determine and report on the current status of the consignment.

3. The use of this code will facilitate transmission, by using "MOV-CHECK/STDTRACER" followed by the letters representing the paragraphs below and the pertinent data.

- a. Consignor and location
- b. Consignee and location
- c. Waybill or similar document number
- d. Means of transport and name/number of vessel/car or wagon/truck/lorry. (If truck/lorry, give designation of unit to which truck/lorry is assigned)
- e. Date loaded and dispatched
- f. Details of route
- g. Any identification numbers or marks known
- h. Commodity description
- j. Number of pieces
- k. Type container
- l. Total deadweight of consignment
- m. Total measurement weight of consignment
- n. Reference to movement program or instruction (as applicable)

p. Instructions when consignment is located (e.g., expedite, divert, reconsign, hold intransit and/or additional details as appropriate)

q. Remarks

- \* In the British and Canadian Armies
- \*\* In the United States Army
- \*\*\* Movement Control Service in the British Army  
Transportation Movements (Region/District) in the United States Army

SOLOG AGREEMENT 31  
(Revised)

APPENDIX A  
TROOP TRAIN INSPECTION REPORT

DATE \_\_\_\_\_

\* UNIT IDENTIFICATION \_\_\_\_\_ TRAIN NO. \_\_\_\_\_

FROM \_\_\_\_\_ TO \_\_\_\_\_

(List ALL coach/car initials, numbers and damaged items. If nil, indicate.)

COACH/CAR NO. & TYPE	CONDITION OF COACH/CARS PRIOR TO ENTRAINMENT (see reverse side)	CONDITION OF COACH/CARS AFTER DETRAINMENT (see reverse side)
-------------------------	--	---

*	*	*	*	*	*	*
---	---	---	---	---	---	---

--	--	--	--	--	--	--

Inspected prior to entrainment by: \_\_\_\_\_ Inspected after detrainment by: \_\_\_\_\_  
(Signature) (Signature)

- |                                   |                               |
|-----------------------------------|-------------------------------|
| 1. Entrainment TO/MC Det ** _____ | 1. Detraining TO/MC Det _____ |
| 2. OC Troops (Train) *** _____    | 2. OC Troops (Train) _____    |
| 3. Railway Inspector _____        | 3. Railway Inspector _____    |

REMARKS: Use reverse side for detailed explanation of cause of damage.  
Inspection to be made by military personnel whether or not  
railway representative is available.

\* When security regulations prohibit it, titles of units will not  
be shown and units will be described by there unit security  
serial number.

\*\* Transportation Officer/Movement Control Detachment.

\*\*\* To be signed by OC Troops (Train), or his representative,  
and should be the same officer making inspection at entrain-  
ing and detraining points if possible.

(Reverse Side of Form)

INSPECTING PERSONNEL WILL CHECK THE FOLLOWING

1. Coach/car floors free from dirt and in sanitary condition.
2. Seats clean and free from tears.
3. No broken windows or doors.
4. Ventilators in proper order.
5. Lavatories in working order and properly supplied with water.
6. Toilets clear and sanitary: flushing apparatus in working order, and sufficient supply of toilet paper.
7. Water tanks filled (and iced if applicable). Extra water containers available in each coach/car.
8. Lighting fixtures in working order and coach/car properly lighted for night travel.
9. Platforms and steps of each coach/car safe and secure.
10. Passage used by passengers between coach/cars to be guarded by diaphragms/covered gangway; if not, arrangements to be made for equipping with chains or heavy ropes.
11. Emergency/communication cord.
12. Fire apparatus.

---

---

ADDED REMARKS

## **APPENDIX F**

### **SOLOG AGREEMENT 50**

---

#### **DETAILS OF AGREEMENT**

#### **TRAFFIC DISPATCH ADVICE**

(Study C20)

The Armies of the United States, United Kingdom and Canada agree that standardized advices/reports for personnel and freight movements will serve to simplify operations and economize on transportation, by insuring advance information to the receiver; so that arrangements can be made for unloading and handling the movement upon arrival.

The Armies further agree that the format and content of these advices will be as indicated in Appendices A & B hereto.

#### **SOLOG AGREEMENT 50**

(Appendix A)

\* **TRAFFIC DISPATCH ADVICE—(TDA)/REPORT  
OF SHIPMENT—(RESHIP)  
PERSONNEL**

- (a) Authority and/or consignment/movement number.
- (b) Place of departure.
- (c) Time and date of departure.
- (d) Number of personnel by appropriate rank or group classification, including unit security designation, if applicable.
- (e) Destination and estimated time of arrival. (State ETA at exchange point, when applicable.)
- (f) Identification of IWT craft, aircraft, train or road transport, by name, number or code designation.
- (g) Details of baggage and equipment accompanying, i.e., location, weight and cube.
- (h) Name of OC Party (OIC Troops (Train), etc.)
- (j) Additional Information and instructions, if necessary.

Note: 1. Code designators may be used rather than clear text, where applicable.

2. This agreement does not replace advices for movements by sea for the United States and the United Kingdom.

3. This agreement includes advices for movements by air only to the extent required by movements offices in the ABC Armies.

\* This form is designated "TDA" in the United Kingdom and Canada; and "REPSHIP" in the United States.



SOLOG AGREEMENT 50  
(Appendix B)

\* TRAFFIC DISPATCH ADVICE—(TDA)/REPORT OF  
SHIPMENT—(REPSHIP)  
FREIGHT

- (a) Authority and/or consignment/movement number.
- (b) Place of departure.
- (c) Time and date of departure.
- (d) Consignor or code designation.
- (e) Consignee or code designation.
- (f) Mode(s) of transport, including route.
- (g) Truck, car/wagon, IWT craft, or aircraft number, as applicable.
- (h) Consignor's number(s)/Bill of Lading number(s).
- (j) Number of cases per truck, car/wagon, IWT craft, or aircraft.
- (k) Weight of freight loaded per truck, car/wagon, IWT craft, or aircraft.
- (l) Cube of freight loaded per truck, car/wagon, IWT craft, or aircraft.
- (m) Description of commodity in general terms.
- (n) Destination and estimated time of arrival. (State exchange points and ETA at exchange point, when applicable.)
- (p) Additional information and instructions, if necessary.

Note: 1. Code designators may be used rather than clear text, where applicable.

2. This agreement does not replace advices for movements by sea for the United States and the United Kingdom.

3. This agreement includes advices for movements by air only to the extent required by movements offices in the ABC Armies.

\* This form is designated "TDA" in the United Kingdom and Canada; and "REPSHIP" in the United States.

**APPENDIX G**  
**STANAG 2041**  
**OPERATIONAL ROAD MOVEMENT ORDERS, TABLES AND GRAPHS**

---

Agreed English/French Texts

STANAG 2041  
(Edition No. 2)

DETAILS OF AGREEMENT (DofA)  
OPERATIONAL ROAD MOVEMENT ORDERS,  
TABLES AND GRAPHS

Annexes: A (DofA). Example of an Operational Road Movement Order.  
B (DofA). Specimen Road Movement Table.  
C (DofA). Example of a Road Movement Graph.

**AGREEMENT**

1. The NATO Armed Forces agree to use the standard layouts for operational road movement orders, road movement tables and graphs as given in Annexes A to C (DofA). The instructions given in subsequent paragraphs are in amplification of these layouts.

**ORDERS**

2. Warning orders and operational road movement orders are of primary concern to those responsible for movement by motor transport. However, standing operating procedure/standing orders may also contain information vital to the conduct of movements by motor transport.

**a. Warning Orders.**

(1) A warning order is a preliminary notice of an order or action which is to follow. It is designed to give subordinates time to make necessary plans and preparations.

(2) A warning order is of value in alerting troops and preparing them for movement, before receipt of the detailed operation order for the movement. A warning order may be issued orally or in message form. The fact that it is only a warning order will always be indicated.

(3) A warning order should be as brief as possible but should include the following items when applicable:

- (a) Probable tasks or movements.
- (b) Earliest time of movement or degree of notice.
- (c) Rendezvous and time of order group, if any.
- (d) Orders for movement of reconnaissance or advance parties.

- (e) Administrative instructions affecting the resting or feeding of troops, regrouping of transport and preliminary movements.

(4) Timeliness is the essence of warning orders.

b. Operational Road Movement Orders. (See Annex A (DofA)).

(1) An operation order for road movement is an order issued covering the details for the movement of a formation/unit by road.

(2) The order should be issued in sufficient time to allow subordinates to make their plans, issue their orders, and complete their preparations for the movement. The amount of detail given in such orders depends on the tactical and traffic situation, the state of training of the formation/unit, and the extent to which standing operating procedure/standing orders have been completed.

(3) Fragmentary orders may be used; but when time permits, a detailed order is issued in the form of the five-paragraph Operation Order (STANAG 2014). Annexes to the order may include a road movement table, administrative/logistic annex, etc. When administrative/logistic details are too voluminous for convenient inclusion in the order, an administrative/logistic order or an administrative/logistic annex to the Operation Order will be issued (STANAG 2032).

c. Standing Operating Procedure/Standing Orders.

The following are some headings that may be used as a guide in drafting standing operating procedure/standing orders for a formation headquarters. This list is not complete and will vary with circumstances, particularly in different theatres of war:

- (1) Composition and duties of advance party.
- (2) Vehicle loads, including personnel.
- (3) Grouping of vehicles and group commanders.
- (4) Organization of columns.
- (5) Sign-posting and traffic control
- (6) Responsibility for manning start point and release point.
- (7) Discipline; halts; lighting.
- (8) Action in the event of enemy attack.
- (9) Drill for establishing headquarters on arrival.
- (10) Responsibility for issue of Operation Orders for movements for headquarters.
- (11) Inspection of vacated office sites for security purposes.

ROAD MOVEMENT TABLES (See Annex B (DofA)).

3. a. Road movement tables will consist of two parts. One giving 'data' paragraphs reflecting general information or information common to two or more columns (or elements of columns). The other listing the columns (or elements of columns) together with all other necessary information, arranged in tabular form.

b. These afford a convenient means of transmitting to subordinates their schedules and other essential detail pertaining to road movement. This is particularly so in cases where the inclusion of such detail in the body of the operation order would tend to complicate it or make it unduly long.

c. They will frequently require a wider distribution than a normal operation order so that copies can be issued to movement control personnel, traffic posts, etc.

d. They will be given security classifications in accordance with their contents, which will not necessarily be the same as that of the operation order.

#### ROAD MOVEMENT GRAPHS (See Annex C (DofA)).

4. a. Road movement graphs are used by staffs in planning and, when applicable, in supervising and/or regulating complicated movements, and for providing a convenient means of recording actual moves of units over a period.

b. The unit of measure to be used, i.e., kilometers or miles, will depend on the requirements of the authorities concerned. However, the resulting orders and instructions should reflect only one unit of measure.

#### 5. Extra Time Allowance.

a. Within a column, moving under one identification serial number, an extra time allowance of one minute per 25 vehicles is always allotted above the calculated pass time.

b. If in a column the number of vehicles is over 600, the extra time allowance allotted will be two minutes per 25 vehicles.

#### GAPS

6. Between the columns having different serial numbers, no standard gaps are prescribed; these gaps are allotted by the staff ordering the movement.

#### IMPLEMENTATION

7. This STANAG will be considered to have been implemented when the necessary orders/instructions putting the procedures detailed in this Agreement into effect have been issued to the forces concerned.

ANNEX A TO THE  
DETAILS OF AGREEMENT OF  
STANAG 2041  
(Edition No. 2)

EXAMPLE OF AN OPERATIONAL ROAD MOVEMENT ORDER  
(intended as a guide only)

---

(SECURITY CLASSIFICATION)

Copy No. 4  
21st Inf. Div.  
YREVA, BLOKSKY  
011030Z Jan 65  
OPS 27

Operation Order 14:

Map: BLOKSKY, 1/250,000 NOTKLOTS-DRAKCIR

Task Organization/Grouping: Annex A—

Task Organization/Grouping (NOT attached to this example).

Time Zone Z.

1. SITUATION

- a. Enemy Forces: BLOKSKY 42nd Infantry Division (reinforced) is delaying advance of V Corps.
- b. Friendly Forces: V Corps attacks early 2nd January.
- c. Attachments and Detachments: None.

2. MISSION

21st Infantry Division to move from YREVA at 012030Z January into NAEJ.

3. EXECUTION

- a. 121 Brigade is to move RED route to DRAKCIR and WHITE route to vicinity of NAEJ.
- b. 221 Brigade is to move BLUE route to NOTKLOTS and GREEN route to vicinity of NAEJ.
- c. 321 Brigade follows 121 Brigade.
- d. Division Artillery follows 221 Brigade.
- e. Division Troops follow 321 Brigade.
- f. Miscellaneous.
- g. Coordinating instructions.
  - (1) Annex B—Movement Table.
  - (2) First short halt 012150Z January 1965.
  - (3) No weapon will be fired at aircraft unless attacked.

#### 4. ADMINISTRATION AND LOGISTICS

Administrative/Logistic Order 19 follows.

#### 5. COMMAND AND SIGNAL

- a. Continue radio silence.
- b. Division Headquarters. Head of Division Troops during move.

AVERS

Major-General

Acknowledge

Annex A—Task Organization/Grouping (NOT attached to this example)

Annex B—Movement Table

Distribution:

Authentication:

(SECURITY CLASSIFICATION)

.../5.

---

ANNEX B TO THE DETAILS OF AGREEMENT OF  
STANAG 2041  
(Edition No. 2)

SPECIMEN ROAD MOVEMENT TABLE  
(A guide only, will need adjustment to suit individual cases)

(SECURITY CLASSIFICATION)

Annex "B" - "Movement Tables" to Operation Order 14  
Map: BLOKSKY, 1/250,000 NOTKLOTS - DRAXCIR

Copy No. 4  
21st Inf. Div.  
YREVA, BLOKSKY  
011030Z January 1965  
OPS 27

General Data:

1. Average Speed
2. Traffic Density
3. Halts

4. Routes (i.e. between Start Points and Release Points)
5. Critical Points (See NOTE 4)
  - (a) Start Points
  - (b) Release Points
  - (c) Other Critical Points
6. Main Routes to Start Points (See NOTE 7)
7. Main Routes from Release Points (See NOTE 7)

Connect with paragraph 3.5. of  
Details of Agreement.  
These routes and points are  
here described by grid references,  
codewords, etc., and, if necessary,  
numbered or lettered for ease of  
reference in the columns below.

Movement Number or Identification Serial Number	Data	Unit/Formation	No. of Vehicles	Load Class of Heaviest Vehicles	From	To	Route	Route to Start Point (See Note 7)	Critical Points			Route from Release Point (See NOTE 7)	Remarks
									Ref.	Due (hrs)	Class (hrs)		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(k)	(l)	(m)	(n)	(o)
See NOTE 5													

Acknowledge

Distribution :-

Authentication :-

(SECURITY CLASSIFICATION)

- NOTES:-
1. Only the minimum number of headings above should be used. Any information which is common to two or more movement numbers or identification serial numbers should be included under the 'data' paragraphs.
  2. As the table may be issued to personnel concerned with control of traffic, the security aspect must be remembered. It may not be desirable to include dates or locations.
  3. If the table is issued by itself, and not as an annex to a more detailed order, the table must be signed or authenticated in the normal way.
  4. 'Critical Point' is defined as 'a selected point along a route used for reference in giving instructions. It includes start points, release points and other points along a route where interference with movement may occur or where timings are critical'.
  5. This will be the number which is used to identify a column (or element of column) during the whole of the movement (see STANAG 2154, paras. 8 & 9).
  6. In the case of an annex having the same distribution as an operation order it will not be necessary to include the headings so ending as shown on this page.
  7. Definitions of these terms will be found in STANAG 2154 (paras. 17 and 18).

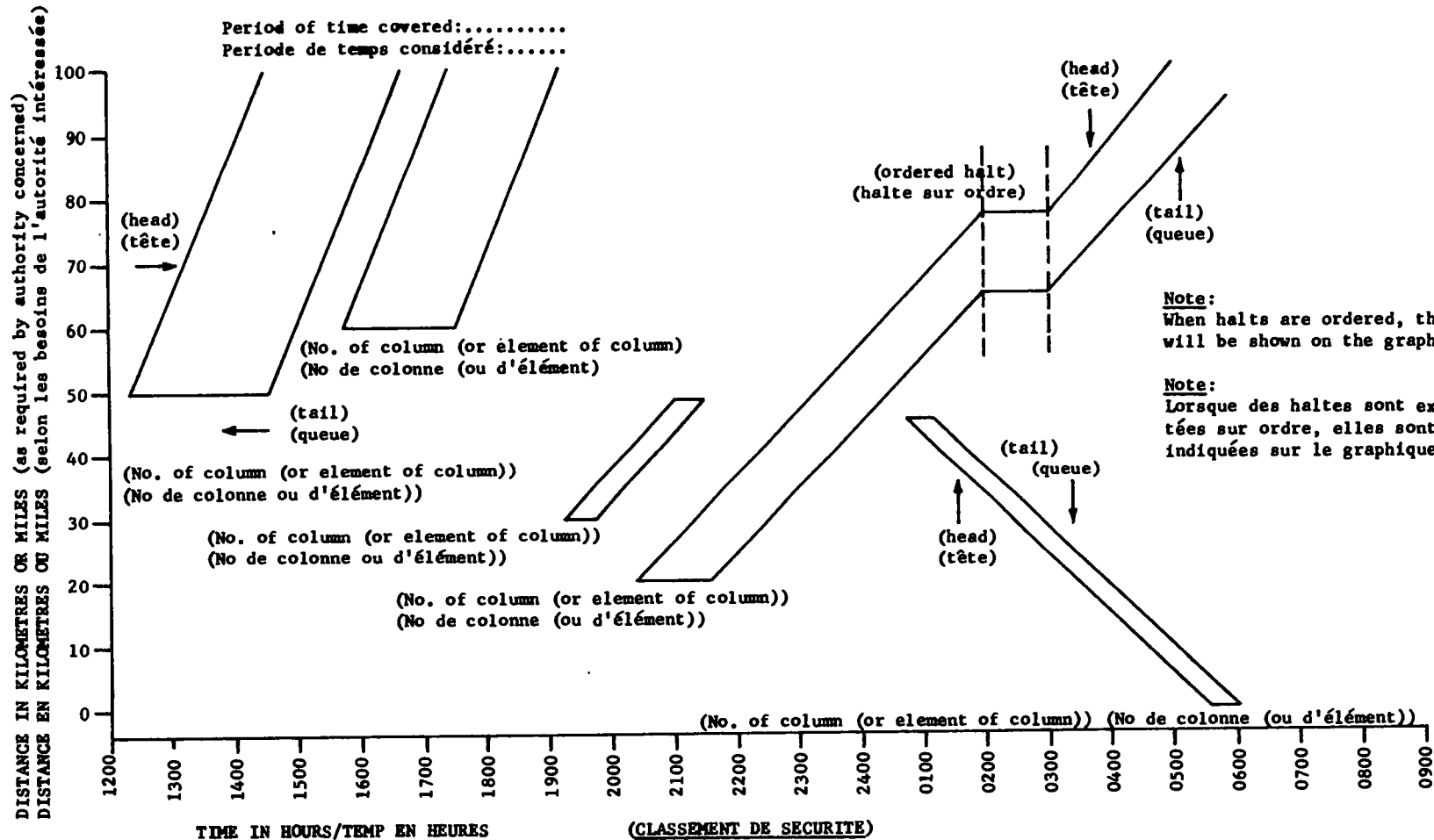
*Annex B to STANAG 2041.*

EXAMPLE OF A ROAD MOVEMENT GRAPH  
MODELE DE GRAPHIQUE DE MOUVEMENTS PAR VOIE ROUTIERE

Designation of route:.....  
Designation de l'itinéraire:.....

**(SECURITY CLASSIFICATION)**

Period of time covered:.....  
 Periode de temps considéré:.....



**Note:**  
When halts are ordered, they  
will be shown on the graph.

**Note:**  
Lorsque des haltes sont exécutées sur ordre, elles sont indiquées sur le graphique.

**Annex C to STANAG 2041.**



**APPENDIX H**  
**STANAG 2151**  
**ROAD NETWORK—DEFINITIONS AND CHARACTERISTICS**

---

Original French/English translation

STANAG 2151

(Edition No. 2—1st Draft)

**DETAILS OF AGREEMENT (DofA)**

**ROAD NETWORK—DEFINITIONS AND CHARACTERISTICS**

**GENERAL**

1. The NATO Armed Forces agree to adopt the following definitions in connection with the use of the road network and to evaluate the potential of this network in accordance with the characteristics indicated below.

**DEFINITIONS**

2. a. The Basic Military Road Network. This network includes all routes designated in peacetime by the host nations to meet the anticipated military movements and transport requirements, both allied and national.  
b. The basic network should already, in peacetime, have sufficient capacity and be equipped with the necessary facilities.  
NOTE (for information): There is a basic CENTRAL EUROPE military network formed from national networks.
3. a. A Military Road Manoeuvre Network. This network is the road system required by a commander for the conduct of a specific operation and for the required logistical support for that operation.  
b. It is built up from the corresponding basic military road network the routes of which form the framework of the military manoeuvre nets, taking into consideration such additions or alternatives as may be required by circumstances and the needs of the Command. This network is defined and controlled (allotment of movement credits) by the military authorities, national or allied, according to the break-down of responsibilities in the theatre of operations (Communication Zone, Rear and Forward Combat Zone.)

**GENERAL BUILD-UP OF MILITARY ROAD NETWORKS**

4. a. Axial Routes ("pénétrantes" or "axiales"). This term denotes the routes running through the rear area and into the forward area. They are identified by odd numbers and shown on overlays by unbroken lines.

- b. Lateral Routes ("latérales" or "rocares"). This term denotes the routes, the general direction of which is roughly parallel to the frontline, which feed into or cross axial routes. They are identified by even numbers and shown on overlays by broken lines.

## STATUS OF ROUTES IN A MILITARY NETWORK

5. a. A Controlled Route ("itinéraire réglementé") denotes a route the use of which is subject to traffic or movement restrictions. ("Movement Credit" mentioned below is defined in STANAG 2154.) Controlled routes can be divided into:
- (1) A Supervised Route ("itinéraire surveillé") is a roadway over which control is exercised by a traffic control authority by "Movement Credit" is required for its use by a column of 20 or more vehicles or by any vehicle of exceptional size or weight.
  - (2) A Despatch Route (UK: "regulated route"; FR: "itinéraire garde") is a roadway over which full control, both as to priorities of use and the regulation of movement of traffic in time and space is exercised. A "Movement Credit" is required for its use by any independent vehicle or group of vehicles regardless of number or type.
  - (3) A Reserved Route ("itinéraire réservé ou spécialisé") is a route the use of which is:
    - (a) Allocated exclusively to a particular authority or formation ("itinéraire réservé") e.g., route reserved for the 10 Division, or
    - (b) Intended to meet a particular requirement ("itinéraire spécialisé") e.g., route reserved for evacuation.
- b. An Open Route ("itinéraire libre") is a route for the use of which no "Movement Credit" is required.

## SPECIAL RESTRICTIONS AND/OR INDICATIONS

6. a. One Way Road ("itinéraire à sens unique") is a road on which vehicles may move in one direction only at a particular time.
- b. Prohibited Route ("itinéraire interdit") or Prohibited Section of Route is a route or selection of route over which all traffic is prohibited.
- c. A Signed Route ("itinéraire fléché") is a route along which a unit has placed, on its own initiative, for its exclusive use, and under the conditions prescribed by the Command or the manoeuvre regulations, directional signs which include the identification symbol of the unit concerned.
- d. Route Where Guides Are Provided ("itinéraire jalonné"). This term denotes a route on which a unit has placed, under its own initiative and for its exclusive use and under the conditions prescribed by the Command or the manoeuvre regulations, guides responsible for showing the vehicles of that unit the direction they are to follow. These guides direct the personnel and vehicles of their own formation, but do not give any indication to personnel and vehicles of other units, who must respect the common signing and regulations.

## TRAFFIC FLOW AND ROAD CAPACITY

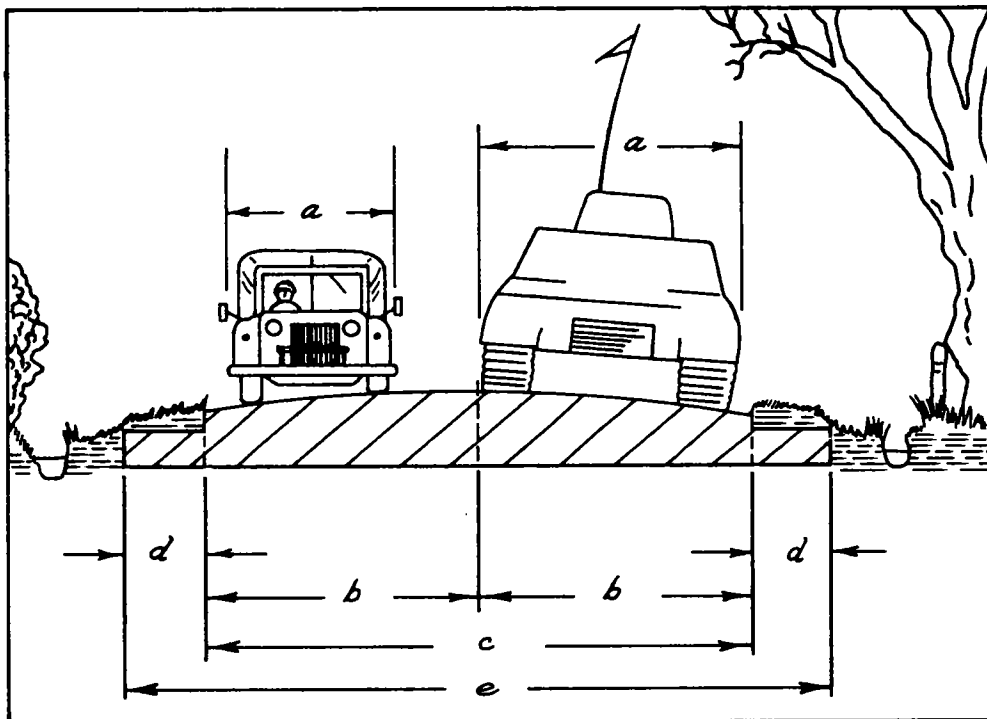
7. a. Traffic Flow ("débit d'un itinéraire") is the total number of vehicles passing a given point in a given time. Traffic flow is expressed as vehicles per hour (V.P.H.).
- b. Road Capacity in Vehicles or Tons ("capacités routières en véhicules ou en tonnes"). The road traffic which may use a road is variable. The maximum capacity either for the flow of vehicles or for the tonnages carried are important data for transportation planning. These maxima are defined below:
  - (1) The Road Capacity in Vehicles "capacité en véhicules ou le débit maximum") is the maximum number of vehicles that can pass over any particular road or route in one direction (one way traffic), within a given time. When the road is to be used in both directions (2-way traffic) this should be noted, and the capacity might be correspondingly reduced. It is generally expressed in vehicles per hour (V.P.H.). The road capacity cannot be greater than the maximum traffic flow at its most restricted point.
  - (2) The Road Capacity in Tons is the maximum number of tons which can be moved over any particular road or route in one direction, (one way traffic), within a given time. When the road is to be used in both directions (two way traffic) this should be noted, and the capacity might be correspondingly reduced. It is generally expressed in tons per hour and is the product of V.P.H. and the average payload of the vehicles using the route (e.g., 200 V.P.H. x 3 T = 600 tons per hour).
- c. Complementary Remarks. Estimate of traffic flows and/or tonnage capacity should take into account the existing conditions. They may include:
  - (1) Road characteristics (terrain, type of roadway, number of lanes available, road maintenance, rated tonnage capacity of the weakest bridge).
  - (2) Military traffic regulations (density, speed limits, direction of traffic).
  - (3) Types of vehicles employed.
  - (4) Movement conditions (by day, by night, lighting and/or weather conditions).

## CHARACTERISTICS

8. The characteristics of a route are in particular:
  - a. The width of the traveled way (UK: "carriage way").
  - b. The clearance of obstacles (e.g., tunnels, bridges, etc.).
  - c. The class of loads which can be accepted in accordance with STANAG 2021.

## WIDTHS

9. a. The various widths of a road are illustrated in the drawing below:



#### LEGEND

- a. Width of vehicle
- b. " " lane
- c. " " travelled way (UK: " carriage way")
- d. " " hard shoulder
- e. " " grading

#### *Various widths of a road.*

- b. The number of lanes is determined by the width of the travelled way; i.e., the subdivision of the travelled way to allow the movement of a single line of vehicles. Taking into account the width of a normal vehicle and the space required on either side of that vehicle, the width of the lane required for the movement of one column is normally estimated at  $11\frac{1}{2}$  feet (3.50m) and 13 feet (4m), for a tracked combat vehicle. A single lane road can only be used in one direction at any one time.
- c. Road Capacity: A route or road can be classified as single or double flow according to the number of lanes.
  - (1) A route or road is single flow ("simple courant") when it allows a column of vehicles to proceed and, in addition, isolated vehicles to overtake or to pass in the opposite direction, at pre-determined points. It is desirable that the width of a single flow road be equal to at least  $1\frac{1}{2}$  lanes.
  - (2) A route or road is double flow ("double courant") when it allows two columns of vehicles to proceed simultaneously. It is essential that the width of a double flow road be equal at least to 2 lanes.

d. In the light of the above definition, the traffic possibilities can be shown in the following table:

FLOW POSSIBILITIES	ROAD WIDTHS FOR NORMAL VEHICLES ONLY	ROAD WIDTHS FOR TRACKED COMBAT VEHICLES
Isolated vehicles of appropriate width only and in one direction only	At least 11½ ft., (3.50m)	At least 13 ft., (4m)
Generally one way only; no overtaking or passing in opposite direction	Between 11½ ft., and 18 ft. (3.50m and 5.50m)	Between 13 ft., and 19½ ft., (4m and 6m)
Single flow	Between 18 ft., and 23 ft. (5.50m and 7m)	Between 19½ ft., and 26 ft., (6m and 8m)
Double flow	Over 23 feet (7m)	Over 26 ft., (8m)

## HEIGHT

10. The height allowed for clearing overhead obstacles is that which separates the travelled way from a line drawn horizontally under the summit of the overhead obstacle. It is a definite limit prohibiting the use of a route to all vehicles which exceed that height, with or without a load.

## CLASS

11. a. Route. The class of a route is fixed in relation to the heaviest gross weight vehicle the route will accept. In such a case the choice of the route is limited (see STANAG 2021).

b. Network. The class of a network is fixed in relation to the minimum route classification in that network.

12. To facilitate movement those routes included in a low class network but over which heavier equipment can be moved are re-grouped in broad categories:

Average traffic routes	:	Class 50
Heavy traffic routes	:	Class 80
Very heavy traffic routes	:	Class 120.

13. Whenever possible, the basic military road network is composed of average routes (Class 50) and includes a certain number of heavy traffic routes and a few very heavy traffic routes.

## POTENTIAL

14. For planning purposes it would be useful that the potential of a route should be expressed on diagrams, tables and maps (by road sections) by:

- Road capacity (in vehicles per hour—one way traffic or two way traffic—see para 7.b.(1)).
- Number of lanes (normal vehicles, see para 9.b.).
- Load class (tracked vehicle, one-way—see para 11.a.).

(Example: 500/2/80 means a road with a one way traffic capacity of 500 V.P.H. 2 lanes, class 80).

Note: If a road should be used for two way traffic, special mention will have to be made.

#### **IMPLEMENTATION OF THE AGREEMENT**

15. This STANAG will be considered to have been implemented when the necessary orders/instructions to use the information contained in this Agreement have been issued to the forces concerned.

**APPENDIX I**  
**STANAG 2154**  
**DEFINITIONS AND REGULATIONS FOR MILITARY MOTOR**  
**MOVEMENTS BY ROAD**

---

Agreed English/French Texts

STANAG 2154  
(Edition No. 2)

DETAILS OF AGREEMENT (DofA)  
DEFINITIONS AND REGULATIONS FOR MILITARY  
MOTOR MOVEMENTS BY ROAD

Annex: A (DofA). Direction Arrow.

**AGREEMENT**

1. It is agreed that the NATO Armed Forces are to use the definitions and regulations applying to military motor movements by road, defined in the following paragraphs.

**ORGANIZATION OF COLUMNS**

2. A column of vehicles is a group of at least ten vehicles moving under a single commander, over the same route, in the same direction.

3. A large column may be composed of a number of organized elements (subunits, march units, sections of vehicles, etc.).

4. Each column and each organized element of the column must include:

- a. A commander whose place may vary.
- b. In the first vehicle: a subordinate commander known as the 'pace setter' (in French: guide).
- c. In the last vehicle: a subordinate commander known as the 'trail officer' (in French: serre-file).

5. The pace setter of the first element of a column leads it and regulates its speed. The trail officer of the last element deals with such problems as occur at the tail of the column.

6. In addition, each vehicle is to have a 'vehicle commander' (who may be the driver).

**IDENTIFICATION OF COLUMNS—MOVEMENT CREDIT**

7. Each column is to be identified by a number and by flags.

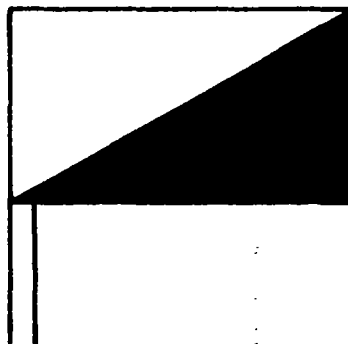
8. Each column is to be identified by a number known as 'movement number' or 'identification serial number' which is allocated at the same time as the 'movement credit' (Annex B (DofA) to STANAG 2155) by the authority organizing the movement (see paragraph 12 below). This number identifies the column during the whole of the movement.

9. The movement number is to be placed on both sides and, if possible, on the front of at least the leading vehicle and the last vehicle of each organized element of the column. It is to be composed of:

- a. Two figures indicating the day of the month on which the movement is due to commence.
- b. Three or more letters indicating the authority organizing the movement, the first two letters being the national symbols indicated in STANAG 1059.
- c. The figures indicating the serial number allocated by the authority responsible for the movement.  
(Example: identification 03-BEA-08 will indicate that Column No. 8 will be moved by the Belgian authority (A) on the 3rd day of the current month.)
- d. The elements of a column may be identified by adding a letter behind the movement number.

10. Additionally, each column is to be identified by flags or, for night movement, by lights, security permitting, as described below:

- a. The leading vehicle of the 'column' is to carry a blue flag (and a blue light at night).
- b. The last vehicle of the 'column' is to carry a green flag (and a green light at night).
- c. The vehicle of the column commander is to display a white and black flag as indicated below:



*Vehicle flag for column commander.*

- d. A vehicle that cannot maintain its position in a column may indicate this condition by displaying a yellow flag.
- e. Flags should be approximately 12" (30 cm) X 18" (45 cm) in size.
- f. Flags are to be mounted on the left side of vehicles except where vehicles drive on the left, in which case the flags are to be mounted on the right side of the vehicles.

11. Headlights. In peacetime, all vehicles driving in a routine march column are to use their dipped headlights, even in daylight.

12. Movement Credit—Time Allocation. (in French: *Crédit de mouvement*.)

- a. A movement credit is the allocation granted to one or more vehicles in order to move over a controlled route in a fixed time according to



movement instructions (see STANAG 2151, paragraph 5 of the Details of Agreement).

- b. Besides the allocation of a 'movement number' or 'identification serial number' (see paragraph 8 above), a movement credit includes the indication of times at which the first and the last vehicle of the column are scheduled to pass:

- (1) The entry point, that is to say the point where the column enters the controlled route.
- (2) The exit point, that is to say the point where the column leaves the controlled route.
- (3) At critical points, and, if necessary at traffic control posts.

#### TIME AND DISTANCE FACTORS IN MOTOR COLUMNS

13. Vehicle Distance. 'Vehicle distance' (in French: distance) is the space between two consecutive vehicles of an organized element of a column.

14. Column Gap. 'Column gap' (in French: créneau) is the space between two organized elements following each other on the same route. It can be calculated in units of length or in units of time as measured from the rear of one element to the front of the following element.

15. Traffic Density. 'Traffic density' (in French: densité de la circulation) is the average number of vehicles that occupy one mile or one kilometre of road space, expressed in vehicles per mile (VPM) or per kilometre (VPK).

16. Length of a Column. 'Length of a column' (in French: longueur d'encombrement) is the length of roadway occupied by a column in movement including the gaps inside the column from the front of the leading vehicle to the rear of the last vehicle.

17. Pass Time. 'Pass time' (in French: durée d'écoulement) of a column is the actual time between the moment when the first vehicle passes a given point and the moment when the last vehicle passes the same point.

18. Road Clearance Time. 'Road clearance time' (in French: durée d'encombrement) is the total time a column requires to travel over and clear a section of road.

#### FORMATION AND DISPERSAL OF COLUMNS

19. Start Point. 'Start point' (in French: point initial) is a well defined point on a route at which a movement of vehicles begins to be under the control of the Commander of this movement. It is at this point that the column is formed by the successive passing, at an appointed time, of each of the elements composing the column. In addition to the principal start point of a column there may be secondary start points for its different elements.

20. Release Point. 'Release point' (in French: point de dislocation) is a well defined point on a route at which the elements composing a column return under the authority of their respective commanders, each one of these elements continuing its movement towards its own appropriate destination. In addition to the principal release point of a column, there may be several secondary release points for the various elements.

#### SPEED AND FLOW OF COLUMNS

21. Average Speed. 'Average speed' (in French: vitesse de croisière) is

the number of miles or kilometres travelled in an hour excluding all ordered halts. It is expressed in miles or kilometres per hour.

22. Speed. 'Speed' (in French: vitesse instantanée) indicates the actual rate of speed of a vehicle at a given moment, as shown on the speedometer (in kilometres/hour or miles/hour).

23. Pace. 'Pace' (in French: vitesse de marche) is the regulated speed of a column or element as set by the pace setter in order to maintain the average speed prescribed.

24. Rate of March. 'Rate of march' (in French: vitesse moyenne) is the average number of miles or kilometres to be travelled in a given period of time including all ordered halts. It is expressed in miles or kilometres in the hour. The rate of march is a general planning factor used by staffs.

## ROUTE SIGNING AND ROAD GUIDES

25. STANAG 2151 gives the definition of a 'signed route' and of a 'route where guides are provided'.

26. Signing and guide teams are normally provided by the moving unit (see paragraph 29 below). Members of these teams must not, under any circumstances, wear the armbands and cuffs specified in STANAGs 2025 and 2159. They may wear coloured armbands.

27. Direction arrows used should preferably be black on white background and bear the identification symbol of the unit in question (distinctive sign or identification number). They may be of a similar type to those shown in Annex A (DofA). Before crossroads leading to several directions, a warning arrow can be used (type similar to that shown in Annex C to the Details of Agreement of STANAG 2012).

## MILITARY ROUTE SIGNING

28. Unit route signs and unit guides are to be put out a short time in advance of the column and picked up as soon as possible after the tail of the column has passed.

29. Route signing and the placing of guides on controlled routes must be under the responsibility of the authority in charge of movements or traffic in the area concerned.

30. Outside these itineraries, the tasks above are to be the responsibility of the column commander.

## SPECIAL REGULATIONS FOR THE EXECUTION OF MOVEMENTS

31. All personnel exercising a command in the column and all drivers must strictly obey the instructions of traffic control and regulating personnel.

32. When approaching a traffic control or a regulating post indicated by prescribed signs (STANAGs 2025 and 2012) the column commander or his representative must advance ahead of his column and report to the regulating post commander to:

- a. Give the required information concerning his organized elements and their movements.
- b. Receive information and possibly instructions.

pass the post, where however they must not stop unless ordered to do so.

33. Through this post, he can also arrange for the transmission of his own instructions, or information, to the various elements of his column as they

## HALTS

### 34. Short Halts.

- a. Short halts made by columns or elements of columns on the controlled routes normally are to last 10 minutes and take place in principle, every 2 hours, 10 minutes before the full hour, even or odd (this detail to be specified in orders). All columns following the same route are to stop at the same time.
- b. However, the characteristics of the road may make it necessary for the halt to take place in one particular part of the route rather than simultaneously at a fixed time. In such cases, the necessary instructions are to be given in the orders relating to the movement.

35. Long Halts. No standard rules for the observance of long halts are laid down. They must always be specifically plotted on movement graphs in order to avoid possible conflict.

36. Particular attention is to be paid to the following aspects of traffic discipline:

- a. When making a long halt, isolated vehicles or vehicles forming part of a column, should move off the roads as much as possible.
- b. If this practice cannot be observed, the commander of a column which is halted on an itinerary must take all necessary measures to facilitate circulation for other road users and avoid accidents or traffic jams. The measures to be taken will vary according to the road conditions and width of the route:
  - (1) Warning, at a sufficient distance from the front and rear of the column (guards, warning flags, lights or flares, security permitting).
  - (2) If required, organize (direct) a system of one-way traffic alternately along the columns etc.
- c. When a halted column resumes movement it has the right of way while moving back on to the road, unless otherwise prescribed.

## OVERTAKING OF COLUMNS

### 37. By Isolated Vehicles.

- a. An isolated vehicle is only authorized to overtake a moving column when:
  - (1) Its maximum authorized speed is appreciably higher than the speed at which the column is moving, thus enabling it to overtake each vehicle rapidly.
  - (2) There is sufficient distance between the vehicle of the column to allow the overtaking vehicle to regain its position in the proper lane after overtaking each vehicle.
  - (3) The trail officer of the column gives a clear signal that overtaking is possible.
- b. In all other cases, an isolated vehicle is to overtake the column only when the latter is halted.

### 38. By Other Columns.

- a. On a controlled route a column may only overtake another column on the orders of the movements authorities and as arranged by the traffic regulating personnel.

- b. On an open route no column may overtake another moving column, except in special cases, e.g., on a one-way road wide enough. In these cases, the commander of the column desiring to pass is to contact the commander of the column to be passed prior to effecting passage.
- c. Outside these special cases, the overtaking of a column by another column is only authorized if the former is halted and providing the moving column has the time to overtake the whole of the halted column before the latter is ready to move on. In this case, the commander of the column desiring to pass is to contact the commander of the column to be passed prior to effecting passage. The commander of the halted column after giving his agreement must facilitate the overtaking.

#### MOVING BY NIGHT (Reference: STANAG 2024)

39. By night, road movements are carried out according to traffic regulations as follows:

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>a. With normal lighting</li> <li>OR</li> <li>b. Reduced lighting</li> <li>OR</li> <li>c. Blackout lighting</li> <li>OR</li> <li>d. Without lights</li> <li>OR</li> <li>e. possibly with 'balisage' (1)</li> </ul> | } | <p>From a certain line or on certain routes specified by orders.</p> |
|--|---|--|

40. When columns are moving under blackout conditions, traffic normally will be one-way.

#### IMPLEMENTATION OF THE AGREEMENT

41. This STANAG will be considered to have been implemented when the necessary orders/instructions to use the definitions and regulations contained in this Agreement have been issued to the forces concerned.

---

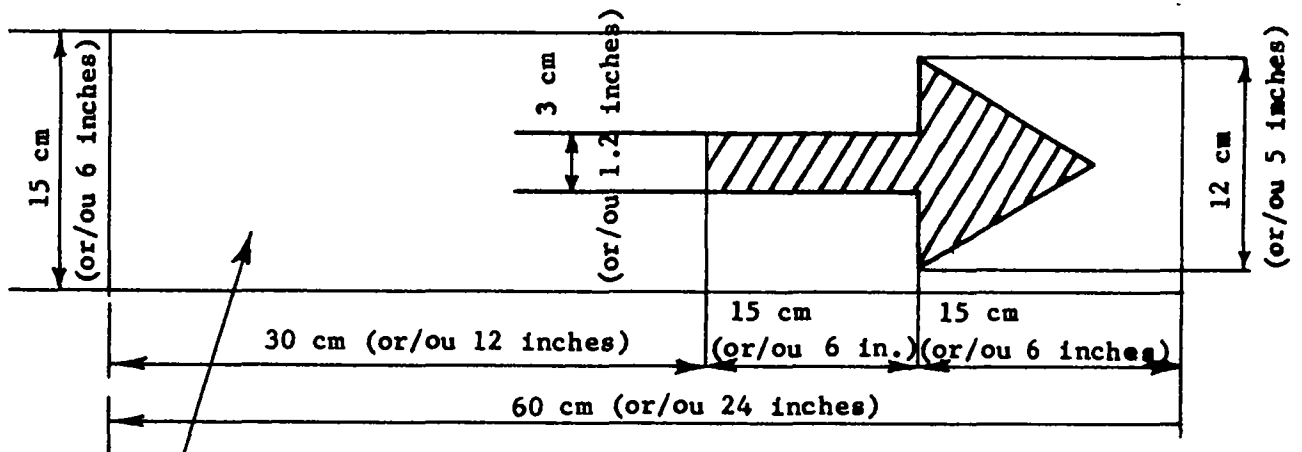
NOTE (1) 'Balisage' is a method by which a route is outlined by a system of dim beacon lights enabling vehicles to be driven at near daytime speed under blackout conditions.

DIRECTION ARROW

(made of paper, synthetic matter or wood.....)

FLECHE DE DIRECTION

(réalisée en papier, en matière synthétique ou en bois.....)



SPACE FOR PRINTING THE SYMBOLS

ESPACE DISPONIBLE POUR LES SYMBOLES

**APPENDIX J**  
**STANAG 2156**  
**TRANSPORT REQUEST AND REPLY TO TRANSPORT REQUEST**

---

Agreed English/French Texts

STANAG 2156

**DETAILS OF AGREEMENT**

**TRANSPORT REQUEST AND REPLY TO TRANSPORT REQUEST**

- Enclosures: I. Annex 'A'—TRANSPORT REQUEST and Appendices 1 and 2.  
II. Annex 'B'—REPLY TO TRANSPORT REQUEST and Appendices 1 and 2.

**INTRODUCTION**

1. When a unit or formation has to effect a movement for which:—
  - a. it does not possess appropriate means of transport,
  - b. it has inadequate means of transport,
  - c. it cannot use its own means of transport,such a unit or formation must prepare a TRANSPORT REQUEST and submit it to the headquarters concerned (Movements and Transport Staff) in accordance with national instructions and international agreements in force.
2. The TRANSPORT REQUEST will be prepared either:—
  - a. by the unit or formation requiring transport,
  - b. or, in urgent cases, by the military commander ordering the movement or transport.
3. The headquarters concerned (Movements and Transport staff) which receives the TRANSPORT REQUEST should find in it ALL the information necessary to enable it to determine quite independently:—
  - a. the most suitable means of transport, in relation to the requirements and the actual transport available;
  - b. the action necessary to organize the transport or the movement.
4. The headquarters concerned (Movements and Transport Staff), when it has considered the Transport Request, will send the unit or formation a reply in the form of a REPLY TO TRANSPORT REQUEST. The Reply to a Transport Request:—
  - a. is used for the purpose of giving the requesting unit or formation a reply as soon as possible so that it may make the preparations for the movement or transport in question;
  - b. may be circulated as an integral part of (or as an annex or supplement to) the Movement Order issued by the authorities responsible;

- c. does not preclude the submitting of a "Movement Credit" request on the routes where it is required (in accordance with STANAG 2151).

## AGREEMENT

5. In order to standardize the information to be incorporated in the TRANSPORT REQUEST and REPLY TO TRANSPORT REQUEST, the NATO Armed Forces agree to comply with instructions in paragraphs 7 and 8 below when preparing such forms. It is further agreed:—

- a. that these documents must be capable of transmission, in code form, by message or telephone;
- b. that it is not necessary to standardize the layout and format of the forms used for TRANSPORT REQUEST and REPLY TO TRANSPORT REQUEST.

6. If the TRANSPORT REQUEST is for a troop or supply movement by Air and is approved by the proper authority, the Movements Staff concerned will transcribe the requirement onto a form NATO Request for Air Transport (NARAT) in accordance with STANAG 3093.

## THE TRANSPORT REQUEST

7. The TRANSPORT REQUEST will give the information called for in the example shown at ANNEX 'A'.

- a. The FIRST Part must be completed in full.
- b. The SECOND, THIRD, FOURTH and FIFTH Parts will be filled in as necessary. Unused spaces will not be taken up subsequently. It is therefore UNnecessary to give nil returns.
- c. Examples:—
  - (1) for the movement of an Infantry Battalion see Appendix 1 to ANNEX 'A';
  - (2) for the transport of a general cargo see Appendix 2 to ANNEX 'A'.

## THE REPLY TO TRANSPORT REQUEST

8. The REPLY TO TRANSPORT REQUEST will provide the information listed in the example at ANNEX 'B'.

- a. The FIRST Part must be completed in full.
- b. The other parts will be filled in as necessary. Unused spaces will not be taken up subsequently. It is therefore UNnecessary to give nil returns.
- c. Examples are given at Appendices 1 and 2 to ANNEX 'B'.

## TRANSPORT REQUEST

C O D E		MEANING	REMARKS
(a)	(b)	(c)	(d)
FIRST PART			
ONE		Very brief description of operation	
TWO		Priority category	If known
THREE		Headquarters concerned (Movements and Transport Staff), unit or service submitting Transport Request	Add: a. rank, name and appointment of officer signing transport request b. address and Tel. No.
FOUR		Security Classification, Reference No. and "Date-time" group given to Transport Request by requesting authority mentioned in FIRST PART THREE	
FIVE		Departure point of transport	Exact position and coordinates
SIX		"Date-time" group of possible start of embarkation or loading operation.	Indicate Time Zone
SEVEN		Destination of transport	Exact position and coordinates
EIGHT		"Date-time" group by which it is desirable that the transport should reach its destination	Indicate Time Zone
NINE		Means of transport desired	Use the following code:— RED : for road transport BLACK : for rail transport BLUE : for inland water-ways GREEN : for sea transport YELLOW : for air transport
TEN		Has the agency requesting transport a metal field loading ramp?	Answer YES or NO
ELEVEN		Any further information considered to be of use.	
SECOND PART			
ONE	ALPHA	Male personnel to be transported:— A/B/C	A = number of officers B = number of Sergeants (or equivalent ranks) and above C = number of Corporals (or equivalent ranks) and below



C O D E		MEANING	REMARKS
(a)	(b)	(c)	(d)
SECOND PART			
	BRAVO	Female personnel to be transported:— A/B/C	A, B and C as for SECOND PART ONE ALPHA
TWO		Personal baggage, dress personal weap- ons, etc.	Brief description
THREE		Officer commanding personnel during movement	Give: rank, name
FOUR	ALPHA	Animals: A/B	A = kind B = number
	BRAVO	etc.	
THIRD PART			
ONE		TANKS AND TRACKED VEHICLES	
	ALPHA	Re first category of vehicles A/B/C/D	A = official description B = number to be moved C = weight in tons D = military class
	BRAVO	E = a × b × c centimetres or inches	a = overall length b = overall width c = overall height (cm for centimetres, in for inches) Where a detail is not known the word 'BLANK' will be inserted; in this way, it will always be possible to identify the data given
	CHARLIE DELTA	Re second category of vehicles A/B/C/D E	{ As above
	ECHO FOXTROT	Re third category of vehicles A/B/C/D E etc.	
TWO		ARTILLERY	
	ALPHA	Re first category A/B/C	A = official description B = number to be moved C = weight in tons

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
	BRAVO	D = a × b × c centimetres or inches (cm or in)	a = overall length b = overall width c = overall height  Insert the word 'BLANK' where any detail is not known
	CHARLIE	Re second category	{ As above
	DELTA	A/B/C D	
	ECHO	Re third category	{ As above
	FOXTROT	A/B/C D	
THREE		WHEELED MOTOR VEHICLES	
	ALPHA	Re first category of vehicles	As for tanks (THIRD PART ONE above)
	BRAVO	A/B/C/D E	
	CHARLIE	Re second category of vehicles	As above
	DELTA	A/B/C/D E	
		etc.	
	ZULA	Number of motor-cycles	
FOUR		TRAILERS	
	ALPHA	Re first category of trailers	As for tanks (THIRD PART ONE above)
	BRAVO	A/B/C/D E	
	CHARLIE	Re second category of trailers	As above
	DELTA	A/B/C/D E	
		etc.	
	YANKEE	Type of tractor necessary for trailers with no tractor vehicle	Allow the authority to which the request is submitted to settle this problem, if a road movement is prescribed
FIVE		TROOPS, MISCELLANEOUS EQUIP- MENT, SUPPLIES, ETC. (WHICH CANNOT BE LOADED IN THE UNIT'S OWN TRANSPORT)	
	ALPHA	Personnel: A/B/C	A = number of officers B = number of Sergeants (or equivalent ranks) and above C = number of Corporals (or equivalent ranks) and be- low

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
	BRAVO	A/B for first category of cargo	A = brief description of cargo B = weight (in tons)
	CHARLIE etc.	A/B for second category of cargo	As above

#### FOURTH PART

ONE	GENERAL CARGO—FIRST TYPE		
	ALPHA	Brief description	
	BRAVO	Weight	in tons.
	CHARLIE	Average dimensions of items:— a × b × c centimetres or inches	1) State cm for centimetres, in for inches. 2) a = length b = width c = height
	DELTA	Loading capability of sender: A	A = tons per hour
	ECHO	Unloading capability of receiving unit: A	A = tons per hour
	FOXTROT	Special precautions desired	
	GOLF	Brief description of heavy or awkward lifts.	

TWO	GENERAL CARGO—SECOND TYPE		
	ALPHA BRAVO CHARLIE DELTA ECHO FOXTROT GOLF	As for FOURTH PART ONE	

#### FIFTH PART

	ALPHA	Requests for procuring of special means of transport
	BRAVO	Items or convoys requiring an escort which the unit itself is unable to provide
	CHARLIE	Any further information considered to be of use

NOTE: The FIRST Part of this format must be completed in full. The SECOND, THIRD, FOURTH and FIFTH Parts to be filled in as necessary.

---

MESSAGE		SECRET
FROM	: COMMANDER 12 INF BN	
FOR	: ACTION : COMMANDER MCG/INTER	URGENT OPS
	INFO : COMMANDER F INTER	ROUTINE
SUBJECT	: TRANSPORT REQUEST	
FIRST		
ONE	: MOV OF 12 INF BN OVER DISTANCE OF 250 KM	
THREE	: COMMANDER 12 INF BN MAJOR JEAN S3 KLEMSKERKE EDEN CINEMA TEL. OSTEND 46521	
FOUR	: SECRET 982 OF 120730 Z	
FIVE	: KLEMSKERKE ES 0177	
SIX	: 122200 Z	
SEVEN	: VERVIERS GS 0408	
EIGHT	: 140600 Z	
NINE	: BLACK	
TEN	: NO	
SECOND		
ONE	: A 40 + B 116 + C 638	
TWO	: KITBAG / BATTLE DRESS	
THREE	: CAPT. LOUIS	
THIRD		
ONE	ALPHA : CARRIER 81 MM MORTAR MT/8/8/8	
	BRAVO : 638 x 223 x 227 CM	
	CHARLIE : CARRIER HT M9/10/8/9/	
	DELTA : 618 x 221 x 228 CM	
THREE	ALPHA : JEEP/50/2/2/	
	BRAVO : 69 x 55 x 70 IN	
	CHARLIE : AMBULANCE/2/5/5	
	DELTA : 590 x 213 x 264 CM	
	ECHO : VAN BAN/10/3/4	
	FOXTROT : BLANK	
	GOLF : LORRY 3T/60/8/10/	
	HOTEL : 567 x 230 x 310 CM	
	INDIA : TRUCK MED WRECKER/3/18/15	
	JULIET : 310 x 9.7 x 103 IN	
	ZULA : 22	
FOUR	ALPHA : TRAILER 250 KG 2-WHEEL/17/1/1/	
	BRAVO : 109 x 56 - 40 IN	
	CHARLIE : TRAILER 1 T 2-WHEEL/30/1/1/	
	DELTA : 380 x 220 x 217 CM	
FIVE	BRAVO : RESERVE FOOD SUPPLIES/15 T	
	CHARLIE : INF AMMO/5 T	

---

---

	MESSAGE	SECRET
FROM	: CMP OSTEND—NIEUWPOORT	
FOR	: ACTION : COMMANDER MCG/INTER	URGENT OPS
	INFO : COMMANDER 10 AMMO DEPOT	ROUTINE
SUBJECT	: TRANSPORT REQUEST	
FIRST		
ONE	: TRANSPORT OF AMMUNITION	
THREE	: CMP OSTEND LT COL BAUDRIER S3 HOTEL COSMOPOLITE	
	OSTEND TEL. 65232	
FOUR	: SECRET 2155 OF 120830 Z	
FIVE	: PORT NIEUWPOORT—BASSIN DES PECHEURS DS 8276	
SIX	: 131000 Z	
SEVEN	: 10 AMMO DEPOT HOUTHULST DS 9746	
NINE	: RED	
TEN	: YES	
FOURTH		
ALPHA	: INF AND ARTY AMMO	
BRAVO	: 400 T	
CHARLIE	: 80 x 40 x 30 CM	
DELTA	: 50 T/HR	
ECHO	: 60 T/HR	

## REPLY TO TRANSPORT REQUEST

CODE		MEANING	REMARKS
(a)	(b)	(c)	(d)
FIRST PART			
ONE		Security Classification, Reference No. and "Date-time" group of transport request to which this reply relates	
TWO		Security Classification, Reference No. and "Date-time" group allocated to this reply by sender	
THREE		Means of transport allocated	Use the following code: RED : road BLACK : rail BLUE : inland waterway GREEN : sea YELLOW : air
FOUR		Complete statement of means of transport allocated	
FIVE		Rank, name and appointment of officer by whom this reply is signed	
SIX		Any additional information considered useful	
SECOND PART			
ONE		Exact location of transport allocated	Identification and coordinates
TWO		"Date-time" group when embarkation or loading operations can begin	Indicate Time Zone. If necessary, break down into ALPHA, BRAVO, CHARLIE etc., if transport availability is spaced out over a period of time
THREE		Expected approximate "Date-time" group of departure of loaded movement or transport	Particularly important in the case of rail movements. Indicate Time Zone
FOUR		Route	Only for road or inland waterway movement or transport
FIVE		Place of disembarkation or unloading	Identification and coordinates
SIX		Any information considered useful	
THIRD PART			
ONE		Any information regarding waiting or transit areas; points of first destination, etc.	If necessary, break down into ALPHA, BRAVO, etc.

C O D E		MEANING	REMARKS
(a)	(b)	(c)	(d)
THIRD PART			
TWO		Special instructions: standards of marching, lighting, blackout line, etc.	As above.
THREE		Comments regarding control and regulating of movements.	As above.

NOTE: The FIRST Part of this format must be completed in full.  
The other Parts will be filled in as necessary.

APPENDIX 1 to ANNEX 'B'  
to STANAG 2156

### REPLY TO TRANSPORT REQUEST

MESSAGE		SECRET
FROM : COMMANDER MCG/INTER		
FOR	: ACTION : COMMANDER 12 INF BN	
	: INFO : COMMANDER F INTER	
SUBJECT : REPLY TO TRANSPORT REQUEST		
FIRST		
ONE	: YOUR SECRET 982 OF 120730 Z	
TWO	: SECRET 551 OF 12 1100 Z	
THREE	: RED EXCEPT FOR YOUR THIRD PART ONE AND THIRD PART FIVE WHICH WILL USE BLACK	
FOUR	: 12 15 METRE FLAT WAGONS AND 5 12T CLOSED WAGONS	
FIVE	: MAJOR JACQUES S3	
SECOND		
ONE	: OSTEND MARITIME STATION DS 9775	
TWO	: 130200 Z	
THREE	: 130600 Z	
FIVE	: VERVIERS EAST STATION GS 0409	
THIRD		
TWO	: RAMPS AVAILABLE AT OSTEND AND VERVIERS	
THREE ALPHA	: FOR YOUR RED MOVEMENT, YOU SHOULD APPLY FOR MOVEMENT CREDIT THROUGH NORMAL CHANNELS	
BRAVO	: BLACK MOVEMENT CAN BE CONTACTED VIA RTO GAND ST PIERRE AND LOUVAIN	

REPLY TO TRANSPORT REQUEST

---

MESSAGE		SECRET
FROM	: COMMANDER MCG/INTER	
FOR	: ACTION : CMP OSTEND-NIEUWPOORT	URGENT OPS
	: INFO : COMMANDER 10 AMMO DEPOT	URGENT
SUBJECT	: REPLY TO TRANSPORT REQUEST	
FIRST		
ONE	: YOUR SECRET 2155 OF 120830 Z	
TWO	: SECRET 558 OF 12 1345 Z	
THREE	: RED	
FOUR	: 20 5T CIVILIAN LORRIES FOR 4 UNINTERRUPTED TRIPS	
FIVE	: MAJOR JACQUES S3	
SIX	: THESE CIVILIAN VEHICLES WILL BE PROVIDED BY OTR FURNES TEL. 216.29—GARAGE MODERNE—55, RUE DE LA GARE	
SECOND		
ONE	: NIEUWPOORT—MARCHE AUX GRAINS—DS 8276	
TWO	: 130900 Z	
THREE	: 13 1300 Z/13 1800 Z/13 2300 Z/14 0400 Z	
FOUR	: PERVYSE/DIKSMUIDE/KLERKEN/HOUTHULST	
FIVE	: 10 AMMO DEPOT HOUTHULST DS 9746	
THIRD		
ONE	ALPHA : SEND REPRESENTATIVE TO MARCHE AUX GRAINS NIEUW- POORT TO DIRECT VEHICLES TO LOADING QUAY	
	BRAVO : WHEN MISSION COMPLETED, PLACE TRANSPORT AT DIS- POSAL OF OTR FURNES	
THREE	: ROUTE UNSPECIFIED	

---



**APPENDIX K**  
**STANAG 2159**  
**IDENTIFICATION OF MOVEMENTS PERSONNEL AND OFFICES**

---

Agreed English/French Texts

STANAG 2159

**DETAILS OF AGREEMENT**

**IDENTIFICATION OF MOVEMENTS PERSONNEL AND OFFICES**

**PART I**

**ARMBANDS FOR MOVEMENT CONTROL PERSONNEL**

1. The NATO Armed Forces agree that distinguishing armbands shall be used to identify all Movement Control Personnel who come into personal contact with forces being moved by road, rail, air or any other agency.

NOTE: This does not refer to personnel posted on the routes solely to assist the flow of road traffic proper; such personnel wear white cuffs (STANAG 2025, paragraph 23).

2. It is agreed that the armband will be red approximately 16½ inches (42 cm) long and 3½ inches (9 cm) wide, with a yellow wheel with eight spokes, 3 inches (7.5cm) in diameter. It will normally be fastened by four hooks or dome fasteners, 1 inch (2.5 cm) apart.

3. The standard armband will be worn on duty in accordance with the uniform regulations of the country concerned but in such a way that the wheel can be clearly seen.

NOTE: Staff Officers may wear normal Staff Armbands if that is the usual practice of the countries concerned.

**PART II**

**IDENTIFICATION OF MOVEMENTS AND TRANSPORT AGENCIES  
AND OF SERVICES RESPONSIBLE FOR ROAD TRAFFIC CONTROL**

Enclosure: Annex 'A'.

1. The NATO Armed Forces agree that standard signs shall be used to identify Movement Planning and Control agencies where these are not an integral part of a superior headquarters. Those agencies which are part of a superior headquarters shall be identified in accordance with STANAG 2030.

2. It is agreed that:

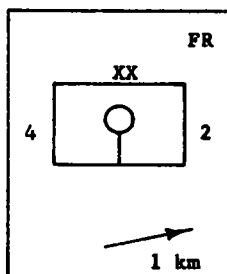
- a. The signs will conform to the procedures laid down in STANAG 2012. They will be rectangular in shape, the longest sides being vertical and the symbols will be painted white on a black background.

b. The signs will display the following:

- (1) The symbols laid down in STANAG 2019, or, if no appropriate symbol can be found in STANAG 2019: an eight spoked wheel, with additional rational distinguishing symbols (STANAG 2027) as required.
- (2) The national distinguishing letters in accordance with STANAG 1059.
- (3) The direction and/or distance to the agency concerned, if necessary.

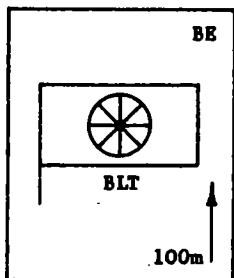
3. Examples are given in Annex 'A'.

1. AGENCIES FOR WHICH THERE IS AN AGREED  
NATO CONVENTIONAL SIGN IN STANAG 2019

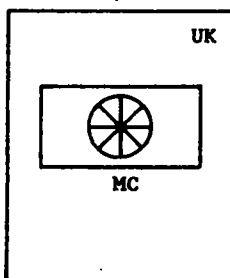


No. 4 Traffic Post of the 2nd French Division at 1 km to the right

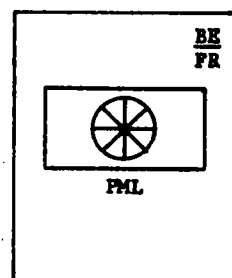
2. AGENCIES FOR WHICH THERE IS NO AGREED  
NATO CONVENTIONAL SIGN IN STANAG 2019



Local Transport Office  
(Belgian)  
(In Communications Zone)  
- Straight ahead at 100m



Movement Control Office  
(British)



Joint Liaison Post  
(Belgian/French)

NOTE: Lettering and diagrams are shown in white on a black background.

Annex A to part II of STANAG 2159.

**APPENDIX L**  
**STANAG 2164**  
**ADVICE OF MOVEMENT**

---

Agreed English/French Texts

STANAG 2164

**DETAILS OF AGREEMENT**

**ADVICE OF MOVEMENT**

Enclosures: Annex "A"—Advice of Movement of Personnel  
(AMOVPER)

Annex "B"—Advice of Movement of Freight  
(AMOVMAT).

**GENERAL**

1. This agreement covers the procedure for advising transit and destination authorities of the movement of personnel and freight and applies to NATO Armed Forces operating in a ground role. It deals only with internal movement (or transport) and, therefore, does not deal with movement which involves trans-world movement by sea or by air.

2. Internal movement is defined as "movement by an agency within a country, or within a defined land mass which may contain several countries, e.g., N. W. EUROPE". Among these types of movements (or transport) taken as a whole, some require special consideration, due, on the one hand, to the nature of the load and on the means of transport to be used, and on the other hand, to the time in which they have to be carried out. For such types of movement (or transport) it would appear desirable that the receiving authorities (and if need be, the transit authorities) be notified in advance by the dispatching authorities in order that:

- a. the transport may be monitored and regulated as necessary;
- b. receipt arrangements and, where necessary, off-loading arrangements may be made;
- c. appropriate action may be taken in the event of unforeseen incidents or changes of plan;
- d. non-arrivals or delays may be investigated.

3. For these purposes, the dispatching authorities will prepare a message called "Advice of Movement of Personnel" (AMOVPER) and "Advice of Movement of Freight" (AMOVMAT). These are shown in Annexes A and B.

**AIM**

4. The aim of this agreement is to—

- a. list the "Movements (or transport) categories" for which, in view of either the nature of the load or the means of transport employed, advice of movement is considered necessary;

- b. define the "types of movement (or transport)" conditions to be complied with in order that, as a result of the time-table laid down, "Advice of Movement" shall be considered necessary;
- c. standardize the information and form of messages advising the movement of personnel and freight.

## AGREEMENT

5. The NATO Armed Forces agree to use the advice of movement of personnel (AMOVPER) and advice of movement of freight (AMOVMAT) for the following "categories or types" of movements (or transport):

- a. Categories of Movements (or Transport)
  - (1) vehicles, guns and self-propelled equipment;
  - (2) empty or filled, military controlled and "pool" warflats, warflat trains, warwells, rectanks, internal user wagons, coaches, ward cars or ramp wagons;
  - (3) military traffic on warflats let to civilian railway organizations;
  - (4) military locomotives, workshop vans, weed-killing trains or cistern wagons (tankers);
  - (5) ammunition, projectiles or missiles;
  - (6) exceptional loads;
  - (7) all special trains transporting military personnel.
- b. Types of Movements (or Transport)
  - (1) mobilization movements;
  - (2) traffic required to be at a destination by a date or at a time sufficiently short to justify the adoption of the "Urgent" procedure;
  - (3) any traffic specially advised as "Urgent" by a headquarters authorized to do so.
- c. Form of Messages
  - (1) AMOVPER and AMOVMAT messages will contain necessary information as indicated in Annexes A and B.
  - (2) The information will be identified by the paragraph code given in Annexes A and B.

## ADVICE OF MOVEMENT OF PERSONNEL (AMOVPER)

PARA/CODE	MEANING	REMARKS
a	b	c
ONE	Authority and/or Movement No.	If movement not connected to a pre-planned move a brief summary of move will be given.
TWO	Number of personnel by ranks	
ALPHA	A + B + C	1. ALPHA—Male personnel
BRAVO	A + B + C	2. BRAVO—Female personnel
		3. A. Number of Officers B. Number of Sergeants (or equivalent ranks) and above. C. Corporals (or equivalent ranks) and below.
THREE	Details of accompanied baggage or equipment i.e., location, weight and cube.	
FOUR	Identification of means of transport	Use the following code: Red for road transport Black for rail transport Blue for inland water transport Green for sea transport Yellow for air Followed by: 1. Military train number and number of wagons. 2. Number of road convoy or number of vehicle. 3. Chalk number of aircraft 4. Name and/or number of barge as appropriate.
FIVE	Place of departure and ETD	Time zone to be shown
SIX	Destination and ETA	
SEVEN	Route, transshipment points and ETA at transshipment points.	
EIGHT	NOT APPLICABLE	
NINE	Additional information and instructions if necessary.	

## ADVICE OF MOVEMENT OF FREIGHT (AMOVMAT)

PARA/CODE	MEANING	REMARKS
a	b	c
ONE	Authority and/or consignment number	If movement not connected to a pre-planned move a brief summary of move will be given.
TWO	Brief description, nature and tonnage of freight/equipment.	
THREE	NOT APPLICABLE	
FOUR	Identification of means of transport	Use the following code: Red for road transport Black for rail transport Blue for inland water transport Green for sea transport Yellow for air transport Followed by: 1. Military train number and number of wagons. 2. Number of road convoy or number of vehicles. 3. Chalk number of aircraft 4. Name and/or number of barge as appropriate.
FIVE	Place of departure and ETD	Time zone to be shown
SIX	Destination and ETA	
SEVEN	Route, transshipment points and ETA at transshipment.	
EIGHT	Time allowed for unloading at destination.	
NINE	Additional information and instructions as necessary.	

**APPENDIX M**  
**STANAG 2166**  
**MOVEMENTS AND TRANSPORT DOCUMENTS USED FOR MOVEMENTS BY SHIP**

---

AGREED ENGLISH/French Texts

STANAG 2166

**DETAILS OF AGREEMENT (DofA)**

**MOVEMENTS AND TRANSPORT DOCUMENTS USED FOR  
MOVEMENTS BY SHIP**

Enclosures: See paragraph 1 below.

**AGREEMENT**

1. The NATO Armed Forces agree to adopt the following documents for movements by ship between NATO Nations:

- a. STRENGTH RETURN—  
MOVEMENTS BY SHIP See Annex 'A' (DofA).
- b. SAILING SIGNAL—  
FREIGHT (VICE) See Annex 'B' (DofA).
- c. SAILING SIGNAL—  
TROOP TRANSPORT (VICE) See Annex 'C' (DofA).

NOTE: The following Annexes are still under preparation and will be forwarded at a later date for ratification:

- d. CARGO AND STOWAGE  
REPORT To be issued as Annex 'D' (DofA).
- e. STOWAGE PLAN To be issued as Annex 'E' (DofA).
- f. SHIP'S DISCHARGE BOOK To be issued as Annex 'F' (DofA).

**IMPLEMENTATION OF THE AGREEMENT**

2. This STANAG will be considered to have been implemented when the necessary orders/instructions, bringing into use the documents mentioned in the agreement, have been issued to the forces concerned.



ANNEX 'A' to DETAILS OF AGREEMENT  
of STANAG 2166

STRENGTH RETURN—MOVEMENTS BY SHIP

1. The purpose of the form "Strength Return—Movements by Ship" (Appendix 1) is to provide a summary of personnel embarked to military authorities responsible for troop transport.
2. The form may also be used for embarkation of military or military sponsored personnel travelling on commercial ships.
3. The form is supported by a nominal roll or passenger-list, which gives the personal particulars of all passengers embarked.
4. The form is amended as necessary during the process of embarkation by the Embarkation Staff Officer (ESO). When ultimately signed by him, it becomes a certificate of personnel actually embarked on the ship.
5. The Strength Return deals with personnel only. No unit equipment (other than personal) will be entered on the form. Only the number of pieces of personal baggage will be entered; separate baggage receipts will be made out.
6. Unit equipment (other than personal) will be shipped on separate cargo documents, irrespective of whether or not the cargo is loaded on the same ship as the unit.
7. A distinction will be made between male and female personnel, military and civilian, travelling under military sponsorship.
8. As certain NATO countries have special arrangements concerning time served in the tropics (between the Tropic of Cancer and the Tropic of Capricorn) the dates of crossing these tropics must be entered on the form by the Embarkation Staff Officer (ESO) at the time of disembarkation. The exact information will be taken from the Master's logbook.
9. The instructions for the completion of the form and the distribution of the copies of the Strength Return will be printed on the reverse side of the form, as shown in Appendix 2.
10. The form will be printed in:
  - a. English and French, if the language of the country of origin is English or French;
  - b. The language of the country of origin and in English and French if the language of origin is not English or French.
11. The form will be printed on the standard size paper of the country concerned, approximately 30 x 20 cm (12 x 8 inches).

Security Classification (1)							
<b><u>STRENGTH RETURN</u></b>							
<b><u>MOVEMENTS BY SHIP</u></b>							
On embarkation and disembarkation of ..... (2)							
moving from ..... (3) to ..... (4)							
<u>To be entered by the ESO (5)</u> EMBARKED AT ..... date ..... par MV/SS ..... Crossing Tropic of <u>Cancer</u> , Capricorn date ..... DISEMBARKED at ..... date .....							
<b>D E T A I L</b> (6)		Strength on departure for Port of Embark.	Casualties en route for Port of Embark.	Strength actually EMBARKED	Casualties during sea voyage	Strength actually DISEMBARKED	<b>R E M A R K S</b> (7)
(a)		(b)	(c)	(d)	(e)	(f)	(g)
<b>MALE</b>	Officers	.....	.....	.....	.....	.....	
	W/Officers I	.....	.....	.....	.....	.....	
	W/Officers II	.....	.....	.....	.....	.....	
S/Sergeants	.....	.....	.....	.....	.....		
Sergeants	.....	.....	.....	.....	.....		
Corporals and below	.....	.....	.....	.....	.....		
<b>T O T A L</b>	.....	.....	.....	.....	.....		
<b>FEMALE</b>	Officers	.....	.....	.....	.....	.....	
	W/Officers I	.....	.....	.....	.....	.....	
	W/Officers II	.....	.....	.....	.....	.....	
S/Sergeants	.....	.....	.....	.....	.....	.....	
Sergeants	.....	.....	.....	.....	.....	.....	
Corporals and below	.....	.....	.....	.....	.....	.....	
<b>T O T A L</b>	.....	.....	.....	.....	.....	.....	
<b>CIVILIAN</b>	Male	.....	.....	.....	.....	.....	
	Female	.....	.....	.....	.....	.....	
	Children (under 10 years)	.....	.....	.....	.....	.....	
<b>T O T A L</b>	.....	.....	.....	.....	.....	.....	
<b>GRAND TOTAL</b>						.....	Number of pieces of baggage in the hold: .....
OC despatching unit ESO Port of EMBARK. OC unit/OC troops (8) ESO Port of DISEMB.	<b>Name</b>		<b>Rank</b>		<b>Signature</b>		
	.....		.....		.....		
	.....		.....		.....		
	.....		.....		.....		
Security Classification (1)							

APPENDIX 2 to ANNEX 'A' (DofA)  
of STANAG 2166

INSTRUCTIONS FOR COMPLETION AND DISTRIBUTION  
OF THE FORM

COMPLETION

- (1) Issuing authority will insert the security classification given in the administrative or other instructions for the move for which this form is prepared.
- (2) Insert title or serial number (if applicable) of unit or portion of unit moving.
- (3) Insert station and country of departure, unless otherwise instructed.
- (4) Insert place and country of final destination, unless otherwise instructed.
- (5) To be entered by the ESO:
  - a. Port, country and date of embarkation.
  - b. Name of the vessel.
  - c. Date of crossing the Tropic of Cancer/Capricorn (delete if not appropriate), to be taken from the Master's logbook.
  - d. Port, country and date of disembarkation.
- (6) Substitute, if necessary, rank designations of the nation and service concerned.
- (7) Insert, if appropriate, particulars of any casualties.
- (8) Delete if not appropriate.

DISTRIBUTION

- a. This form will be prepared in six copies by the unit or authority responsible for assembling the personnel concerned and sending them to the port of embarkation (dispatching unit). All six copies of this form will be handed to the movements staff at the port of embarkation.
- b. After completion and signing (as far as possible) of the forms the movements staff at the port of embarkation will retain two copies for its own use and deliver or forward four copies as follows:
  - (1) One copy to the officer commanding the unit or to the OC Troops;
  - (2) One copy to the dispatching unit;
  - (3) Two copies to the movements staff at the port of disembarkation; these copies will be sent by different means, one of them the fastest possible.
- c. On arrival at the port of disembarkation the officer commanding the unit or the OC Troops will hand his copy (signed and amended as necessary in the event of casualties, etc.) to the movements staff at the port of disembarkation.

REFERENCES

- a. State if necessary the specific regulations of the country of origin \_\_\_\_\_
- b. State if necessary the specific regulations for the movements staff of the country concerned at the port of disembarkation \_\_\_\_\_

ANNEX 'B' to DETAILS OF AGREEMENT  
of STANAG 2166

SAILING SIGNAL—FREIGHT (VICE)

1. Movements staffs at port of loading will dispatch a sailing signal for each ship carrying military cargo as soon as loading has been completed. Instructions for preparing these signals are given below.

2. Precedence. Sailing signals will be assigned a precedence in accordance with existing NATO procedures.

3. Security Classification. The originator is to insert the appropriate security classification.

4. Text

a. The text of the signal will clearly begin with the word "Vice" (traditional abbreviation for "Advice"). When it is not clear from either the address or the originator's number that the signal is for Movements, the text will begin "For Mov" (.) (Vice) (.).

b. The body of the signal will consist of the particulars given below, preceded by the code letter shown against each:

(A) Name of ship.

(B) Port of loading and ETD (Estimated Time of Departure).

(C) Port of discharge (if known) and ETA (Estimated Time of Arrival). If the port of discharge is not known the country of discharge will be stated.

(D) Consignee.

(E) Deadweight tonnage of stores by types, excluding those details in (F), (G) and (H) below.

(F) Appropriate description of classified equipment, ammunition and explosives with the total deadweight tonnage and stowage.

(G) Full description of cabin freight and "lock up" stores, with deadweight tonnage and full details of stowage.

(H) Full description of stores stowed on deck, with deadweight tonnage.

(J) Numbers and types of vehicles and tanks, showing separately those stowed on deck.

(K) Total deadweight of cargo including vehicles and tanks.

(L) Remarks including details of awkward and exceptionally heavy lifts (e.g., immobile vehicles and lifts exceeding the capacity of the ship's derricks).

c. When copies of Movement Instructions (Freight) have been dispatched so as to reach the action addressees before the possible arrival of a sailing signal, an abbreviated sailing signal will be sent in the following form:

(A)	}	As in sub-para. b above.
(B)		
(C)		
(D)		Does not apply.

- (E) Reference to the Movement Instructions (MI) (Freight) with details of variations, e.g.:
- (i) MI (Freight) No..... Complete
  - (ii) MI (Freight) No..... less (Stores Identification No.), or less ... "shut out"
  - (iii) MI (Freight) No..... plus (Stores Identification No.) with full description of additional cargo
- (F) Does not apply.
- (G) As in sub-para. b above.
- (H) and (J) Does not apply.
- (K) } As in sub-para. b above.
- (L) }

NOTE: When a full description is required, the following information will be given:

Identification Number.  
Number of packages.  
Type of stores.  
Consignee.

5. Specimen Sailing Signal—Freight (Vice). A Specimen Sailing Signal—Freight is given at Appendix 1 to Annex 'B' (DofA).

# APPENDIX 1 to ANNEX 'B' (DofA) of STANAG 2166

## SPECIMEN SAILING SIGNAL—FREIGHT (VICE)

### MESSAGE FORM

PRECEDENCE— ACTION	PRECEDENCE— INFO	DATE-TIME- GROUP
PRIORITY	DEFERRED	190700 Z
FROM: PORTMOVES LONDON	SECURITY CLASSIFICATION	
TO: MOV ANTWERP	UNCLASSIFIED (Classified in Wartime)	
INFO: WAR OFFICE Q(M)1 HQ BAOR COMD NCG/INTER	ORIGINATORS NUMBER MOV 363	

### VICE

- (A) SS BENARTY
- (B) LONDON 19 JUN
- (C) ANTWERP 20 JUN
- (D) TKS AND B VEHS TO 5 BOD. SUPS TO 3 SRD. SIGN EQPT  
AND MED STORES TO 12 INF BN
- (E) SUPS 120 TONS. POL 500 TONS. ORD 600 TONS

- (F) ONE CWT SIG EQPT CATEGORY ONE STOWED NO 2 TWEEN DECK LOCK-UP
- (G) ONE CWT MED STORES C/OCHIEF OFFICER CABIN
- (H) 5 TONS ENGR BRIDGING EQPT
- (J) 3 CENTURIONS NO 2 LOWER HOLD. TEN 3 TON B VEHS PORT AND STARBOARD OF NO 1 HATCH
- (K) 895 TONS 2 CWT
- (L) LOCO BOILER DW 35 TONS STOWED NO 1 LOWER HOLD BEYOND CAPACITY OF SHIPS' DERRICKS.

ANNEX 'C' to DETAILS OF AGREEMENT  
of STANAG 2166

SAILING SIGNAL—TROOP TRANSPORT (VICE)

1. Movements staffs at ports of embarkation will ensure that a signal is dispatched to all concerned, as soon as possible after the sailing of a ship on which Forces or Forces sponsored passengers have been embarked. Instructions for preparing these signals are given below.
2. Precedence. Sailing signals will be assigned a precedence in accordance with existing NATO procedures.
3. Security Classification. The originator is to insert the appropriate security classification.
4. Text
  - a. The text of the signal will clearly begin with the word "Vice" (traditional abbreviation for "Advice"). When it is not clear from either the address or the originators number that the signal is for Movements the text will begin "For Mov". (Vice).
  - b. The body of the signal will consist of the particulars given below, preceded by the code letter shown against each:
    - (A) Name of ship.
    - (B) Port of Embarkation and ETD (Estimated Time of Departure).
    - (C) Port of Disembarkation and ETA (Estimated Time of Arrival).
    - (D) Numbers of passengers on board by categories.
    - (E) Destination of passengers.
    - (F) Tonnage of baggage by categories and stowage. (This may be the subject of a separate signal if desired.)
    - (G) Remarks including medical assistance required on disembarkation, prisoners, etc.
5. If necessary, sailing signals may be compiled in several parts, each relating to one port of call.
6. Specimen Sailing Signal/Troop Transport (Vice). A specimen Sailing Signal—Troop Transport (Vice) is given at Appendix 1 to Annex 'C' (DofA).

APPENDIX 1 to ANNEX 'C' (DofA)  
of STANAG 2166

SPECIMENT SAILING SIGNAL—TROOP TRANSPORT (VICE)

MESSAGE FORM

PRECEDENCE— ACTION ROUTINE	PRECEDENCE— INFO DEFERRED	DATE-TIME- GROUP 190600 Z
FROM: EMBARKING LIVERPOOL		SECURITY CLASSIFICATION
TO : MOV ANTWERP		UNCLASSIFIED (Classified in Wartime)
INFO : WAR OFFICE Q(M)2 HQ BAOR COMD NCG/INTER		ORIGINATORS NUMBER MOV 12

VICE

- (A) EMPIRE WANSBECK
- (B) LIVERPOOL 190545 Z
- (C) OSTENDE 200400 Z
- (D) MALES: OFFICERS 50. WO AND SGTS 100. CPL & BELOW 700.  
FEMALES: OFFICERS 10. WOs AND SGTS 30. CPL & BELOW  
70. FAMILIES/DEPENDENTS: 1ST CLASS 40. 2ND CLASS 60.  
3RD CLASS 100.
- (E) MALES TO TRANSIT CAMP OSTENDE. FEMALES TO HOS-  
TEL BRUSSELS.
- (F) 50 TONS TO OSTENDE. 10 TONS TO BRUSSELS. STOWED NO.  
2 HOLD.
- (G) AMB REQUIRED FOR 6 FEMALE CASUALTIES.



**APPENDIX N**  
**STANAG 3093**  
**REQUEST FORM FOR AIR TRANSPORT (NARAT)**

---

Original English/French Translation

STANAG NO. 3093  
(Edition No. 2)

**DETAILS OF AGREEMENT**

**REQUEST FORM FOR AIR TRANSPORT (NARAT)**

1. Participants agree to use the format described below for messages requesting air transport support.
2. The value of the form lies in the accuracy and detail in which it is completed, and in the speed with which it is actioned. Generally, unless a decision is reached by the proper interservice authority within 24 hours of the form being signed, the advantage gained by using air transport over other means is lost.

**MESSAGE CONTENTS**

NARAT (See Note A)

- ONE — Unit requesting airlift (See Note C).
- TWO — Reason
- THREE — Coordinating officer of requesting unit (Name and telephone number)
- FOUR — Description of airlift for airlanding:  
ALPHA — Number and gross weight of troops or passengers  
BRAVO — Weight of baggage not hand carried (not included in the total weight shown in ALPHA above)  
CHARLIE — Gross weight of cargo  
DELTA — Number of items, total volume and dimensions of biggest items  
ECHO — Number of casualties sitting/lying
- FIVE — Description of airlift for airdropping:  
ALPHA — Number and gross weight of parachutists  
BRAVO — Gross weight of cargo  
CHARLIE — Number of items, total volume, and dimensions of biggest items
- SIX —  
ALPHA — Desired point of loading  
BRAVO — Officer i/c detail (Name, location, telephone number, etc.)
- SEVEN —  
ALPHA — Desired point of delivery  
BRAVO — Receiving unit

- EIGHT** — Desired date and time of delivery
- NINE** — Details of perishable or dangerous material
- TEN** — Remarks (to include any information likely to assist in planning the airlift, e.g., description of any special loading or lashing aids required, name and telephone number of contact officer at receiving unit, if applicable, etc. . . .).

#### **NOTES**

- A.** "NARAT" is the short title for NATO Request for Air Transport Support and should prefix the first item of the message.
- B.** Paragraph numbers and subparagraph letters should be spelt out in full as indicated in the message contents; the word 'Nil' is to be inserted if no information needs to be shown against the paragraph number.
- C.** Unit requesting airlift should not be lower than US Group/UK Group, or US Battle Group/UK Brigade Headquarters level, or equivalent units of other NATO nations.

**APPENDIX O**  
**STANAG 3344**  
**PROCEDURES FOR TRACING AND DISPOSING OF BAGGAGE (BAGLO/TROBAG)**

---

Original English/French Translation

STANAG NO. 3344

**DETAILS OF AGREEMENT**

**PROCEDURES FOR TRACING AND DISPOSING OF BAGGAGE  
(BAGLO/TROBAG)**

- Enclosures I. Annex 'A' Lost Baggage Message (BAGLO)  
II. Annex 'B' Found Baggage Message (TROBAG)

1. Participants agree, as detailed below, to use a standard method to report on and to initiate tracing action for baggage reported as lost, and to use a standard method to inform on and to seek disposal of baggage reported as found.

**2. Definitions**

- a. Lost baggage: —accompanied baggage separated from its owner en route;
- b. Found baggage: —unclaimed baggage located aboard an aircraft or at an air terminal.

NOTE: Unaccompanied baggage is included in the term "cargo" and does not fall within the provisions of this agreement.

**3. Procedures**

- a. Units of NATO forces may communicate directly on matters pertaining to lost and found baggage;
- b. Lost Baggage. A lost baggage message (short title 'BAGLO') will be dispatched immediately to the emplanement airfield, to each en route stop, and to the final destination of the flight. The composition of this message will be as shown at Annex 'A'.
- c. Found Baggage. A found message (short title 'TROBAG') will be dispatched to the units mentioned below for each NATO nation. The composition of this message will be as shown at Annex 'B'.

- (1) Belgium : Comdt. (BE) TAF-MOVAIR, Force Aérienne—Bruxelles 14.
- (2) Canada : Air Transport Command Headquarters, Royal Canadian Air Force, Trenton, Ontario.
- (3) France : Base de Transit Air No. 250, 5, Ave de  
(Peace-time) la Porte de Sevres-Paris 15e.  
(War-time) District de Transit de Paris—Paris

- (4) German Federal Republic : Lufttransportkommando der Bundeswehr, Köln—Wahn.
- (5) Italy : Italy-Comando Trasporti Aerei, Roma, Ciampino.
- (6) Portugal : The la Regiao Aerea, Portuguese Air Force, Lisbon, Portugal.
- (7) Turkey : Turk Hava Kuvvetleri Komutanligi, Lojistik Baskanligi, Ankara, Turkey.
- (8) United Kingdom : Headquarters Transport Command, Royal Air Force, Upavon, Wiltshire.
- (9) United States : MATS Found Baggage Center, Scott Air Force Base, Illinois.
- (10) Other participating nations as applicable.

4. Disposal of Unclaimed Baggage. Where disposal of baggage to its rightful owner cannot be accomplished, ultimated disposal will be effected in accordance with the following instructions for each NATO nation concerned:

- a. Belgium : AP 3150, RAF Manual of Movements (Modified to apply to Belgium).
- b. Canada : RCAF Administrative Order 25.21/01.
- c. Germany : German Civil Code (Burgerlickes Gesetzbuch), Paragraph 979.
- d. Italy : Italy—SMA—23/R—Manual Del Transporto Aero (Air Transport Manual).
- e. United Kingdom : AP 3150, RAF Manual of Movements.
- f. United States : MATS Manual 76-1.
- g. Other participating nations as applicable.

ANNEX 'A' TO STANAG 3344

LOST BAGGAGE MESSAGE (BAGLO)

1. FORMAT

ADDRESSOR

ADDRESSEE

(1) BAGLO

(2) Baggage Tag Number(s) and/or Owner Identification Marks.

(3) Colour, Number of pieces by type, any other brief descriptions that may facilitate identification.

(4) Flight Serial and Itinerary.

(5) Point of Origin, and Date of Departure and Destination Point of Baggage Shipment.

(6) Other instructions.

2. EXPLANATION

(1) The body of the message is to begin with 'BAGLO' which is short for 'Baggage Lost'.

(2) Owner identification marks may include: name, rank, serial number, parent unit or base, other markings.

(4) To include any name or serial number by which the flight is identified, departure and itinerant points served by the flight.

(5) Point and date on which the baggage was emplaned and ultimate destination of the baggage.

(6) Any other pertinent information or instruction.

3. EXAMPLE

FROM : COM 1010 ABW ANDREWS AFB MD

TO : 2 MOV U AIR LACHINE QUEBEC

INFO : COM 1601 ATW MAGUIRE AFB NJ

(1) BAGLO

(2) TAG 46728 and 46729 EVANS SGT. USAF NO OTHER

(3) 2 BROWN SUITCASES WITH INITIALS HBE

(4) RCAF SPECIAL 1602 30 JULY MONTREAL, MAGUIRE, ANDREWS

(5) MONTREAL 30 JULY ANDREWS

(6) HOLD FOR DISPOSAL INSTRUCTIONS IF LOCATED

ANNEX 'B' TO STANAG 3344

FOUND BAGGAGE MESSAGE (TROBAG)

1. FORMAT

ADDRESSOR

ADDRESSEE

(1) TROBAG

(2) Baggage TAG Number(s) and/or Owner Identification Marks.

- (3) Colour, Number of pieces by type, any other descriptions that may facilitate identifications.
- (4) Location of found baggage.
- (5) Other information.

## 2. EXPLANATION

- (1) The body of the message is to begin with 'TROBAG' which is short for 'Found Baggage'.
- (2) Owner identification marks may include: name, rank, serial number, parent unit or base, other markings.
- (4) Point at which the baggage is found and held.
- (5) Any other pertinent information.

## 3. EXAMPLE

FROM : AIR TRANSPORT COMMAND HE RCAF TRENTON ON-TARIO

TO : MATS FOUND BAGGAGE CENTER SCOTT AFB ILLINOIS

- (1) TROBAG
- (2) TAG 67321 JONES SGT USAF NO OTHER
- (3) ONE BLUE SUITCASE WITH INITIALS CDJ
- (4) MONTREAL
- (5) NIL

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,  
*General, United States Army,*  
*Chief of Staff.*

Official:

KENNETH G. WICKHAM,  
*Major General, United States Army,*  
*The Adjutant General.*

Distribution:

To be distributed in accordance with DA Form 12-11 for Transportation Movement and Service in Theater of Operations and Transportation Movements and Service in Field Army.

☆U.S. Government Printing Office 1967—250-509/7147A



