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DEPARTMENT OF THE ARMY FIELD MANUAL

MOTOR TRANSPORT SERVICE IN THEATERS OF OPERATIONS



HEADQUARTERS, DEPARTMENT OF THE ARMY
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MOTOR TRANSPORT SERVICE IN THEATERS OF OPERATIONS

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✓ This manual supersedes FM 55-31, 7 May 1956.

CHAPTER 1

MOTOR TRANSPORT SERVICE

Section I. INTRODUCTION

1. Purpose and Scope

a. The purpose of this manual is to provide basic information and doctrine concerning the organization and operation of the motor transport service in theaters of operations. This manual also describes motor transport planning, coordination, and support in theaters of operations.

b. The material presented herein is applicable without modification to both nuclear and nonnuclear warfare. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to the Commandant, U.S. Army Transportation School, Fort Eustis, Va.

2. Transportation Corps Motor Transport Service

The mission of a motor transport service is to provide motor vehicle transportation for the movement of persons and things for the Army and other agencies as directed by competent authority.

a. Motor transport services performed by the Transportation Corps provide a general cargo and personnel hauling service, wheeled-vehicle delivery, and highway regulation for the Armed Forces.

b. Motor transport staff sections and units provide the motor transport portion of the transportation service. By direction of the commander, this service may require the pooling of motor transportation within the communications or combat zone.

c. Local civilian motor transport equipment, personnel, and facilities and captured enemy equipment may be used for transportation. Civilian equipment, facilities, or real property must be used in accordance with established regulations governing requisition, purchase, rent, or other means of acquisition.

d. Transportation truck units habitually engaged in the intersectional movement of petroleum products will normally be assigned to the petroleum intersectional service (POLIS) to permit their complete integration into the mission of supplying and distributing petroleum products. Technical inspection, review of technical reports on use of vehicles, and technical supervision of training pertaining to units assigned or attached to POLIS will be accomplished by appropriate Transportation Corps agencies. Transportation Corps truck companies will be utilized primarily for the wholesale movement of products. However, to preclude double handling, supplies will be moved directly from source to ultimate consumer whenever possible. The integrity of Transportation Corps units assigned or attached to POLIS will be maintained, and the units will be commanded by Transportation Corps officers. When these units are not being fully utilized on bona fide POLIS missions, the units or segments should revert to the control of the appropriate transportation officer for use on other transportation tasks.

Section II. CHARACTERISTICS OF MOTOR TRANSPORTATION

3. General

Motor transportation is characterized by adaptability, flexibility, speed, regularity, and reliability. These characteristics are interdependent and in combination give motor transportation the mobility and utility that enable it to effectively support military operations.

4. Adaptability

Motor transport units can perform varied, extensive, and large-scale operations. They can operate effectively over any type of road net and, under certain conditions, in the absence of a road net. Assigned task vehicles are primarily general purpose and can be used for any cargo load compatible with their weight or cubic capacity. Vehicles of various sizes and types make possible the accomplishment of missions involving both large and small quantities of cargo and/or personnel. Since equipment and personnel needed to operate effectively are organic to the units, facilities can be situated at the most effective locations for efficient operation.

5. Flexibility

The flexibility of motor transportation should be considered in plans and operations. The dispatching of vehicles individually or in convoy, coupled with the control exercised over schedules and routes, permits rapid and extensive changes in operations. Motor transportation may be woven into tactical or logistical plans so that supplies are scheduled to arrive as needed. Size and spacing of convoys and dispatching of

individual vehicles may be varied to meet operational requirements. Units may be widely dispersed and operate effectively. As the scope and type of operations change, the composition of battalions or higher units may be modified so that different types of services can be performed by the same unit. In addition, motor transportation may be used extensively to complement other modes of transportation, thus increasing the effectiveness of the overall transportation service.

6. Speed

Motor vehicles are capable of high speeds on well-surfaced roads, but the speed should be controlled to produce the most effective results. Motor transportation permits maximum control over time spent in terminals, loading and unloading time at other points, traffic control and routing restrictions, and the vehicle density of a particular route. Since motor vehicles can be dispatched and operated individually, they lose little time in terminal and loading and unloading operations. By proper use and loading of vehicles, transfer of cargo from one vehicle to another can be held to a minimum and delays usually associated with large shipments can be eliminated. Traffic tie-ups can be avoided by rerouting.

7. Regularity

Frequency of motor vehicle service may be regulated without undue delay to equipment or loss of man-hours. When requirements exist for service at certain intervals, truck convoys may be scheduled to arrive at destinations throughout the day and night at the time and in the manner required. Motor transportation can respond rapidly to demands for reduced or increased frequency of movement, thus insuring a continuous, efficient flow of traffic.

8. Reliability

The characteristics discussed in paragraphs 4 through 7 contribute to the reliability of motor transportation service, but scheduling, regulation, and supervision are essential. Even under adverse conditions, the rate at which tonnages can be moved over a predetermined distance may be estimated to the extent that dependable movement schedules may be maintained. Regulation of vehicle movement by the motor transport service makes possible timely and accurate reports on the status of motor operations. A good road net and adequate highway regulation minimize the effects of tactical movements and casual vehicles.

CHAPTER 2

STAFFS IN THEATERS OF OPERATIONS

9. General

A fully developed theater of operations is normally divided into a combat zone and a communications zone. The combat zone comprises that part of the theater required by the combat forces for the conduct of operations. The communications zone includes all the territory of the theater of operations between the rear boundary of the combat zone and the rear boundary of the theater. Additional information on the organization of the theater of operations is contained in FM 100-10 and FM 100-15.

10. Organization of Motor Transport Service in Theaters of Operations

a. The transportation function is represented at all echelons of command. The size and duties of the transportation element of the staff are dictated by the mission of the command and, to a lesser degree, by the type and composition of subordinate commands. The organization of a type transportation staff section is shown in figure 1. The functions of transportation officers at various echelons of command are discussed in FM 55-6.

b. In commands such as field armies or theater army logistical commands (TALOG), the motor transport service is performed under the supervision of the staff transportation officer of the command and consists of transportation units and such other support services as are required. A transport and terminals branch under the staff transportation officer provides for supervision, planning, coordination, and direction of the various modes of transportation for achieving maximum capability of both transport units and, when applicable, available civilian transport service in coordination with the civil affairs staff section or the civil affairs unit as appropriate. The motor section under the transport and terminals branch provides these functions for motor transportation. The motor section functions in close cooperation with other elements of the transportation staff, other special staff sections, and appropriate transportation operating units. When TALOG motor transportation operates into the combat zone, the TALOG commander is responsible for its operation and for coordination with field army commanders concerned.

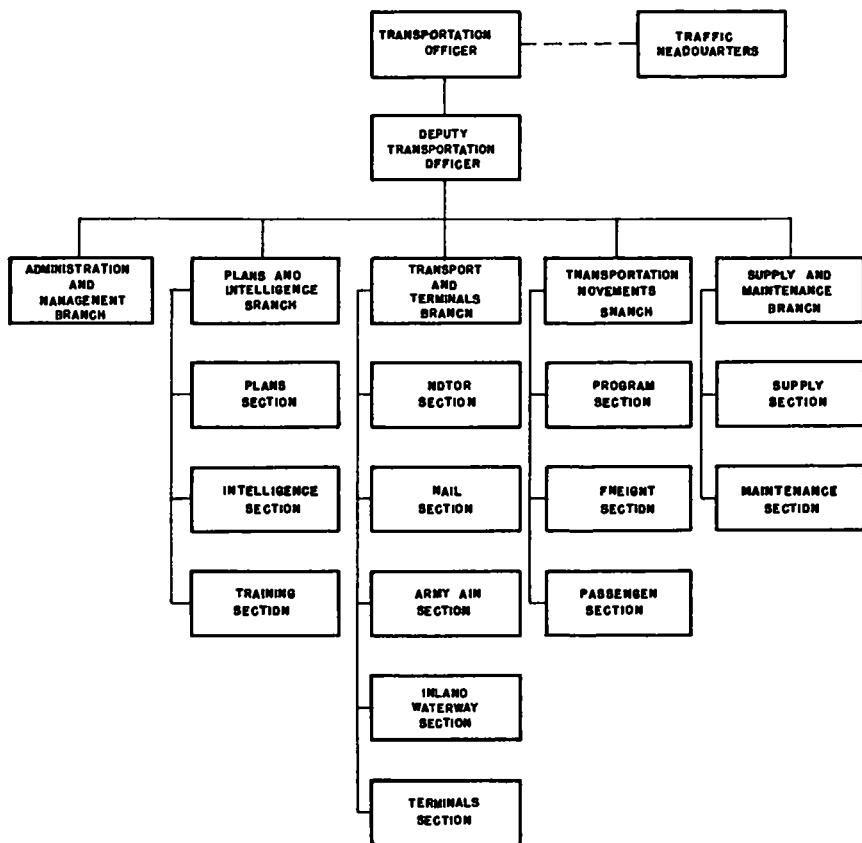


Figure 1. Type transportation staff section.

c. Ordinarily, motor transport service is not organized at levels below army, separate corps, or logistical commands. Commands such as divisions, battle groups, battalions, companies, and comparable Air Force units have organic transport for their local transportation needs. If sufficient organic transportation is not provided in tables of organization and equipment, additional motor transportation may be provided by the motor transport service. Organic transportation, when engaged in local hauling such as routine transportation of supplies between supply points and using units, operates under the commander of the troop unit concerned, subject to policies of higher headquarters on utilization and regulation.

11. Organization of Commands

a. All staff functions are performed for and in the name of the appropriate commander. The staff logistics officer on a combined, joint, or general staff or the director of services on a director staff is responsible for coordination of all transportation matters.

b. The transportation officer at each echelon of command exercises technical supervision over transportation activities and advises the commander on matters pertaining to transportation. For detailed duties of the transportation officer see FM 101-5. In a small organization where motor transport is the primary means of movement, the staff transportation officer may be a motor transport officer. In larger organizations, the staff transportation officer normally has a motor transport officer on his staff. At highest command echelons, the staff transportation officer has on his staff a highway traffic engineer, in addition to a motor transport officer.

c. Motor transport staff elements are contained in tables of organization and equipment for armies, corps, divisions, and logistical commands. When command headquarters other than these are used, motor transport staff elements may be organized under tables of distribution or, at the direction of the commander, a motor transport headquarters unit may function as the motor section. This command unit may function concurrently as the motor transport staff element and as the command headquarters for subordinate motor transport units.

CHAPTER 3

COMMAND AND EMPLOYMENT OF MOTOR TRANSPORT UNITS

Section I. COMMAND

12. General

The effectiveness of motor transport service depends upon continuous coordination between commanders and staff officers concerned with the control and/or supervision of units engaged in command, administrative, or logistical support operations.

13. Centralization

Whenever possible, motor transport control should be centralized at the highest level of command commensurate with the accomplishment of the mission of the motor transport service. Responsibility for actual operation should be placed with the smallest unit capable of performing its portion of the assigned task. In general, the ability to centralize will depend upon the efficiency of communications. Motor transport units should be equipped with sufficient communications equipment to provide maximum centralization and efficient management. A decision to decentralize should be made only when the requirement for direct local control is so important to a tactical or priority logistical mission that the loss of management efficiency and operational flexibility is justified. However, in direct support of logistical and tactical operations, control must pass to the appropriate commander until the direct-support mission is completed. At the completion of the mission, control immediately reverts to the parent motor transport command unit.

14. Organization

The organization for motor transport service is flexible. Within any given command or area, the size and composition of the motor transport service is directly dependent on the extent to which motor transport is used. Motor transport units are attached to major commands in the number and types required to perform the mission. Additional units are allocated as required.

a. Command units are as follows:

- (1) Headquarters and headquarters company, transportation motor transport command.

- (2) Headquarters and headquarters detachment, transportation motor transport group.
- (3) Headquarters and headquarters detachment, transportation motor transport battalion.

b. The basic operating units of the motor transport service are as follows:

- (1) Transportation car company.
- (2) Transportation light truck company.
- (3) Transportation medium truck company.
- (4) Transportation heavy truck company.
- (5) Cellular units (augmentation teams from TOE 55-500 and TOE 29-500).

15. Chain of Command

There is no direct chain of command between transportation staff elements and command or operating units except where a motor transport unit is serving in the dual capacity of a motor transport staff element and a command unit. The staff transportation officer issues orders in the name of the commander. For example, the TALOG transportation officer issues orders in the name of the TALOG commander, and the commander of the senior motor transport organization exercises command of his subordinate units to implement the instructions of the TALOG commander.

16. Liaison and Coordination

Liaison is established between the motor transport service and staff officers and commanders engaged in or responsible for the supervision or operations of logistical, administrative, and tactical support units.

17. Communications

The commander of each unit of the motor transport service is responsible for the signal communication of his command. Communications for the motor transport intersectional service are provided by the theater army signal system. Although a sole-user communications circuit is desirable, the signal requirements of all units in the theater army are considered in designing a theater army signal system. Alternate means of communications, including messengers, should be considered.

18. Intelligence

a. Planning for future operations requires detailed intelligence. Continuous coordination is effected between the plans and intelligence division of the transportation staff and the intelligence staff of the major command for the formulation of requirements and the timely receipt of

intelligence required for transportation operations and planning. Transportation Corps intelligence teams (TOE 55-500) may be made available to the staff transportation officer as required. Their services may be utilized for collecting, processing, and maintaining highway intelligence necessary to effect an efficient motor transport system. There must be a continuing effort by all personnel to collect and report all types of intelligence of value within their area of operations.

b. Detailed information on transportation intelligence and assignment of transportation intelligence teams is contained in FM 55-8.

19. Vehicle Maintenance

a. *General.* Maintenance of motor vehicles is any action taken to keep or restore motor transport equipment in a serviceable condition. It includes cleaning; inspecting; testing; servicing; adjusting; and classifying as to serviceability, repair, rebuild, modification, and reclamation. Maintenance of motor vehicles, equipment, and tools is the responsibility of the unit commander. He may delegate such functions to his motor maintenance officer, but he will assure proper performance through scheduled and spot inspections. The maintenance system is flexible and may be quickly adapted to varying operational conditions. It is based on the unit or individual responsible for the maintenance function at various echelons rather than on the work performed by each echelon.

b. *Types of Maintenance.*

- (1) *Categories of maintenance.* The maintenance system is divided into three categories: organizational, which includes the first and second echelons of maintenance; field, which incorporates the third and fourth echelons; and depot, which constitutes the fifth echelon. Organizational maintenance is the responsibility of motor transport units. Responsibility for the categories of maintenance above organizational is vested in the Ordnance Corps, except where third echelon maintenance may be performed by using agencies (TM 9-2810).
- (2) *Preventive maintenance.* Preventive maintenance is a system of periodic inspections, servicing, and repair of equipment to maintain it in operational condition and to detect and correct incipient failures.
 - (a) These services are performed by the vehicle operator and organizational maintenance personnel and include daily preventive maintenance service performed by the vehicle operator and crew, quarterly (Q) preventive maintenance service performed by organizational maintenance personnel assisted by the vehicle operator or crew, and lubrication

performed by organizational maintenance personnel assisted by the vehicle operator or crew.

- (b) Drivers are responsible for driver maintenance of vehicles to which assigned. Through proper driving, periodic inspection, and prompt repair within his scope, the driver should insure that his vehicle is in safe and efficient operating condition at all times (FM 25-10 and TM 9-2810).
- (c) During round-the-clock operations or under conditions which make it impracticable for the driver or crew to perform the lubrication services, second echelon maintenance augmentation should be provided to relieve the driver of these services. Vehicle maintenance and services are discussed in detail in TM 9-2810 and pertinent vehicle publications.

20. Security

a. Security is a function of all levels of command. Every officer and enlisted man in the military establishment is responsible for protecting Government property.

b. Security plans must be developed by all units of the motor transport service as directed by the next higher headquarters. These plans should include, but are not limited to, the following:

- (1) Defense against guerrilla attack.
- (2) Defense against ground, airborne, and aircraft attack.
- (3) Defense against nuclear, biological, and chemical attack.
- (4) Plans for demolition.
- (5) Plans for withdrawal.
- (6) Plans for area damage control.

21. Cargo Security

Responsibility of the motor transport service for security of cargo moving by highway begins when the cargo is loaded and checked out on the vehicle and ends when the cargo has been delivered to the designated consignee and proper receipts have been accomplished.

22. Training

a. The minimum training schedule for motor transport units is given in ATP 55-11 and current Department of the Army mobilization training programs and training directives. These publications are designed to furnish the commander with a guide outlining the essential training required for a balanced training program.

b. Training must be a continuous, comprehensive effort aimed at producing a smooth-running organization capable of performing sustained operations under varying conditions with maximum speed and efficiency. All individuals must be trained both as soldiers and technicians.

c. Coordination of training is achieved by a standard training cycle. Men advance successively through phases of training, regardless of their military occupational specialties (MOS) or the type of unit to which they belong. However, training does not stop with completion of the standard training cycle. Postcycle training consists of refresher and cadre training.

- (1) *Refresher training.* Refresher training is intended to correct deficiencies found during or after completion of the standard training cycle. For example, while on a field exercise, a unit may show that it is not prepared for meeting a gas attack. As soon as possible after the field exercise is over, this unit will take refresher training in defense against chemical warfare.
- (2) *Cadre training.* Normally, new units will be formed by cadre selected from other motor transport units which are already in training or which have completed training. Cadre members who are specialists should attend courses covering their specialty. When possible, these courses should be completed before the concentration of the selected cadre at the location of the new unit.

Section II. EMPLOYMENT

23. Request for Motor Transportation

Requests for transportation must provide sufficient information on which to base a commitment. Information will include type and amount of cargo or number of persons to be transported, point of origin and destination, desired time of departure and arrival, and estimated time required for loading and unloading. Information about types and numbers of vehicles desired is not required and, if provided, will be accepted only as a recommendation. Basing his decision upon information contained in the request, the responsible motor transport commander determines the types and numbers of vehicles which will be dispatched to accomplish the task.

24. Allocation of Motor Transport Units

a. The theater army commander allocates motor transport units to major commands in theaters of operations. Major commanders may further attach motor transport units to subordinate commands. These units give the command a capability over and above that provided by vehicles organic to subordinate units and installations of the command. Thus assigned, the motor transport units form a source of transportation to meet peak needs, as well as daily needs, of the command and in effect are the motor transport service.

b. The motor transport staff element of the appropriate transportation office continually reviews utilization of motor transport units and, when required, recommends changes in assigned missions of motor transport units.

c. At times, motor transport units may be placed in direct support of other units. This occurs when motor transport units are placed in support of tactical units or in direct support of a separate major command, an installation, or a logistical operation. When units of the motor transport service are placed in a direct-support role, appropriate orders are issued which set forth the period of time and the mission involved. A motor transport unit in direct support receives and executes missions directly on call from the supported unit.

25. Employment of Equipment

a. Efficient employment of motor transportation requires that motor transport equipment be kept in as constant use as circumstances and maintenance requirements permit. Elimination of delay in loading and unloading is a basic consideration.

b. Truck-tractor and semitrailer operations necessitate a ratio of semitrailers to truck tractors based on the ratio of loading and unloading time to running time. Generally, the shorter the haul, the greater the proportion of semitrailers. A ratio of three semitrailers to one truck tractor represents a situation in which one semitrailer is loading, one traveling, and one unloading, all simultaneously.

26. Utilization

Motor vehicles should be pooled under a central dispatch office and dispatched on a one-time basis. The only vehicles dispatched to agencies on a recurring or job basis should be those required to fill constant minimum needs.

27. Round-the-Clock Operations

a. Operations of motor transport units in theaters of operations may be conducted on a continuous or round-the-clock basis. Vehicles are then scheduled for 20 hours of operation per day, with drivers scheduled for 10- to 12-hour shifts, circumstances permitting.

b. Round-the-clock operations generally require fewer truck companies in a given area, thus conserving critical manpower and equipment. However, limited preventive maintenance and constant vehicle use increase the requirement for second echelon maintenance. This may necessitate augmentation of unit mechanic personnel. Automotive maintenance detachments, as established in TOE 29-500, will be used for this purpose.

28. Convoys and Individual Dispatch

Generally, motor vehicles are dispatched individually for local hauls and in convoy for line hauls. However, the method employed will depend on existing conditions and will be prescribed by the appropriate motor transport commander.

29. Documentation

The importance of properly prepared documentation cannot be over-emphasized. Personnel must be continually trained in proper documentation of cargo. Documentation is basically of two types—supply and transportation.

a. Supply documentation is used mainly by the consignor and consignee for property accountability purposes. Supply documentation enables the consignor to prepare accurate transportation documentation. The Army shipping document and the Air Force requisition and shipping document are examples of supply documents.

b. Transportation documentation is used to arrange for the physical movement of cargo, to identify the shipment en route, and to serve as a receipt from the carrier to the consignor and from the consignee to the carrier for cargo moved. DA Form 1635-R (Motor Freight Waybill) is utilized for this purpose. (All forms illustrated in this manual whose numbers include -R are to be reproduced locally.) The motor freight waybill is prepared by the consignor or the installation transportation officer, if available. The driver checks the cargo and is responsible for the quantities he acknowledges on the waybill. After the consignee acknowledges receipt, a copy of the waybill is returned to the unit operations section for information and statistical purposes. Use of the motor freight waybill is further explained in paragraph 93.

30. Loading and Unloading Vehicles

a. Vehicles are loaded by the shipping agency (and unloaded by the receiving agency).

b. The driver uses the motor freight waybill to check the cargo aboard his vehicle.

c. Blocking and bracing of loads is the responsibility of the shipping agency. The driver inspects loads and performs necessary lashing. Precautions will be taken by the driver to insure safety during movement.

31. Capacity Loading

Vehicles should be loaded to capacity whenever possible. As less than capacity loading results in requirements for additional vehicles, it is only efficient management to fully utilize existing transportation. Corollary to this principle are the following factors:

a. When mixed loading is necessary, trucks should be loaded to effect the most expeditious unloading.

b. When scheduling return loads, the increase in turnaround time must be considered.

32. Safety

a. Commanders are responsible for assuring that every driver has qualified for and has been issued a Standard Form 46 (United States Government Motor Vehicle Operator's Identification Card). Commanders are also responsible for ascertaining that drivers observe safe driving rules and traffic regulations.

b. Vehicles not in safe operating condition will be deadlined until necessary repairs are made.

c. Every motor vehicle accident will be investigated and appropriate corrective action initiated. Accident reports will be completed at the scene of the accident if possible (AR 385-55).

d. Refresher training will be provided for every driver in traffic rules, safe driving procedures, seasonal hazards, and related matters. This training may be provided by training programs; study and review of traffic regulations; and posters, safety films, bulletin boards, and other training media.

CHAPTER 4

MOTOR TRANSPORT UNITS

Section I. MOTOR TRANSPORT COMMAND

33. Mission

The mission of the headquarters and headquarters company, transportation motor transport command (TOE 55-11), is to provide command, planning, supervision, coordination, and control of the activities of transportation motor transport groups and other assigned or attached units.

34. Assignment

The headquarters and headquarters company, motor transport command, is assigned as the senior motor transport unit to the theater army logistical command (TALOG) or a field army operating independently. When assigned as a command unit, it exercises those functions necessary to perform its mission and such other activities as directed by the commander of the headquarters to which assigned.

35. Capabilities

The headquarters and headquarters company, motor transport command, is capable of commanding three to seven motor transport groups and assigned or attached supporting units of other administrative or technical services.

36. Characteristics

- a. The headquarters is administratively self-sufficient.
- b. Assigned transportation is used administratively in liaison and supervisory missions.
- c. Mobility of the unit is fixed. Additional motor transportation is required for unit movement of personnel and equipment.

37. Functions

- a. *Organizational.* The command headquarters consists of the commander and a deputy commander. The staff sections of the motor transport command assist the commander in formulating, interpreting and

disseminating policy and in supervising and directing operations and other activities of the headquarters as required.

b. Operational. Operational functions of the motor transport command encompass all motor transport activities of the headquarters served. These functions are primarily of a planning or supervisory nature.

(1) Planning functions include—

- (a) Evaluation of motor transport requirements in tactical and logistical support of the forces involved.
- (b) Study of existing terrain, roadway, enemy situation, and other conditions affecting road movement.
- (c) Preparation of recommended policies dealing with motor transport matters for inclusion in the standing operating procedure of the headquarters to which assigned.
- (d) Determination of motor transport units required to accomplish the motor transport mission.
- (e) Provision of military personnel and equipment, programing of training activities, and establishment of procedures for operation, maintenance, and supply.
- (f) Coordination with the appropriate civil affairs unit for the provision of civilian personnel, commercial transport equipment, programing of training, and establishment of procedures for operation.

(2) Supervisory functions include directing the execution of plans and assuring that they are adequately carried out. This is accomplished through—

- (a) Issuance of orders and pertinent directives to subordinate commands.
- (b) Constant attention to the progress of movements and other projects under way.
- (c) Close liaison with units and installations serving the motor transport command and being served by it.
- (d) Inspection of various activities by the responsible sections of the headquarters to assure that subordinate units and functioning properly.

38. Employment

a. The motor transport command is the senior motor transport unit. It is employed as the command unit by TALOG or field army when more than two motor transport groups are required.

b. The motor transport command plans, coordinates, and controls all motor transport activities within its jurisdiction. It commands all attached motor transport and support units. Subordinate motor transport units may, at times, be placed in direct support of other organi-

zations; however, command and responsibility for efficient utilization of transport equipment are not relinquished by reason of direct-support missions.

Section II. MOTOR TRANSPORT GROUP

39. Mission

The mission of the headquarters and headquarters detachment, transportation motor transport group (TOE 55-12), is to provide command, staff planning, and control of operations of transportation motor transport battalions and attached units.

40. Assignment

The headquarters and headquarters detachment, motor transport group, is assigned to a logistical command or a field army. When operating separately, the group performs its mission under the appropriate staff transportation officer. It may be attached, with other motor transport groups, to a transportation motor transport command. As a command unit the motor transport group exercises those capabilities necessary to perform its mission and such other activities as directed by the commander of the headquarters to which assigned.

41. Capabilities

The headquarters and headquarters detachment, motor transport group, is capable of commanding three to seven motor transport battalions and assigned or attached units. At full strength it has the following capabilities:

- a. Supervising and assisting subordinate units in administrative and personnel matters.
- b. Operational planning for the group.
- c. Coordinating and supervising operations of subordinate units.
- d. Supervising and assisting subordinate unit supply and maintenance activities.
- e. Operating the group electrical communications system, including both wire and radio, to subordinate and superior echelons.
- f. Providing organizational maintenance on organic vehicles and communications equipment.

42. Characteristics

- a. The headquarters and headquarters detachment, motor transport group, is administratively self-sufficient.
- b. There are no task vehicles organic to the unit. Assigned transportation is used for administration and supervision only.

c. The unit is 65 percent mobile and requires additional motor transport for movement of personnel and equipment.

43. Functions

a. *Organizational.* Group headquarters sections are organized within the headquarters detachment. These sections are under appropriate staff officers assigned to group headquarters. The group headquarters is under the group commander, who is assisted by the executive officer. The staff sections of the motor transport group assist the commander in formulating, interpreting, and disseminating policy and in supervising and directing operations and other activities as required.

b. *Operational.*

- (1) Operational functions of the headquarters and headquarters detachment, motor transport group, include planning, coordinating, and supervising attached or assigned units engaged in operational assignments such as port or beach clearance, local or line hauls, and other motor transport missions.
- (2) The group headquarters plans for the most economical and efficient use of motor transport equipment assigned to subordinate units. Plans must be made for the most complete and effective use of the highway network. Such plans normally culminate in an operational analysis with a tabulation of tasks for subordinate units, designated routings for supply hauls if necessary, and road movement tables and graphs that fit the schedules of individual units into the overall operation and traffic plan. These procedures form the basis for orders issued to operating units.
- (3) In fitting capabilities of assigned units to operational requirements, the group headquarters maintains close coordination with higher headquarters. Coordination is also necessary with the following:
 - (a) The ordnance officer is obtaining the required supply, issue, and field and depot maintenance of equipment.
 - (b) The signal officer in establishing communications.
 - (c) The provost marshal in traffic control matters.
 - (d) The engineer officer for route construction and maintenance.
 - (e) All technical services in regard to location of depots, supply points, pipeline terminals, access roads to installations, and loading and unloading facilities and capabilities at supply installations.
 - (f) The G5 or director of civil affairs for negotiations or relations with civil authorities; civil affairs support units for required civilian personnel, facilities, transport equipment, and materiel.

- (4) The group headquarters has two responsibilities for training, which in most cases must be carried on simultaneously. Individuals are trained to perform their assigned tasks and, at the same time, the group is trained to supervise the operations and training of attached units. Motor transport battalions and companies are attached to the group during training periods to improve the quality of their training and to give the group headquarters necessary experience in the supervision of subordinate units.

44. Employment

The headquarters and headquarters detachment, motor transport group, is a command unit for motor transport operations. When three or more groups are required, they normally operate under a motor transport command. A group headquarters may be assigned responsibility for an entire line haul or a segment of one.

Section III. SUBORDINATE MOTOR TRANSPORT UNITS

45. General

This section deals briefly with subordinate units. Detailed descriptions, operations, and functions are presented in field manuals of the 55-series.

46. Transportation Motor Transport Battalion

a. The mission of the headquarters and headquarters detachment, transportation motor transport battalion (TOE 55-16), is to provide command and supervision of units engaged in all types of motor transport such as direct support of tactical units, port or beach clearance, depot and terminal operations, and line hauls.

b. This unit is normally assigned to a motor transport group, but it may be attached to any other organization having a continuous requirement for coordinated administration and operation of motor transport companies. It then operates under the appropriate staff transportation officer.

c. The headquarters and headquarters detachment, motor transport battalion, is capable of commanding and providing administrative support for three to seven transportation truck, amphibious truck, and/or tracked vehicle companies. Small units of supporting services, such as an ordnance maintenance company or detachment, may be attached when required.

d. The headquarters and headquarters detachment, motor transport battalion, is administratively self-sufficient except for messing. Assigned

vehicles are used administratively and for supervisory purposes. There are no task vehicles provided in the tables of organization and equipment. The unit is 75 percent mobile and requires additional vehicles for movement of personnel and equipment.

47. Transportation Light Truck Company (TOE 55-17) (FM 55-32)

a. The mission of the transportation light truck company is to provide transportation for the movement of general cargo and personnel by motor transport.

b. The type motor vehicle equipment authorized this unit and the unit capabilities are contained in current-series TOE 55-17.

c. This unit is normally attached to a transportation motor transport battalion but may operate separately under the control of the appropriate transportation officer.

d. This unit is 100 percent mobile.

48. Transportation Medium Truck Company (TOE 55-18) (FM 55-32)

a. The mission of the transportation medium truck company is to provide for the movement of general cargo, bulk petroleum products, refrigerated cargo, and missiles by motor transport.

b. Items of motor transport equipment authorized this unit and capabilities of the unit are contained in current-series TOE 55-18.

c. When augmented by the missile transport squad, this unit is capable of transporting missiles in either local or line hauls.

d. This unit is normally attached to a transportation motor transport battalion, or it may operate separately under the control of the appropriate transportation officer.

e. Mobility of this unit is governed by the task vehicles assigned and ranges from 50 to 100 percent.

49. Transportation Heavy Truck Company (TOE 55-28) (FM 55-32)

a. The mission of the transportation heavy truck company is to provide truck transportation for the movement of tanks and other heavy or bulky vehicles and to transport heavy, bulky, or outsized cargo.

b. The motor vehicle equipment authorized this unit and the unit capabilities are contained in current-series TOE 55-28.

c. When augmented with a driveaway platoon, this unit is capable of delivering or evacuating vehicles by the driveaway method.

d. This unit is normally attached to a transportation motor transport battalion, or it may operate separately under the control of the appropriate transportation officer.

e. This unit is 100 percent mobile.

50. Transportation Car Company (TOE 55-19) (FM 55-32)

a. The mission of the transportation car company is to transport personnel and light cargo by motor transport.

b. Items of motor transport equipment authorized this unit and capabilities of the unit are contained in current-series TOE 55-19.

c. The transportation car company may be assigned or attached to a transportation motor transport battalion or a major headquarters, corps or higher; or it may operate separately under the control of the appropriate transportation officer.

d. When organized as a transportation car company (airborne corps) this unit is assigned to an airborne corps.

e. This unit is 100 percent mobile.

51. Service Organization Augmentation

a. *Transportation Service Organization* (TOE 55-500). Motor transport service organizations consisting of the following teams are contained in TOE 55-500: GA, car squad; GB, bus squad; GC, heavy truck squad; GD, light truck squad; GE, medium truck squad; GF, trailer transfer point, operating; and GG, highway regulation point. These teams may be attached or assigned to higher echelon units or may operate independently under the appropriate staff transportation officer.

b. *Composite Service Organization* (TOE 29-500). Composite service organization teams with varying capabilities and personnel strengths are contained in TOE 29-500. The mess detachments and automotive maintenance detachments are utilized to augment motor transport units to permit round-the-clock operations. Other technical service teams are as established in appropriate TOE's.

Section IV. TYPE B MOTOR TRANSPORT UNITS

52. Mission, Assignment, and Capabilities

The mission, assignment, and capabilities of the type B motor transport units are the same as those of the full-strength motor transport units discussed in paragraphs 33 through 51. Full-strength organizations contain only military personnel. Type B units contain military and civilian personnel and are normally limited to noncombat operations.

Generally, motor transport units other than tactical carrier units, the motor transport group, the motor transport command, and divisional transportation units are adaptable to organization as type B units.

53. Organization

a. The organizational structure of full-strength motor transport units and type B units is identical.

b. Allowances of military personnel as established by TOE may be modified by major oversea commanders to reflect local conditions of employment or to provide effective accomplishment of the assigned mission.

c. Comparison of the TOE strength column for a type B unit with that of a full-strength motor transport unit will indicate those duty positions capable of being filled by non-United States personnel.

d. Requirements for non-United States personnel may vary, dependent upon the productive efficiency of the personnel available, the number of work shifts, and other local conditions.

54. Management

a. The local civilian personnel employed in type B motor transport units should be, so far as possible, familiar with motor vehicles. They should also know the highways of the area.

b. During operations, due consideration must be given to the work methods and systems formerly employed by local civilians.

c. Objectives must be clearly defined. A simple method of issuing orders and instructions should be devised and detailed standing operating procedures established.

d. Employment of civilians will be in conformity with theater or theater army directives and current security regulations (FM 27-10 and DA Pam 690-80).

CHAPTER 5

OPERATIONS

Section I. GENERAL

55. Local and Line Hauls

The type of motor transport operation is determined by the task to be accomplished, but all may be classified under two types of hauls:

a. A local haul is a type of haul involving short trips over the road. Running time is low in relation to time consumed in loading and unloading. A local haul normally involves a number of vehicle trips per day. Local hauls are evaluated on the basis of tons moved per operational period.

b. A line haul is a type of haul involving long trips over the road. Running time is high in relation to time consumed in loading and unloading. A line haul normally involves one trip or a portion of a trip per day. Line hauls are evaluated on the basis of tonnage hauled or ton-miles accomplished per operational period.

56. Types of Control

a. *Organizational Control.* Organizational control is exercised by the commander of the organization or unit using the road and is always necessary during highway movements. This control insures observance of rules of the road, traffic laws and regulations, speeds, spacing, routing, adherence to schedules, discipline en route and at halts, and measures for local security.

b. *Area Control.* Area control of highways is a command responsibility exercised under general staff supervision. Area control is superimposed over organizational control and is the means by which highway movement is coordinated between units and organizations using the highways. Area control is employed to the extent necessary to insure orderly and effective movement of vehicles over the highway system. The control exercised by headquarters such as TALOG or the field army may extend only to the designation of intersectional routes or the establishment of area-wide standing operating procedures for coordination of intersectional highway movements. The control exercised by subordinate commanders within their areas implements, but does not conflict with, the procedures established by higher headquarters.

57. Control Classification of Highway Routes

Highway routes are designated as indicated in *a* through *d* below. The designation selected will depend on the degree of control required. Actual control employed at any time should be the minimum required to obtain desired results.

a. Open. An open route is a roadway over which a central traffic authority normally exercises only a minimum of supervision. Ordinarily, supervision on an open route is limited to control of traffic at intersections with a dispatch, reserved, or a supervised route, and to the posting of necessary traffic signs and regulations. Convoy control personnel needed on an open route are usually furnished by march columns using the route, except at intersections controlled by military police.

b. Supervised. A supervised route is a roadway over which limited control (by means of traffic control posts, traffic patrols, or both) is exercised by a central traffic authority. Small units are ordinarily allowed to use supervised routes without prior correlation of individual march schedules, but time of access to the route may be regulated in conformity with the traffic situation.

c. Dispatch. A dispatch route is a roadway over which full control, both as to priorities of use and the regulated movement of traffic in time and space, is exercised by a central traffic authority.

d. Reserved. A reserved route is one that is set aside for the exclusive use of a designated unit or specified type of traffic, or for other specific purposes. Reserved routes may be operated as supervised or dispatch routes at the discretion of the commander.

58. Types of Service

a. Motor transport may provide either intrasectional or intersectional services for agencies desiring transportation support.

- (1) *Intrasectional service* is the movement of personnel and supplies within command boundaries. This service is normally associated with local haul operations. Transportation units are provided to base logistical, advance logistical, and area commands when transportation requirements exceed the capabilities of transportation organic to such commands. Centralized control is exercised by the appropriate transportation officer.
- (2) *Intersectional service* is the movement of personnel and supplies across sectional boundaries, generally from the point of entry into the theater to the field army area. This service is normally associated with line haul operations. Centralized control is exercised by the TALOG transportation officer.

b. The functions of a motor transport intersectional service are performed by a headquarters unit, such as the motor transport command or group. The service is integrated under the motor transport command or group for command and supervision of a general hauling service, formulation and coordination of plans for the efficient use of motor transport resources, and integration and supervision of the operation of local civilian motor transport and highway facilities used in the logistical or tactical support of military operations. Motor transport units subordinate to the transport command or group perform the operation.

59. Classes of Operation

a. Motor transport provides logistical support for the following operations:

- (1) Port and beach clearance.
- (2) Installation support operations.
- (3) Transfer operations.
- (4) Field support operations.
- (5) Transportation intersectional motor transport service.

b. These operations are discussed in detail in paragraphs 61 through 94.

60. Methods of Operation

The methods for accomplishing the motor transport mission are defined in *a* through *f* below. These methods may be used singly or in combination.

a. A *direct haul* accomplishes a single hauling mission in one trip. This method does not involve transfer of cargo or exchange of vehicles or drivers, but vehicles may be loaded in such a manner as to permit delivery of cargo at several points en route to final destination.

b. In *shuttle* movements repeated trips are made by the same vehicles between two designated points to complete a hauling mission.

c. *Relay* movements permit continuous movement of troops or cargo to destination without transfer from one vehicle to another. This is accomplished by change of drivers and/or truck tractors. In tractor-semitrailer operations, relay is the through movement of semitrailers by successive tractors operating over successive segments of a route.

d. *Piggyback* is the movement of equipment by a combination of rail and motor transport. Semitrailers are loaded onto rail cars and moved as far forward as possible. They are then offloaded and moved to destination by motor transport.

e. In *roll-on, roll-off* operations supplies are moved by a combination of water and motor transport. Semitrailers are loaded within the con-

tinental United States, moved to port, and put aboard a roll-on, roll-off vessel. After completion of the water move to an overseas area, they are offloaded from the vessel and moved to final destination by motor transport.

f. In *driveaway* operations the Transportation Corps provides or augments vehicle operators to meet the requirements of other agencies to move motor vehicles. These movements may range from extended operations, such as transporting replacement vehicles over long distances from a port to ordnance facilities or ultimate destination, to limited operations involving the movement of a few vehicles over short distances from one depot, post, unit, etc., to another. Driveaway operations may also include retrograde movements of extended or limited scope.

Section II. PORT AND BEACH CLEARANCE

61. General

Port and beach clearance is the transfer of cargo and personnel from sea lines to land lines. Expeditious clearance of the port or beach area is imperative. Sufficient land transport, properly regulated and capable of integration into the discharge operations under varied conditions, must be available to accomplish the mission. Because of its flexibility, motor transport normally provides most of the initial transport requirement and maintains a support role of continuing importance throughout the operation.

62. Beach Clearance

Beach clearance is the clearing of cargo and personnel from the *immediate* vicinity of the beach. Prompt, efficient, and continuous action is necessary to prevent bottlenecks and confusion. Planning for beach clearance must be based on two factors: the rate at which cargo and vehicles can be brought ashore; and the rate at which the road net leaving the beach can handle the loads. The Engineers provide data on the capacity of the road net and are responsible for constructing and maintaining the access roads from the beach.

a. During the initial phases of a beach operation, motor transport operations are from the beach directly to depots or supply points. Landing craft (lighterage) transports cargo from the ships to the beach for transfer to trucks for delivery. Amphibious cargo vehicles proceed across the beach directly to destination (an inland point) for discharge. As the beachhead is developed, motor transport operations are extended forward.

b. The beach must have suitable exits and routes to supply points. To avoid confusion a definite traffic circulation plan must be made for

the beach area. Adequate signs and markers are required to implement and control this plan.

c. Repeated travel over beaches may make them impassable for ordinary vehicles. Therefore, vehicles with high tractive effort should be used for beach clearance, and matting or other surfacing should be provided when possible.

d. When motor transport units are employed in the early stages of a beach operation to move cargo from landing craft to inland supply points, they may be placed in direct support of the beach command, or, in tactical situations, of the engineer amphibious support command. Later, when the operation becomes primarily logistical, control of the beach passes to the appropriate logistical command. At this time, motor transport units revert to the control of their normal command. The requirements of an operation may warrant the continued employment of certain motor transport units in direct support of the terminal command. However, the motor transport service will closely control such operations, determining from operational reports whether vehicles are being fully utilized and making adjustments as required. Every effort will be made to replace light truck units with units of greater vehicle tonnage capability as early as possible in beach operations.

63. Port Clearance

Port clearance is the clearing of cargo and personnel from the immediate vicinity of a water terminal. Ships must be unloaded continuously and without delay. Cargo should not be backlogged in the terminal area.

a. Operations at a port are irregular, the greatest activity coinciding with the arrival of vessels. To meet these varying requirements, the port develops, in coordination with the other staff agencies, a program for moving cargo and personnel from the port by motor transportation. Using this program as a basis, the motor transport staff element of the appropriate command provides the terminal command with the motor transportation necessary for operations.

b. To avoid congestion, truck units engaged in port clearance may establish a temporary motor pool or park near the dock area from which vehicles are dispatched to piers as needed and, when loaded, to the proper supply point or depot. In extensive or widely dispersed port areas several pools or subpools may be established. Multiple freight waybills given to the driver show vehicle cargo destination and routing and serve as tally sheets and receipts.

64. General Principles

To provide operating units of the motor transport service with sufficient drivers to permit round-the-clock operations, truck units must be

maintained at full TOE strength and car companies must have driver augmentation. Capacity loading should be accomplished whenever possible, and loads should be arranged to permit expeditious unloading at destination. Procedures should be established to maintain control over vehicles at all times. When used, cargo nets must be returned from vehicle unloading points to the port or beach area without delay.

Section III. INSTALLATION SUPPORT OPERATIONS

65. General

Installation support operations provide motor transportation for commands, installations, terminals, and depots to meet requirements that exceed organic vehicle capabilities. Primarily, these operations are concerned with the adjustment of supply levels or the distribution of supplies within the supply system. However, in the theater of operations, especially within the communications zone, there is a considerable requirement for motor transportation in the normal operation and administration of such facilities. Requirements also exist for rewarehousing and local movement of cargo not necessarily intended for immediate issue. In addition, major construction at communications zone installations often requires support to the installations and to units engaged in the construction. Installation support operations may be local or line hauls and are usually intrasectional movements.

66. Intradepot

a. Intradepot operations are restricted to the depot to which motor transport support is provided. They are normally local hauls comprising internal deliveries, rewarehousing, and other transportation requirements incident to normal administrative and housekeeping operations.

b. Full capacity loads are difficult to achieve in intradepot operations. Generally, those vehicles assigned to the light truck company are most suitable. However, the equipment that will most satisfactorily perform the mission should be used. Regardless of the tonnage to be moved, task vehicles must not be dispatched in groups that will exceed depot loading and handling capabilities.

c. Supervision of vehicles engaged in intradepot tasks is a responsibility of the motor pool officer or the commander of the unit providing the vehicles. (Roving patrols among the various depots are a primary means of insuring effective utilization.)

67. Interdepot

a. Interdepot operations are concerned with the movement of cargo between depots. They may be local or line hauls. If movement is regular

and tonnages are stable, a motor transport unit may be assigned a depot support mission. Otherwise vehicles are dispatched from a motor transport unit or a transportation motor pool in the numbers and types required.

b. Where motor transport requirements at individual depots are light and loaded vehicles from several depots have common destinations, vehicles may assemble at truck terminals for movement in motor convoys. Such activities will be supervised by the unit responsible for the operation of the truck terminal.

c. If semitrailers are employed, a shuttle movement can be established to permit maximum use of transportation. One tractor may be employed with three semitrailers: one at origin for loading, one at destination for unloading, and one on the road all times.

d. The efficiency of depot hauls, especially over short distances, depends on the speed of loading and unloading. Labor difficulties and restricted operating areas affect such operations. Therefore, the labor and facilities available and the rate at which trucks can be loaded or unloaded must be considered when motor transport support is provided.

68. Supply Points

a. The motor transport service furnishes trucks for the movement of cargo between supply points and from depots, terminals, and transfer points to supply points. Such movements may be on a routine and recurring basis, which will permit a stable allocation of task vehicles.

b. Supply points in the combat zone normally are served from depots in the army service area. These army depots are supplied from depots within the communications zone. Substantial transportation economy may be achieved if cargo is moved directly from base section depots to army depots and supply points. This requires coordination between the appropriate transportation officers and the various modes concerned.

69. Administrative Operations

Administrative operations are hauls necessary for the administration and housekeeping functions of headquarters, units, and installations. Generally, motor pools are established to furnish transportation as required. Detailed operations of transportation motor pools are prescribed in AR 58-5 and discussed in TM 38-660-1.

Section IV. TRANSFER OPERATIONS

70. General

a. Transfer points are transportation facilities for transferring cargo or personnel from one transport unit or transportation mode to another.

Cargo handling is accomplished by transportation service personnel or terminal service companies. Augmentation as required is provided by personnel of Transportation Corps terminal or Quartermaster Corps service units or local civilian labor.

b. Transfer points include railheads, navigation heads, truckheads, pipeheads, and air terminals.

71. Establishment of Transfer Points

a. Transfer points are established as required and may vary from small points operating intermittently to large installations operating on a round-the-clock basis. The appropriate transportation service is responsible for the establishment and operation of transfer points. Since most transfer points require motor transportation, a motor transport unit may be required to supervise the operation of small points where terminal service units or transportation movements offices are not available.

b. The principal reasons for the establishment of a transfer point are—

- (1) Termination of one means of transportation, making transfer to another means necessary to continue movement.
- (2) Absence of a through route or major disruption of one.
- (3) Inadvisability of further forward movement by original carrier because of the proximity of enemy forces.
- (4) Reduction of capacity at a point along a line of communication, making necessary the transfer of the excess load.
- (5) Overall capabilities and priorities.

c. Discussion of transfer points in this manual will be restricted to transfer point operations involving motor transportation.

72. Railhead

a. A railhead is an installation on a rail line at which cargo is unloaded from rail transport and forwarded or distributed by other modes of transportation. Railheads may be located at the terminus of a rail line or at intermediate points as required. Railhead operations normally involve only rail and truck transportation. Cargo and personnel arrive by rail and are transferred to trucks and moved to the desired destination. Normally, cargo arrives at railheads for movement to depots or supply points. Transportation economy can be substantial if cargo is moved from the forward railhead directly to the army supply point.

b. The appropriate transportation officer at the railhead informs the motor transport service of transportation requirements. Vehicles are then scheduled to the railhead for loading. For local hauls, vehicles may be dispatched individually from the railhead; for line hauls, vehicles will normally be moved in convoy. Each vehicle operator should be

furnished a motor freight waybill and, as required, a map, directions, or other necessary instructions. When appropriate, a consolidated summary of the documentation may be given to the convoy commander for delivery to the receiving agency.

c. At times, railheads are operated exclusively for railhead distribution of cargo directly to using units. In such operations the motor transport service would be concerned with highway regulation since convoys traveling to and from the railhead could cause traffic congestion and delays. For example, if the railhead were on a reserved route over which a motor transport unit exercised highway regulation, the unit would schedule convoys to alleviate congestion. Or, even if the unit were not exercising highway regulation, the operations section of the unit would plan and coordinate convoy schedules to eliminate delays and conflicts on the route and to comply with highway regulations of higher headquarters.

73. Navigation Head

A navigation head is a point on a waterway where cargo is transferred between water carriers and land carriers. Navigation heads may be located at the extremities of navigable waterways or at intermediate points, as required. Navigation heads are operated by the units operating the inland waterways service. Clearance of cargo from navigation heads is accomplished in a manner similar to port clearance (par. 63).

74. Truckhead

A truckhead is a point at which cargo is unloaded from trucks and transferred to other trucks or other modes of transportation. Truckheads may be located at any point on a route at which transfer may be made from trucks to combat vehicles, human bearers, animals, or other means of transportation. Truckheads may be established for supply point distribution, in which case a motor transport unit is responsible only for delivery to the truckhead. A truckhead may be established as a truck terminal where cargo is transferred from larger to smaller vehicles or from smaller to larger vehicles. The motor transport unit in charge of the terminal arranges for personnel and equipment to transfer cargo between vehicles of the motor transport service.

75. Pipehead

Transfer operations of pipeheads are the responsibility of the Quartermaster Corps. Appropriate Transportation Corps motor transport units may be assigned or attached to Quartermaster operating units in support of operations.

76. Air Terminal

a. An air terminal consists of the facilities on or at an airfield which contribute to the transfer of cargo and personnel between air and other

modes. These facilities usually provide for administration, loading, and storage. The aircraft involved are not included. Cargo and personnel are received and shipped by air transportation through air terminals. They may be transferred to other modes of transportation, normally by trucks of the motor transport service.

b. Truck terminals may be established near an airfield to facilitate operations. The senior motor transport commander commands all motor transport units and facilities engaged in the movement of personnel and cargo from depots or terminals to and/or from the air terminal. If motor transport vehicles operate into an air terminal, coordination between the Air Force commander and the motor transport commander is effected through the transportation movements officer. At times, motor transport units may be placed in direct support of Air Force operations.

Section V. FIELD SUPPORT OPERATIONS

77. General

Transportation Corps motor transport units may make hauls in direct support of tactical operations. Armies, corps, or divisions may utilize organic or attached motor transport as a pooled service to be allocated when and where needed to meet the changing tactical situation. Methods of operating motor transportation in support of tactical operations are similar to those employed in the communications zone except as altered by proximity to the enemy and demands for increased security measures. Equipment adapted for offroad operation is usually required in tactical support operations.

78. Tactical Unit Support

Normally support is given tactical units for movements within the combat zone. The vehicles of the motor transport service are used in direct support of combat operations to increase the mobility of combat units. For example, to render them fully mobile, infantry divisions require additional trucks; these are ordinarily furnished from the motor transport service of the field army. Motor transport units supporting a division are attached to the division transportation battalion. Upon further attachment unit integrity is maintained as much as possible so that truck unit commanders can supervise the unit and promptly regroup it for its next mission when it is released. A motor transport unit in direct support of tactical operations is under the operational control of the tactical commander. Upon completion of a mission, the unit returns to the control of its parent unit.

79. Field Army Support

a. The transportation special staff section organic to the headquarters of the field army is under the staff supervision of the Army G4. The

special staff transportation officer exercises operational control over all motor transport units assigned to the field army. A motor section is established in the transportation special staff section to exercise technical supervision for the transportation officer over motor transport units.

b. Motor transport units assigned to the field army may vary with the mission, the operating condition, and the force to be supported. For units assigned to a typical field army, see FM 101-10.

c. The mission of the motor transport service in the field army is the movement of cargo and personnel within the field army area. At times, motor transport units from the communications zone may travel directly to army supply points. Plans, including highway regulation, must be coordinated between the field army and TALOG. In turn, these plans must be coordinated with those of subordinate commands of the field army.

d. At the discretion of the field army commander, motor transport units operating forward of a corps rear boundary may be placed under the operational control of that corps (control is further delegated to the corps transportation officer) if a routine allocation of vehicles is necessary. The units remain under the command of the army and are withdrawn when required elsewhere.

e. Army motor transport units are employed for—

- (1) General hauling missions in support of depots and installations.
- (2) Hauling from depots in the army service area to army supply points.
- (3) Movement of troops and cargo in direct support of tactical operations.
- (4) Augmenting other army transport operations.

f. Ordinarily, motor transport is in support of each army supply point. Hauls involve movement of supplies from depots in the army service area to the army supply point. Truck units from these support organizations may perform missions in the forward area of the combat zone and still remain under the command of the motor transport organization. Motor transport battalions and/or companies are not attached to other units or installations except on a mission basis and then only for a specified time or until the mission is accomplished. The composition of a particular motor transport organization varies with the mission assigned. To insure priority of movements, motor transport organizations in support of army supply points may, when directed, exercise highway regulation over main supply roads.

Section VI. TRANSPORTATION INTERSECTIONAL MOTOR TRANSPORT SERVICE

80. General

a. Transportation intersectional motor transport operations are normally line haul movements operated for extended distances over main supply routes. They may extend through the communications zone into the Army service area. Line hauls may assume the proportions of a major logistical task in support of a field army or other large unit and become the assigned mission of a motor transport command. Line hauls may be operated with such precision that tonnage can be hauled at a predetermined rate. Additional transportation economy can be gained when requirements for tonnage can be made routine and regular operations established. Policies for intersectional line hauls are determined by the theater army logistical command (TALOG).

b. At times, motor transport express operations may be required. Express operations are expedited movements of high priority cargo in which established line haul procedures are modified in the interest of a more rapid delivery than regular line haul. Scheduling must be precise and control highly centralized. Express operations may be given the specific mission of supporting a field army or other large unit or of moving a designated tonnage or type of supply within a specified period of time. Express operations may be established whenever there is a necessity for expeditious movement of tonnage over considerable distances and when other modes of transportation cannot meet the requirements.

81. Command

The commander of a motor transport unit is responsible for the operation of the line haul. Depending upon the size of the operation, a battalion or group headquarters may be used. In a large-scale operation requiring units from three or more motor transport groups, a motor transport command may be assigned this mission.

82. Organization

a. The precise organization for a line haul depends largely on the distance involved, the tonnage to be moved, and the type of cargo to be transported. These factors affect the number, type, and composition of the units assigned. Over long distances, a motor transport command may be the highest headquarters, and group and battalion headquarters may be assigned responsibility for operation and administration of truck terminals and of specific segments of the route. Over short distances, these command units may operate the entire distance of the route.

b. Attachment of truck companies and other units to command units of the motor transport service will be made according to unit capabilities, the geographical area, and the time and distance factors of the route.

83. Equipment

Tractor-trailer equipment will ordinarily be the most efficient equipment for line hauls. Medium truck companies should serve as the nucleus around which the operation is established. Heavy-lift equipment contained in the heavy truck company (heavy lift) can be used for line hauls of heavy and outsized equipment.

84. Operational Planning

a. When operational plans for a line haul operation are made, the following factors must be considered:

- (1) Actual capabilities of the routes to be employed.
- (2) Feasible maximum speeds to be allowed over various segments of the route.
- (3) Current personnel and vehicular strengths of assigned truck units.
- (4) Specific locations for truck terminals, unit bivouacs, and trailer transfer points.
- (5) Specific amounts and types of tonnages to be transported, actual locations of depots and supply points for cargo pickup and delivery, and actual capabilities of equipment and units to perform the required tasks.
- (6) Definite requirements for any supporting services, such as quartermaster POL service, ordnance maintenance, and signal communications.

b. In addition, the operational planner must develop the actual road movement graph, convoy schedules, route maps, and support plan for the operation.

c. Programed movement requirements are allocated to each transport mode through the command movement program which is distributed to all interested agencies. This allocation is expressed as an average daily short ton requirement by class and service of supply. The mode planner must translate these bulk allocations into anticipated equipment requirements and adjust his capabilities to insure the accomplishment of the programed requirements. However, the program is not self-implementing. Shippers must initiate a request for actual movement through the transportation movements field organization in advance of shipping date as prescribed by command standing operating procedure. If daily requirements exceed available truck capacity, adjustments will be made by the transportation movements organization according to

established priorities. Information concerning actual or anticipated shipments is teletyped to motor transport headquarters and to intermediate and destination truck terminals. This permits prior planning for all agencies.

d. This standard procedure may be varied when shipping installations are overburdened or when priority is given to personnel movements or to specific classes of supplies.

- (1) If shippers are unable to fulfill commitments, they inform their own special staff sections and the local transportation movements officer of anticipated difficulties. Corrective action is taken at TALOG headquarters. Shipping allocation may be given to different shippers, or additional loading capability may be given shippers. Motor transport headquarters is informed of the decision and informs the truck terminal at origin of the plans. Since this terminal has integrated dispatch facilities, trucks engaged in shuttle operations can be quickly shifted to new pickup points. The same system is used at destination points.
- (2) In an emergency, in-transit storage may be required at origin, destination, or intermediate truck terminals. However, in-transit storage is discouraged as it lessens the capability and flexibility of motor transport equipment. Motor transport command headquarters keeps the TALOG transportation officer informed of the class and quantity of supplies stored in transit and the quantity and type of transport equipment inactive because of mobile storage. Since the ratio of shuttle vehicles to line haul equipment is carefully proportioned, mobile storage can disrupt the operation. Continuation of storage without a proportionate decrease in tonnage allocation necessitates additional transport equipment if allocated tonnage is to be delivered.
- (3) Changes in supply movement programs are relayed to subordinate command units by motor transport command headquarters. Action is taken by all units to adjust operations to the changing situation.
- (4) Large personnel movements are expedited. If motor transport units in addition to those assigned are used, motor transport headquarters is responsible for integrating the move over the roadway. Priorities are established for personnel convoys and are coordinated at truck terminals and highway regulation points.

85. Route Selection and Reconnaissance

a. Routes selected for motor transport line haul operations should, if possible, be primary-type paved highways with good connecting and

access roads. If two-way roads are not available, parallel one-way roads with regular points of convergence should be selected. The points of convergence should coincide with the desired locations of truck terminals or trailer transfer points.

b. A complete and detailed analysis of the route must be made from available information or maps and aerial photographs; and, if practicable, a ground reconnaissance should be conducted. The analysis should include the location of critical points, bottlenecks, and hazards; a full evaluation of the traffic potential; and estimates of average speeds over every segment and of approximate time-distances between trailer transfer points. When a ground reconnaissance is made, the following information will be obtained: average travel times; desired speeds; ability of vehicles to negotiate difficult grades, defiles, bridges, or terrain; and initial repairs required in roadway or structures before operation.

c. As a result of this analysis, the route will be segmented in such a manner as to provide approximately equal time-distances between terminals (fig. 2). Routings and regulations to be established for vehicular movements over various segments will also be determined. The location of depots, supply points, transfer points, and supporting facilities must be considered. The method of operation and the schedule of movement will have a definite bearing on all these factors.

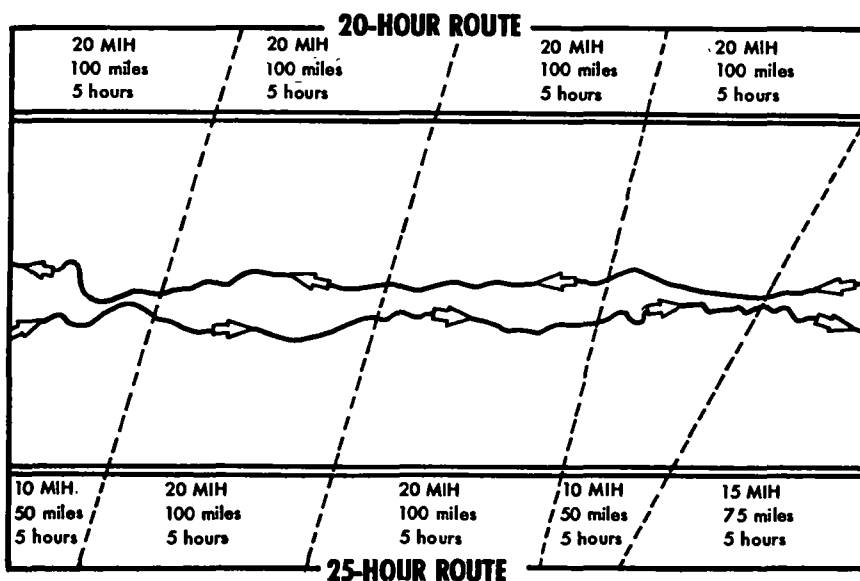


Figure 2. Comparison of two route analyses in arriving at equal time-distances between segments.

86. Methods of Operations

The equipment available, the road conditions, and the logistical mission or military situation governing line hauls may vary in each situation. Since line haul operations may be adapted in many ways to suit particular operations, successful operations depend in large measure on the ingenuity and initiative of individual commanders and on the ability of planning staffs to foresee and provide the types of equipment required. The semitrailer relay method is normally used in line haul operations. For that reason it is discussed in detail here; however, the general principles for relay operation are applicable to all line haul operations and should be adapted to other operations when practicable.

a. A simple relay operation is established with a truck terminal at both origin and destination and, depending upon the distance involved, one or more trailer transfer points at intermediate sites along the route. At the origin terminal, shuttle (terminal) tractors move empty semitrailers from the terminal to surrounding depots and supply points for loading and return loaded semitrailers to the terminal where they are documented, assembled, and prepared for forward movement. Line tractors of the unit responsible for operation of the first segment (leg) of the journey pick up loaded semitrailers and move them forward to the first trailer transfer point. Here forward-moving loaded semitrailers are exchanged for empty or return-loaded semitrailers, which are then returned to the origin terminal for rehandling and subsequent forward movement. Line tractors of the unit assigned the mission of operating the second segment of the operation transport forward-moving semitrailers to the next trailer transfer point where similar exchange procedures are accomplished. The relay is continued until the forward-moving semitrailers arrive at the destination terminal. Shuttle tractors then move loaded semitrailers to ultimate destinations for unloading and return empty or return-loaded semitrailers to the terminal, where they are documented, assembled, and prepared for retrograde movement. Thus there is a continuous flow of loaded semitrailers moving from depots and supply points to forward areas and of empty or return-loaded semitrailers moving rearward for subsequent rehandling and forward movement.

b. The system of relay should be designed to provide the necessary command, supervision, and support services required by the operation. This may necessitate establishment of facilities for messing, vehicle service and repair, quartering, administrative support, and logistical services.

c. The accountability, control, and maintenance of semitrailer equipment employed in relay operations are discussed in detail in paragraphs 91 through 94.

87. Truck Terminals

a. *General.* Truck terminals (fig. 3) are normally located in or near centers of concentrated trucking activities at both extremities of a line haul operation, where they form the connecting link between local hauls and the line-haul service. They constitute assembly points and dispatch centers for motor transport equipment employed in line haul operations. Although they may be used for in-transit storage or freight sorting, this use should be avoided or held to an absolute minimum. Truck terminals may, depending upon the situation, be located at intermediate points along the route of a line haul operation and function not only as terminals but also as trailer transfer points.

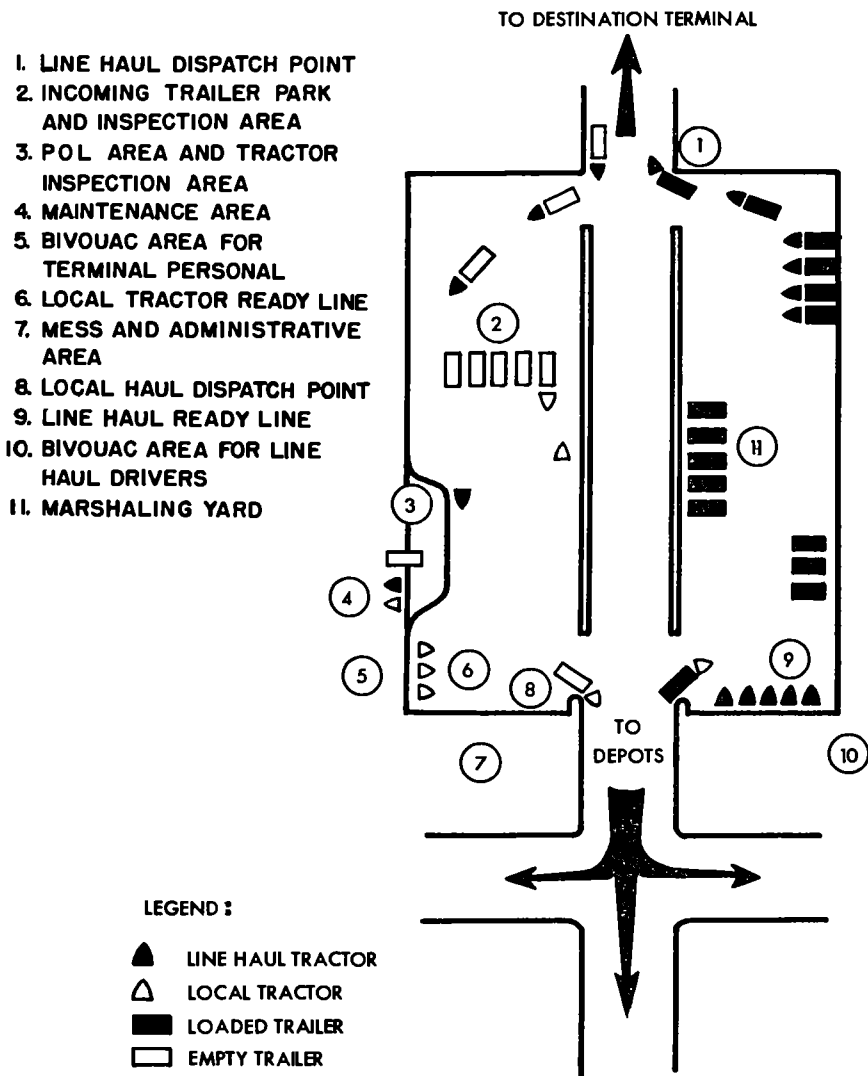


Figure 3. Origin truck terminal.

b. Facilities at Terminals. The truck terminal is a consolidated facility, normally commanded and operated by a motor transport battalion. It includes a marshaling area and such other activities and services as are required to support the operation: normally a dispatch office, a consolidated mess for operational personnel, and consolidated maintenance and servicing facilities. Truck unit bivouacs or temporary quarters for drivers may also be located within or near terminal areas.

c. Operation of Terminals.

- (1) Truck terminals normally use tractor-semitrailer equipment to operate a shuttle service to surrounding depots or supply points for the purpose of assembling semitrailers for further movement. At these depots or supply points shuttle tractors exchange empty semitrailers for loaded ones. The loaded semitrailers are moved to the marshaling yard within the terminal, where they are spotted and prepared for further movement. Incoming line haul tractors drop their semitrailers and, after required driver messing and vehicle servicing, are coupled onto loaded semitrailers for line haul movement. At the destination terminal the process is reversed, incoming loaded equipment being exchanged for return-loaded equipment. Thus, by operating a shuttle service for local hauls and marshaling convoys in advance, delay to over-the-road tractors at either end of the line haul is reduced. This operation may also be carried out with straight trucks, but it then involves changing drivers or loading, unloading, or transferring cargo.
- (2) Every unit operating a truck terminal must keep a careful check on the location and use of its semitrailers, which are spotted at various depots and supply points awaiting loading or unloading. A close accounting of these vehicles is absolutely necessary, and the terminal commander must work out suitable receipting arrangements with the supply facility.

88. Trailer Transfer Points

Trailer transfer points are normally located at predetermined locations along the route of a line haul operation. They form the connecting links between those segments of a route designated as the areas of responsibility for various operating units. These points function as modified truck terminals and tie the overall operation into a continuous, efficient operation.

a. All facilities available in a truck terminal may be incorporated into a trailer transfer point with the exception of those concerned with local hauls; this is, the local haul dispatch point and the local tractor ready line. The minimum facilities required for operations would consist of a dispatch point and a marshaling area to facilitate semitrailer

interchange. Other facilities, such as a troop mess, a maintenance and service area, and a bivouac area, would be established as warranted by the operational situation.

b. Basically a trailer transfer point offers the facilities for interchanging semitrailers between line tractors operating over adjoining segments of a line haul route and for controlling and reporting upon equipment engaged in the operation. Line tractors moving up from rear areas drop their loaded semitrailers at a transfer point and pick up empty or return-loaded semitrailers for retrograde movement. Line tractors coming in from forward areas drop their empty or return-loaded semitrailers and couple onto forward-moving loaded semitrailers for further movement toward ultimate destinations. Local tractors may be employed within the trailer transfer point for shuttle operations to spot and prepare semitrailers for subsequent movement. This action reduces layover time of line tractors and expedites the overall operation.

c. Figure 4 illustrates a type express operation (line haul) incorporating the origin and destination terminals and one trailer transfer located at an intermediate point along the route of travel.

89. Highway Regulation and Other En Route Services

a. Line haul operations require a closely supervised system of highway regulation and traffic control. Routes should be planned so that there will be as little interference as possible from other traffic. They should normally be reserved for express hauls or other priority movements cleared through the command having jurisdiction over the entire route. Routes must be well marked so that drivers can follow them easily.

b. Highway regulation points should be provided at convenient locations along the routes. Reports from highway regulation points enable the motor transport staff to maintain constant control of movements, effect priorities, make adjustments in routings, and coordinate travel over the route in adapting operations to the ever-changing tactical situation. Highway regulation points may be established at communications zone sectional boundaries; truck terminals; trailer transfer, loading, and delivery points en route; and any point where the demand on the highway net requires continual control of motor vehicles.

c. Military police traffic control personnel should be provided at busy intersections and other congested areas to assist the express traffic. In areas where local police are retained as a functional organization, they may be expected to supplement military police, particularly with respect to control over civilian vehicle and pedestrian traffic.

d. Tractor service and mobile maintenance teams should be provided at strategic points for the repair and recovery of disabled vehicles.

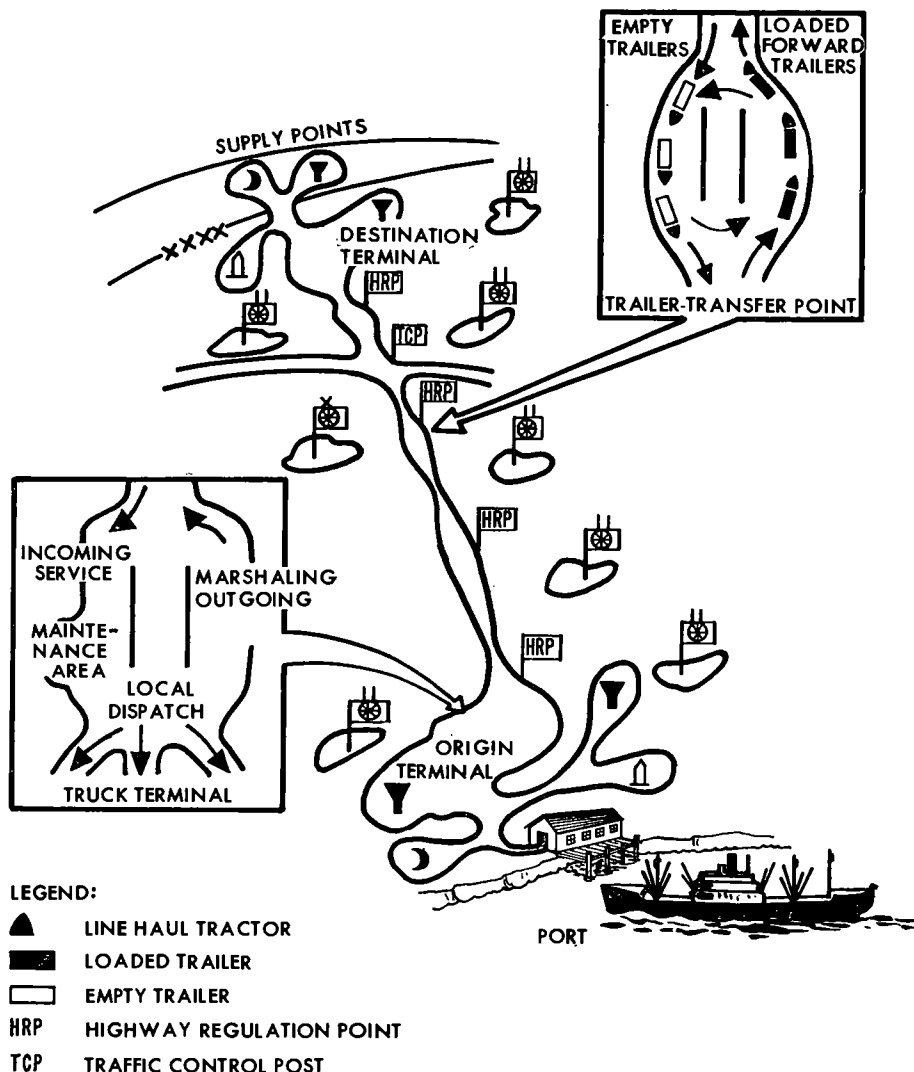


Figure 4. Type express operation (line haul).

90. Assignment of Semitrailer Equipment

The flexibility and effectiveness of motor transportation permits the employment of company-size units in a wide variety of tasks under many different circumstances. Since one or more units must often operate independently, it is essential that each truck unit be assigned semitrailers to meet specific requirements.

a. The medium truck company may be assigned stake and platform, refrigerator, tank, or other types of semitrailers to perform its assigned mission. The variety of semitrailer designs enables the company to

provide suitable transportation without a change in basic organization or operating procedure.

b. The ratio of semitrailers to truck tractors is dependent upon the ratio of travel time to loading and unloading time. The number of semitrailers assigned is based on maximum operating time for the tractor.

91. Accountability for Semitrailer Equipment

a. The commanding officer of a motor transport command, group, or battalion may solve his semitrailer supply problem in a number of ways. If relay operations are to be of short duration, he may leave the semitrailers assigned to companies and impose stringent measures for maintaining responsibility over semitrailers away from parent units. However, it may be preferable to transfer informal accountability for semitrailers to the motor transport command, group, or battalion and maintain property books and control records at the command, group, or battalion level.

b. AR 735-31 authorizes the motor transport command, group, or battalion to assume informal accountability for semitrailer equipment of assigned companies when a relay operation is established. This provision may be implemented by direction of the theater commander or on order of the commanding officer of the motor transport command, group, or battalion. At the discretion of the appropriate supply agency, equipment modification lists and other records may be used to simplify accountability and to fix direct responsibility.

c. When the provisions of AR 735-31 are put into effect, the truck company commander is relieved of informal accountability for semitrailer equipment previously assigned to his unit. He is, however, charged with direct responsibility for the semitrailers with which he is operating and must insure that adequate care is given all semitrailers in his custody.

d. The motor transport command, group, or battalion must establish informal accountability and provide for the maintenance of property records in its supply section. Further, the command, group, or battalion must establish, through its operations section, reporting and control procedures that can pinpoint the location of semitrailers wherever they are within the system and specify and hold responsible that unit or person in whose custody the equipment is at a particular time.

e. Upon entry into the operational phase of a relay system, the appropriate headquarters will establish a trailer accounting office within the supply section. Individual truck units will be relieved of informal accountability for trailers and semitrailers; the information will be recorded in a consolidated trailer property book maintained by the headquarters. Upon completion of the operation, return of the units to routine operations, or transfer to another command, the consolidated

property book will be adjusted to reflect the current status of on-hand semitrailer equipment and hand receipts will be made reassigning equipment to the companies.

92. Control of Semitrailer Equipment

In this centralized operation, accountability and control of semitrailer equipment are vested at the same level of command. The supply section of the headquarters units assumes responsibility for the equipment. The operations section of the headquarters units assumes responsibility for control. Control is effected through reports from units and the maintenance of records and a control board (par. 93). Maximum use of high-speed communications, confirmed by written reports, is imperative to accomplish this requirement.

a. The reports forwarded to the operations section place responsibility for equipment on the unit having the equipment at a particular time. They also give the operations section a daily check on the location of all semitrailer equipment in the system and on the status and condition of such equipment.

b. Information received from units on their daily yard check and outgoing trailer movement reports should be posted on the control board in the operations office. The control board, in addition to indicating the status of semitrailer equipment throughout the system, is an invaluable aid to the commander in controlling the operation, assessing responsibility for trailers needing repair, locating lost or delayed trailers, and rerouting cargo loads en route. The simplest form of control board is one on which semitrailers are listed first by registration numbers and then terminals and transfer points are listed in sequence according to route of travel. A space may be left between terminals or transfer points to indicate equipment en route between them. Locations of semitrailers may be indicated by tabs and loads and destinations by various colors or notations on the tabs. Semitrailers loading or unloading at supply installations may be charged to the appropriate terminals, or separate columns may be provided on the board to indicate these locations.

93. Records

a. Trailer Receipt.

- (1) Semitrailers are receipted for whenever they are exchanged. DA Form 1317-R (Trailer Receipt) (fig. 5) provides documentation for the receipt of both loaded and empty trailers moving into and out of the truck terminal and received at trailer transfer points. The form contains spaces for listing all semitrailers of a particular convoy and for noting deficiencies. This form is also used to fix responsibility for the condition of the trailers listed.

TRAILER RECEIPT						
Received from <u>Capt R. Kilroy</u> of the (Terminal Agent, Convoy Commander, or Driver)						
<u>132nd Trans Motor Trans Bn</u> the following listed trailers in (Transportation Battalion)						
good condition. (Exceptions noted in <u>Remarks</u> .)						
LINE ITEM	VEHICLE REGISTRATION NUMBER	LOAD CLASS	TONS	SHIPPER	WAYBILL NUMBER	REMARKS
1	01180241	Ord F	12	RAD	914453	No exceptions
2	01179232	Empty	—	—	—	Tape missing
Date and Time 311400 July 1960		Unit 145th Trans Motor Trans Bn			Signature, Grade, and Organization John Dillow, Capt, TC	

DA FORM 1317-R, 1 May 55

Figure 5. DA Form 1317-R (Trailer Receipt).

- (2) Trailer receipts are retained in the files of units operating terminals or trailer transfer points to support their daily yard check and outgoing trailer reports. The receipts are prepared by the dispatching unit in triplicate: copy 1 to prove acceptance by a succeeding convoy commander, terminal, or trailer point; copy 2 to pass with the trailer as a memorandum of the exchange; and copy 3 to serve as a temporary receipt from the convoy commander to the dispatching unit.

b. *Daily Yard Check.* Units responsible for truck terminals will accomplish a DA Form 1318-R (Daily Yard Check) (fig. 6) for all semitrailers on hand. This form will be completed as of a designated hour each day to provide the operations section with current data regard-

ing operational equipment. It is divided into separate sections for empty and loaded semitrailers. Where applicable, appropriate information from trailer receipts on equipment deficiencies will be made on the daily yard check.

c. *Daily Outgoing Trailer Report.* Units responsible for truck terminals will complete a DA Form 1319-R (Daily Outgoing Trailer Report) (fig. 7) as of the same hour specified for the daily yard check. This form will cover all semitrailers dispatched since the previous report and will list any deficiencies in the *Remarks* section. DA Form 1319-R will be transmitted to higher headquarters with DA Form 1318-R.

d. *Weekly Trailer Location Report.*

- (1) On a specified day each week DA Form 1320-R (Weekly Trailer Location Report) (fig. 8) will be accomplished by the vehicle operations section of the headquarters maintaining

DAILY YARD CHECK				
TO:		FROM:		Time and Date
37th Trans Motor Trans Comb		148th Trans Motor Trans Bn		311400 July 1960
LINE ITEM	SECTION I EMPTY TRAILERS	SECTION II LOADED TRAILERS		REMARKS
	Trailer Registration Number	Trailer Registration Number	Destination	
1	0118011	01181063	Karlsfeld Ord Dep	Sec I and II: No exceptions
2	01179347	01179378	Karlsfeld Ord Dep	Sec I: No exceptions Sec II: Landing gear damaged
3	01147346	01179937	Mannheim Ord Dep	Sec I and II: No exceptions
4	01179913	01147050	Boblingen	Sec I: No exceptions Sec II: Japs missing
5	01180173	01179873	Rhine Engr Dep	Sec I: Japs missing Sec II: No exceptions
6	012980			Sec I: No exceptions
7	0129856			Sec I: No exceptions

DA FORM 1318-R, 1 May 55

Figure 6. DA Form 1318-R (Daily Yard Check).

DAILY OUTGOING TRAILER REPORT							
TO: 37th Trans Motor Trans Comd			FROM: 24th Trans Motor Trans Bn			Time and Date 311400 July 1960	
LINE ITEM	VEHICLE REGISTRA- TION NUMBER	*LOAD CLASS	DESTINATION	TIME OF DEPART- URE	UNIT MOVING TRAILER	CONVOY COMMANDER OR DRIVER	REMARKS
1	0114001	E	HED	1015	67th	Moore	No exceptions
2	01179345	L	HSD	0845	68th	James	No exceptions
3	01179428	L	Mannheim	1050	68th	Bryant	No exceptions
4	01179565	E	HED	0930	67th	Reeves	No traps
5	01179931	E	HED	0915	67th	Mc Cann	Subgate broken
6	01180081	E	HED	0845	68th	James	No exceptions
7	01179833	E	Rhine Main	0745	67th	Johnson	No exceptions
8	0118004	E	Rhine Main	0745	67th	Johnson	No traps
9	01179425	L	Mannheim	1050	68th	Bryant	No exceptions
10	01179843	L	Mannheim	1050	68th	Bryant	No exceptions

*L--Loaded, E--Empty

DA FORM 1319-R, 1 May 55

Figure 7. DA Form 1319-R (Daily Outgoing Trailer Report).

informal accountability and control of semitrailers in the relay operation. This report reflects the information contained on the control board as of a specific day. The weekly report serves as a check on the equipment accounting and reporting system and indicates the number of consecutive days a semitrailer has been at an installation, either loaded or empty. This report gives commanders an indication of mismanagement. If operational equipment is not being fully utilized, the weekly report will reveal the misuse to the commander.

- (2) The weekly report is forwarded to subordinate commands as a cross-check on semitrailers in their yards as reported on daily yard checks. The subordinate commands use this report to note semitrailers reported at supply installations within their

area of responsibility and to cause followup checks to be made when necessary.

e. Motor Freight Waybill.

- (1) Loaded trailers are originally documented by shipping agencies on DA Form 1635-R (Motor Freight Waybill) (fig. 9). This document accompanies the shipment to its final destination, except where redocumentation is required because of offloading or onloading of cargo at an intermediate destination. In this event the new document accompanies the shipment. The original is retained in the files at the intermediate destination to verify the transaction.
- (2) The motor freight waybill may be used as a trailer receipt, provided sufficient coipes are available. Depending upon the situation, the headquarters responsible for relay operations

WEEKLY TRAILER LOCATION REPORT											
TO: (Battalion)		FROM: (Headquarters)				Date					
24th Trans Motor		37th Trans Motor				31 July 1960					
Trans Bn		Trans Comd									
LINE ITEM	TRAILER REGISTRATION NUMBER	TERMINAL OR MARSHALING YARD				SUPPLY INSTALLATIONS					
		No 1 Main	No 2 Hansen	No 3 Jedig	No 4 Kaiser	KOD	MOD	RED	HED	NOD	
1	01146519				L28						
2	01146944		L22								
3	01179346				L14 for Hansen						
4	01179763	E2									
5	01179779			E22							
6	01179795									L16	
7	01179821							E30			
8	01179822		L22 for Verdun								
9	01179823			E12							
10	01179839					E14					
11	01179853		L15								
12	01179885	E23									
Typed Name and Grade						Signature					
A. P. Hill, Lt Col, TC						A. P. Hill					

DA FORM 1320-R, 1 May 55

Figure 8. DA Form 1320-R (Weekly Trailer Location Report).

MOTOR FREIGHT WAYBILL		DATE <i>4 May 1960</i>		WAYBILL NUMBER <i>C-5348</i>		COPY <i>1</i>	
CARRIER NUMBER <i>USA 01179111</i>		UNIT IDENTIFICATION <i>37th Transp. Mtr. Trns. Co.</i>		SEAL NUMBERS <i>NA</i>			
FROM: (Consignor) <i>Hansen Sig Dep 701</i> <i>APO 11</i>				ROUTING <i>NA</i>			
TO: (Consignee) <i>Pittsmead Sig Dep 706</i> <i>APO 222</i>				SPECIAL INSTRUCTIONS <i>L-54 Fragile</i>			
MOVEMENT AUTHORITY (Line or release Nr.)	PACKAGES		DESCRIPTION	WEIGHT (In pounds)	CUBE	REMARKS	
	Number	Kind					
<i>L-41</i>	<i>50</i>	<i>Radio</i>	<i>Wire, W-110-B</i>	<i>7902</i>	<i>186</i>		
<i>L-54</i>	<i>4</i>	<i>Boxes</i>	<i>Radio, SCR 506A, set 1, boxes 1/4, 2/4, 3/4, 4/4</i>	<i>376</i>	<i>8</i>		
<i>L-54</i>	<i>4</i>	<i>Boxes</i>	<i>Radio, SCR 506A, set 2, boxes 1/4, 2/4, 3/4, 4/4</i>	<i>376</i>	<i>8</i>		
				<i>8654</i>	<i>202</i>		
EXCEPTIONS <i>None</i>							
SIGNATURE OF CARRIER REPRESENTATIVE <i>R. Gray</i>				SIGNATURE OF CONSIGNEE <i>J. B. Scott</i>			
GRADE <i>Cpl</i>	UNIT <i>2066 Transp Co, Lt Inf</i>		GRADE <i>Sgt</i>	UNIT <i>PSD 106</i>			
TIME <i>0810</i>	DATE <i>4 May 1960</i>		TIME <i>1530</i>	DATE <i>4 May 1960</i>			

DA FORM 1635-R, 1 Mar 56

Figure 9. DA Form 1635-R (Motor Freight Waybill).

may arrange with the agency at origin to reproduce enough copies to be used as receipts. When the load is delivered at destination, the consignee or his authorized representative must sign a copy of the freight waybill or otherwise receipt for cargo delivered. The driver or convoy commander returns this receipt to his parent organization for retention in unit files. Pertinent information may be extracted from the receipt for records or for transmission to higher headquarters.

94. Maintenance

a. *General.* The maintenance and repair services for vehicles employed in relay operations are the same as for all military vehicles.

However, modifications in usual procedure may be required. Normally, military vehicles may operate 4 to 6 hours per day, but equipment employed in relay operations may operate 20 hours each day. Therefore, maintenance requirements are increased. In addition to the normal mechanic augmentation provided truck units in round-the-clock operations, it is often necessary to assign nondriver personnel as mechanic's helpers.

b. Consolidated Maintenance. In order to achieve maximum utilization of maintenance skill and maintenance facilities, consideration should be given to consolidated maintenance. To provide a service section at a truck terminal, the battalion headquarters draws from its assigned companies the required mechanic personnel, tools, and equipment. Consolidated maintenance may be provided in three ways, depending on the conditions—

- (1) Grouping all company maintenance personnel into one centralized area or pool.
- (2) Drawing only the mechanics required to accomplish those consolidated maintenance activities under battalion supervision.
- (3) Detailing company mechanics to the battalion maintenance service and rotating them on a day-to-day shift basis.

c. Maintenance Records. When semitrailers are employed in relay operations, they are away from the parent unit much of the time and individual units cannot retain maintenance records and vehicle jacket files for semitrailers employed throughout the system. The jacket file may be maintained at the central accounting office, and all other necessary papers accompany the semitrailer. In such an operation, DD Form 314 (Preventive Maintenance Schedule and Record) (TM 38-660-2) is used in lieu of DA Form 460 (Preventive Maintenance Roster). DD Form 317 (Preventive Maintenance Service Due) may be attached to the semitrailer each time scheduled inspection and service is performed as a reminder to other units of the date of forthcoming services. If it is impractical to use the sticker, a watertight compartment may be built in the semitrailer to hold necessary papers or a maintenance schedule board may be stenciled on the tarp box for recording scheduled maintenance services.

Section VII. PERSONNEL MOVES

95. General

Troop moves may create a substantial demand for motor transportation. Generally, such moves will be made from entrucking points adjacent to troop staging or training areas. When personnel are moved long

distances, coordination must be effected to select and schedule stopover points for messing and relief of the troops en route.

96. Techniques Employed

A discussion of the various techniques employed in planning and executing personnel moves, including methods of movement, entrucking and detrucking procedures, loading of individual equipment, and command policies, is contained in FM 25-10.

CHAPTER 6

HIGHWAY REGULATION

97. General

a. Highway regulation is the planning, scheduling routing, and directing of the actual use of the highways by vehicles, personnel afoot (including troops, refugees, and others), and animals, so as to meet military operational requirements.

b. For the purpose of coordinating and regulating the movement of vehicles and other traffic over highways, an operating agency known as the highway traffic headquarters will be organized within the headquarters of the logistical command, field army, corps, division, and other major commands having area jurisdiction. All matters pertaining to highway regulation will be centralized in this highway traffic headquarters.

c. The highway traffic headquarters is established under control of the assistant chief of staff, G4, or the director of services in a director-type staff. The staff transportation officer of the command operates and supervises the highway traffic headquarters.

98. Staff Responsibilities

Highway regulation depends upon information, recommendations, and services from other agencies. The overall plan for highway regulation is formulated by the traffic headquarters and coordinated with general and special staff agencies as shown in figure 10. Communication should be established and maintained with the rear area security control center (RASCC) of the field army and with the rear area security element of the administrative support operations center (ADSOC) of the logistical command. The general staff or appropriate directorates inform the commander and recommend action concerning matters pertaining to personnel, intelligence, tactical and supply plans, and civil affairs.

Figure 10. Highway regulation.
(Located in back of manual)

99. Highway Traffic Headquarters

a. *Mission.* The mission of the highway traffic headquarters is to provide efficient highway regulation.

b. Organization. Highway traffic headquarters will be established at division and higher headquarters. A type highway traffic headquarters is generally organized as shown in figure 11. Since personnel requirements for a highway traffic headquarters generally exceed the capabilities of the transportation staff section, personnel may be drawn from TOE 55-500 or traffic teams may be activated to perform this function. The highway traffic officer, a Transportation Corps officer, is responsible for the actual operation of the traffic headquarters and direct supervision of its personnel. Transportation Corps personnel within this headquarters perform highway regulation functions as directed. Military police personnel are assigned to the traffic headquarters as required. The representatives designated by the G5, the engineer officer, the ordnance officer, and the signal officer are not normally assigned to the traffic headquarters but will be available when required. They coordinate matters that are the primary responsibility of the staff office they represent.

c. Functions. Planning, routing, scheduling, and directing traffic over the highway are specific functions of the highway traffic headquarters. These functions will be discussed in detail in paragraphs 101 through 104.

d. Operations. Operational requirements of a traffic headquarters vary within commands. The traffic headquarters performs the following operations:

- (1) Establishes and disseminates priorities for highway movement in accordance with the commander's instructions.
- (2) Receives, records, and disseminates, as required, information from other traffic headquarters concerning highway movements into its area of jurisdiction.
- (3) Receives requests (proposed itineraries) for highway routings and scheduling of movements over regulated routes from units within the area of jurisdiction.
- (4) Consolidates itineraries and road movement tables and schedules highway movements as necessary within the area.
- (5) Coordinates movements terminating outside the area of jurisdiction with other traffic headquarters.
- (6) Maintains a situation map of the highway net and keeps posted up-to-minute data on obstructions, detours, defiles, capacities, and surface conditions.
- (7) Changes routes, schedules, or priorities as the situation dictates and notifies unit or convoy commanders through command channels when possible or through highway regulation points or traffic control posts.
- (8) Coordinates with the theater army civil affairs command through the director of civil affairs.

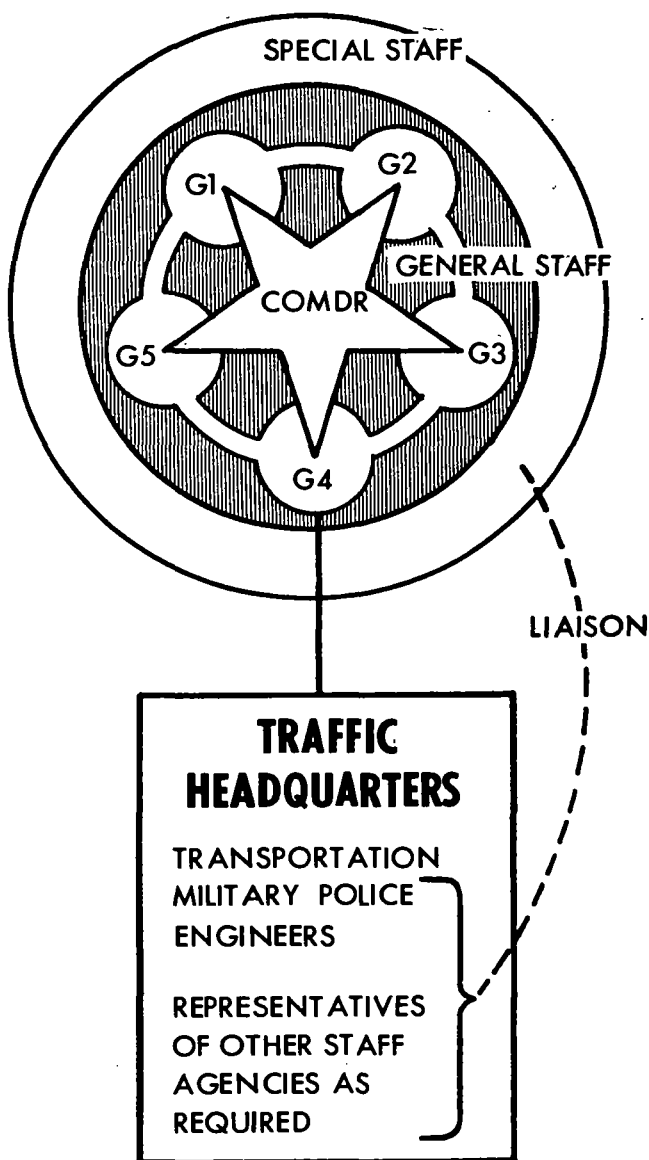


Figure 11. Type highway traffic headquarters.

e. Liaison. Since the traffic headquarters is a staff agency, its authority is in the name of the commander. Coordination between traffic headquarters parallels command channels generally, but direct communication between adjacent traffic headquarters is authorized. Each traffic headquarters respects the authority of others in obtaining approval for the routing of traffic through another area.

100. Highway Regulation Points and Highway Regulation Point Patrols

Highway regulation points and highway regulation points patrols are authorized under TOE 55-500. They assist traffic headquarters in exercising responsibility for regulating highway transportation.

a. Highway regulation points are located at intervals along the route(s) so that progress of vehicles may be followed and movement schedules adjusted as required. Highway regulation points may be advantageously located at truck terminals, transfer points, crossroads, or key routes leading to or from port and depot complexes. Highway regulation points should provide off-road parking space for convoys so that departures of lower priority convoys may be regulated to allow higher priority convoys to pass. Dispersion is of particular importance, and when possible off-road parking should provide concealment from aerial observation. Highway regulation points perform the following major functions as required:

- (1) Report on convoys and other elements arriving at and clearing the point so that progress may be recorded.
- (2) Report on current highway conditions and changes as they occur.
- (3) Adjust the rate of advance of units and organizations using the highway by regulating departures, speeds, gaps, and other factors.
- (4) Transmit orders and/or information from higher headquarters to passing units or organizations.
- (5) Receive, correlate, and disseminate traffic and operational information.
- (6) Make diversions and effect changes in priorities of traffic as ordered.
- (7) Receive and pass on to higher headquarters all requests for clearance, and check on clearances of passing units.
- (8) Receive clearances for units entering the highway net and transmit this information to the unit concerned.

b. Highway regulation point patrols monitor and supervise the operation of highway regulation points and assist in implementing the overall highway regulation plan. Each patrol has the capability of providing personnel to monitor and supervise the operations of up to six highway regulation points located along a road net not to exceed 120 miles in length.

c. Highway regulation point teams and patrols are normally attached to motor transport units for administration and operate under the control of the traffic headquarters.

101. Planning

Planning must start well in advance of actual operations. Planning requirements vary with the size of the command; the highway net; the logistical situation; and the mission, composition, and disposition of tactical units. Planning must be fully coordinated with other staff agencies and between all echelons of commands concerned to insure the effectiveness of the overall highway regulation plan.

a. Planning Factors. Requirements for highway regulation planning specifically involve—

- (1) The assigned mission, which may be an extension of the tactical mission.
- (2) Reconnaissance, which will include the collection, collation, and evaluation of information on the physical capabilities and limitations of routes and facilities, traffic densities and flow, signal communications, and traffic control measures and an analysis of such information with recommendations as necessary.
- (3) An estimate of the situation which will reflect current transportation intelligence; operational plans of the command; quantity and type of traffic; origin, destination, and date of movement; policies, priorities, and restrictions imposed by higher headquarters; location of installations and their road nets and traffic flow.
- (4) Preparation of the highway regulation plan, based on the preliminary data in (1) through (3) above.

b. Reconnaissance.

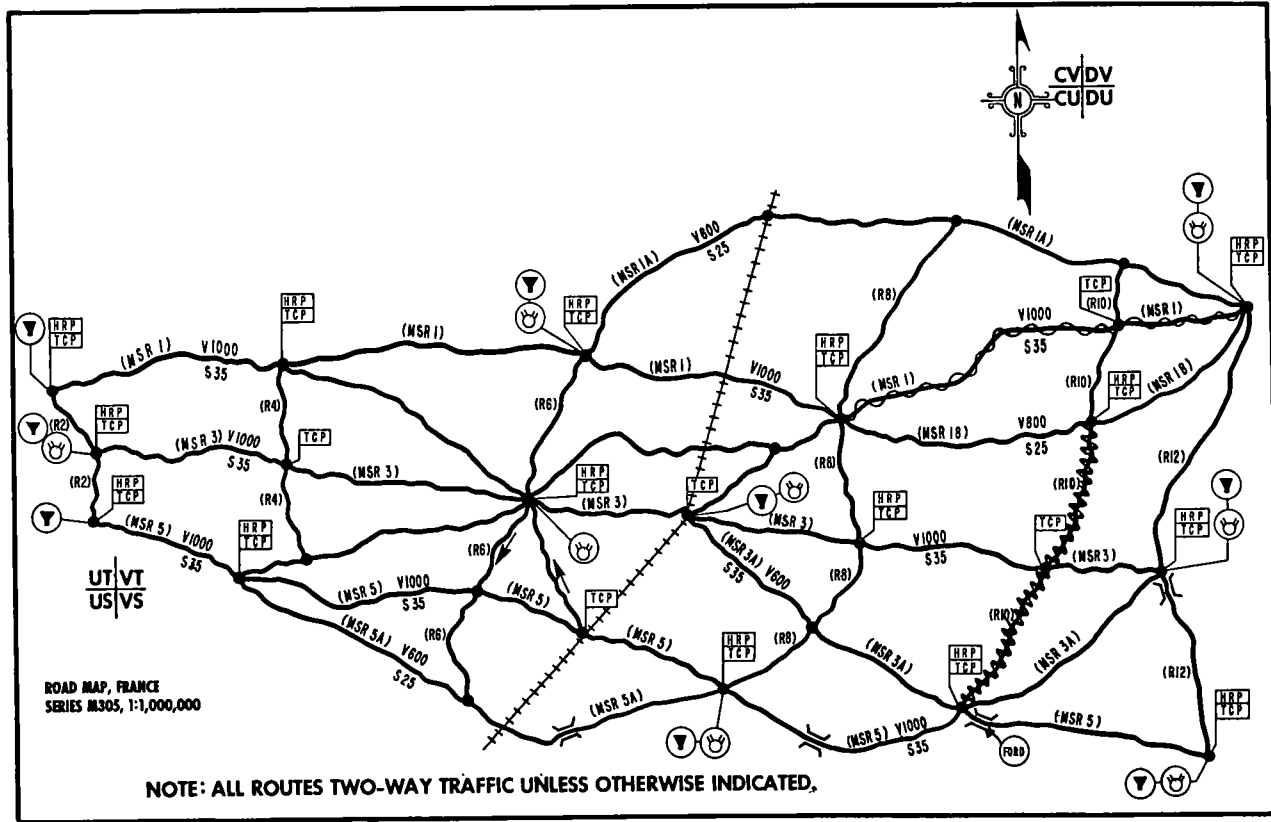
- (1) Reconnaissance will be as thorough as the situation and the time permit. Preceding ground reconnaissance, preliminary information concerning the highway network is generally obtained from maps, aerial photographs, local traffic authorities, intelligence reports, and transportation intelligence studies. Ground reconnaissance parties may be composed of military police, engineer, or transportation personnel, or a combination thereof. Ground reconnaissance may be supplemented by aerial reconnaissance when the situation permits.
- (2) Reconnaissance parties are assigned specific missions for the collection of information. They will not generally collect data available from other sources unless it is necessary to secure information and/or current status reports on this information. Units responsible for or employed in highway regulation should be prepared to assist in or accomplish the necessary reconnaissance missions in the absence of military police or engineers.
- (3) Detailed information on engineer and military police reconnaissance reports and highway capability estimates is con-

tained in FM 5-36, FM 19-25, and FM 55-54. The reconnaissance information most commonly required is listed below.

- (a) General route information, to include the highway capability; for example, surface or pavement type, alignment, surface and shoulder width, location and characteristics of bypasses or detours around limiting physical features and potential hazards, and description of the highway network distances and driving times.
- (b) Traffic information to include traffic density and volume anticipated by vehicle type; variations in flow of traffic over sections of routes during particular periods of time; and location of sensitive points of light traffic volume, for example, potential bottlenecks, crossroad interference, intersections requiring control, railroad crossings requiring guards, and the need for patrols.
- (c) Terminals and other facilities to include location and characteristics of supply points, depots, service stations, turn-arounds, off-road halting facilities, bivouac areas, and evacuation and hospital facilities. Consideration should be given to access from major routes and capabilities for receiving, loading, and unloading motor transport equipment.
- (d) Recommendations and conclusions on the general estimate of engineer work needed, traffic circulation, possible routings, personnel requirements for traffic control and highway regulation purposes, and summary of findings.

c. Highway Regulation Plan.

- (1) The highway regulation plan is approved by the commander. Details of the plan depend on the level of command and the regulation and control necessary in carrying out the responsibility of the command. Upon completion of preliminary planning, the highway regulation plan will contain, but not be limited to, the information in (a) through (k) below.
 - (a) Traffic circulation plan, including road net and direction of movement, classification of routes, bridge capacities, tunnels, and other route restrictions. A traffic circulation map overlay (FM 55-15) is shown in figure 12 and a route classification overlay in figure 13. (See FM 21-30, FM 30-5, and pertinent STANAG agreements for explanation of signs and symbols used.)
 - (b) Priorities of movement for vehicles and convoys.
 - (c) Location of depots, ports, and terminals.
 - (d) Communications system.
 - (e) Speed, safety, use of lights, security, and other pertinent regulations.



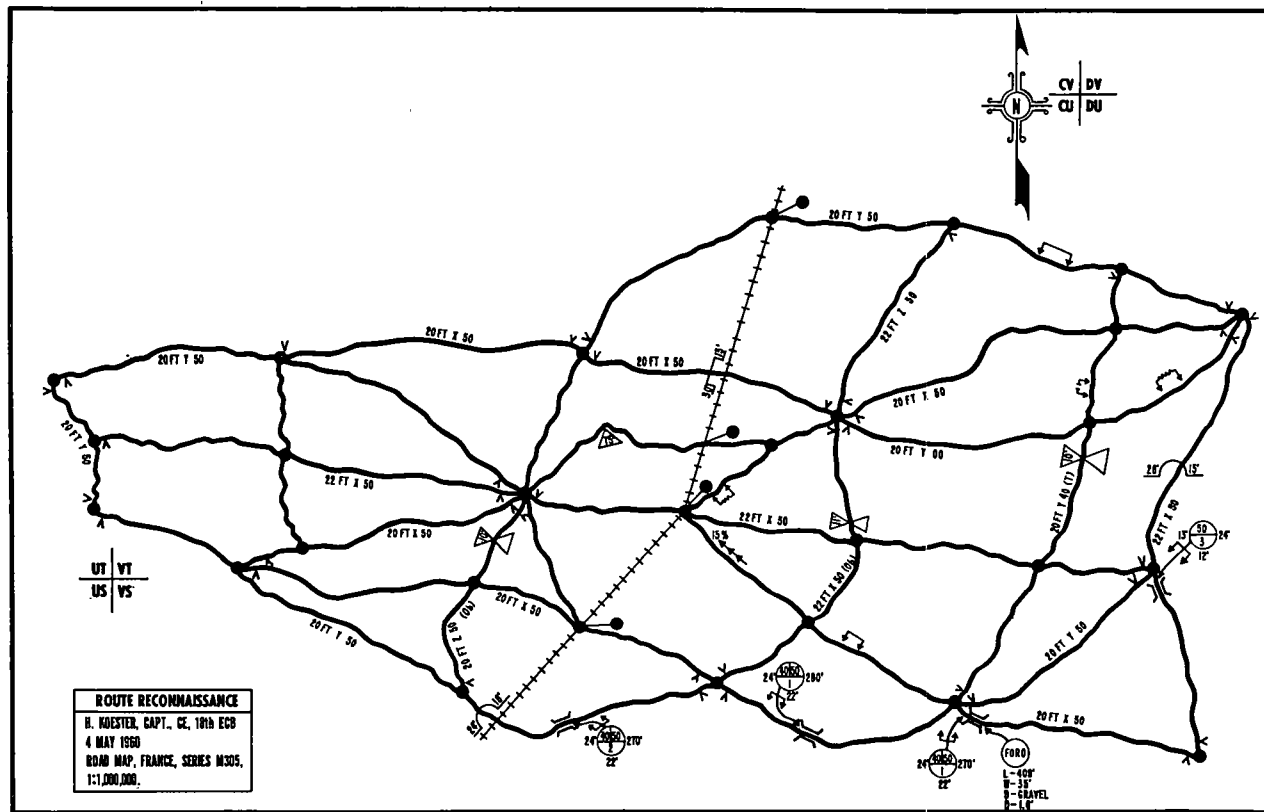


Figure 13. Route classification overlay.

- (f) Location of highway regulation points, traffic control posts, and military police motor patrols.
 - (g) Reporting procedures.
 - (h) Makeup of march serials and convoys.
 - (i) Methods of scheduling and reporting the progress of convoys and other movements.
 - (j) Regulations concerning convoy schedules and their approval and arrangements with civil authorities (when applicable) for military vehicular movements.
 - (k) Procedures for highway movements through commands of the field army, communications zone, and allied nations.
- (2) The objective of the highway regulation plan is to obtain the maximum effective use of the roadways. This objective is attained through routing, scheduling, and directing.

102. Routing

a. Routing is the planning of movements over designated routes. It may be accomplished through balance, separation, and distribution.

- (1) Balance is the matching of vehicle performance characteristics with characteristics and limitations of available routes; for example, routing heavy, cumbersome, and outsized equipment over a route that insures that grades and curves are negotiable and that bridges are adequate in capacity and width.
- (2) Separation is the allocation of nonconflicting routes to concurrent movement; for example, separate lanes provided for slow and fast traffic or one road for forward traffic and another for return traffic.
- (3) Distribution is the spreading of traffic over as many of the available roadways as possible. It reduces traffic conflict and prevents deterioration of roadways resulting from constant use by heavy traffic.

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

- (1) Route all traffic from its origin via predetermined intermediate locations to destination.
- (2) Assign highest priority traffic to routes that provide the shortest time-distance.
- (3) Make use of as many available routes as possible to insure efficient use of the highway net, to effect dispersion of vehicles, and to decrease the time required to complete the movement through the area.
- (4) When assigning vehicles to routes, consider the capabilities of the roads and bridges to sustain operations (balancing vehicle and road characteristics).

- (5) 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.

103. Scheduling

a. Scheduling is the time apportionment of roadways used for road movements. Scheduling is necessary in order to—

- (1) Provide time coordination of the movement of columns and vehicles along routes and at origins, destinations, and intermediate highway regulation points in accordance with administrative and tactical needs.
- (2) Provide for uninterrupted movement of traffic by minimizing friction at intersections resulting from lack of adequate facilities for simultaneous accommodations.
- (3) Provide for movement of traffic in accordance with priorities by prescribing schedules that reserve specific facilities for designated movements.
- (4) Minimize delays, conflicts, and congestion by insuring that the traffic flow never exceeds the capacity of the worst bottleneck (critical point) to be encountered and by spreading peak traffic flow over longer periods of time.
- (5) Provide detailed regulation of special or high-priority individual movements.
- (6) Obtain secrecy and passive protection by prescribing movements during darkness.
- (7) Keep traffic within road capabilities and permit required maintenance of the highway facility.
- (8) Keep all convoys under constant control so that at any time they can be rerouted, diverted, put to emergency use, or held to permit passage of priority movements.
- (9) In scheduling several units, give priority to the units moving to the more distant positions.

b. Road movements may be scheduled by the following methods:

- (1) *Infiltration.* An infiltration schedule is a vehicular dispatch rate assigned to a unit for use during a specific period. Vehicles or small groups of vehicles proceed independently to their destinations over a prescribed route. By assigning appropriate dispatch rates to different units using the same route, average traffic flow, particularly at critical points, 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.* A location schedule apportions time to different movements at a location such as a start point (SP), a city, an intersection, or other traffic bottleneck. This schedule minimizes congestion at a critical point and prevents clogging of the traffic stream. It may be applied by assigning specific times for movement from or at a given location; for example, northbound movements proceed through a defile every even hour and southbound movements, every odd hour.
- (3) *Column.* The column schedule (or road movement table) designates the arrival and clearance times for individual movements at specific points along a prescribed route of march. This schedule is used for the movement of each unit and is an aid to the unit commander in exercising organizational control. Movement instructions often take the form of road movement tables approved by the appropriate traffic headquarters.
- (4) *Route.* The route schedule is used for given routes to apportion time to different movements proceeding along or intersecting the route. Certain routes can be designated dispatch routes, and a road movement graph is prepared for each. The routes selected may be reserved routes, main supply routes, routes which traffic analysis indicates will carry the greatest volume of traffic, or routes selected on the basis of a need for coordination. For example, in planning for a special operation, the routes described in all road movements tables submitted for approval for movement on a given day may be plotted on one overlay. The composite route(s) controlling the greatest number of convoys should then be selected as the dispatch route(s). Since road movement coordination by this method is complex, the number of routes must be kept to a minimum consistent with the control required—usually three or four routes per traffic headquarters. This method graphically portrays the progress of each convoy along the route. The effect of an adjustment in the schedule of any convoy, including restrictions and changes in rates of march, is readily apparent throughout the route. However, the route schedule is limited in scope, and there is no control over movements to and from the dispatch route.
- (5) *System.* The system schedule is a method of coordination of almost unlimited scope. Points of likely conflict, such as intersections and defiles, are selected and the time allotted for each convoy passing through the point is recorded either in a series of tables or on a critical points graph (FM 25-10). Essentially it is an interrelated collection of location schedules treating the allocation of time to each convoy passing that point as a restriction to all other convoys. Sufficient points must be selected to

insure the required degree of control. The disadvantage in this method lies in the inability to graphically portray movement between points. An adjustment in a schedule must therefore be computed for every points through which the convoy passes before any resultant conflict becomes apparent. Although it is a good visual aid, the critical points graph is only a partial answer since the rate of march is not represented by the time blocks which record the time allotted to each convoy at the various points. The critical points table has a distinct advantage in that the schedules at each location may be extracted, easily reproduced, and furnished to traffic control posts or highway regulating points at that location to facilitate the control and reporting of the passage of convoys. The complexity of coordinating road movements by the system schedule method increases as the number of convoys and critical points increase. To minimize the creation of resultant conflicts when adjustments are made, the most critical point should be the first point at which to resolve conflicts. When all adjusted schedules are free of conflict at this point, they are less likely to conflict when compared at the next most critical points in sequence.

c. Listed below are some principles which can be used as a guide in scheduling highway movements.

- (1) Intraarea movements will be scheduled and movement numbers assigned to the unit by the traffic headquarters of the area in which the movement takes place.
- (2) Interarea movements will be coordinated between areas concerned, with the assistance of the next higher echelon if necessary. The traffic headquarters of the area where the movement originates will assign the movement number. Where interarea movements conflict, the commanders concerned (through the appropriate general staff section) will be advised and information requested to determine the priority of movements.
- (3) A round trip movement scheduled for completion in less than 24 hours will be treated as a single movement. When a round trip movement requires more than 24 hours to complete, the return trip will be treated as a separate movement requiring a new movement number.
- (4) Movements in one direction only, regardless of the number of days involved, will be treated as a single movement, retaining the same movement number to destination.
- (5) March units within a convoy will normally move under the same movement number.
- (6) Promulgated schedules and movement numbers will be furnished the provost marshal. The provost marshall will then

provide the necessary control of movements within his capabilities.

d. 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 is likely to require additional adjustments. If the plan is extensive, it will involve numerous calculations and tend to lose flexibility; if limited, the necessary control may be lacking. A balance must be found that will provide the degree of control required by the commander while permitting all possible flexibility and responsiveness to change.

- (1) The number of scheduled routes or critical points must be kept to a minimum. In fact, the heavier the traffic, the fewer controlled points there should be. More reliance must be placed on standing operating procedures and organizational control. Proper selection of controlled points will give adequate control throughout. Application of a prescribed rate of march will fix the appropriate time at any point along the route.
- (2) Movement instructions, once published, should be adjusted by an additional instruction to add or subtract the required amount of time throughout the schedule. This usually makes republishing of road movement tables unnecessary.

e. If a requirement exists that movements may not start until a given hour, the time-distances need be computed only from the start points to the major controlling critical point. The units may then be given priority on the basis of their nearness to the scheduled point. If a requirement exists that units must complete movement by a given hour, the time-distance must be computed back from destination to the scheduled critical point. The units may then be given priority on the basis of their distance from that point to their destination. The last unit will clear the critical point at the hour designated for completing the movement less its time-distance from the critical point to the release point.

f. The relationships of rate, time, and distance (FM 25-10) are fundamental to scheduling. The objective is to describe a proposed movement in such a manner that it can be recorded and readily compared with all other movements proposed for the same time to insure that columns are not scheduled to conflict.

- (1) To describe and record the proposed movements, some form of road movement table is necessary. The amount of information required depends on the degree of supervision of organizational control desired. A form similar to DD Form 1265 (Request for Convoy Clearance) may be used to obtain information to check the adequacy of organizational control planning and insure that all requirements for support of the movement have been ar-

ranged for. The minimum information required is an identification of the movement and a statement of time length, route, starting time, rate of march, and significant planned exceptions to the rate of march.

- (2) Each of the methods of scheduling suggests a system somewhat different from the others for recording the allocation of time along a route or at a point. Whether road movement tables, critical point tables and graphs, time sequence overlays, or density/volume flow charts are used will depend on personal preference for visual aids, as well as the characteristics of the highway network and the traffic that uses it. The goal in the use of any of these is to help control the scheduling and to prove the results. The time sequence overlays plot the road space occupied by each convoy on the network at a given time on one overlay. A new overlay is prepared for each successive time at regular intervals. Since accuracy requires a rather large-scale map, the overlays may become difficult to handle. A workable variation of this system is the "war game," where lengths of cord representing the road space occupied by each column in the scale of the map to be used are moved concurrently over a floor map. This system can give a clear understanding of the plan, but it does not provide a permanent record. Moreover considerable time and effort are expended in preparation, and all road movement tables must be computed according to the location-at-the-time rather than the normal time-at-a-location basis; it is consequently not practical to use this system except in preparation for a special operation.
- (3) In the preparation of a large-scale road movement plan, much of the schedule computation becomes repetitious. The systemization of these computations is the best way to simplify what often becomes a complicated task. Some computations can be simplified by the use of tables, as in conversion of kilometers to miles, numbers of vehicles to time length, and distance to time. Another way to simplify coordination of schedules is to standardize as many of the variables as possible. For example, if all wheeled vehicles that are not overweight or oversize can be directed to use the same rate of march on a certain class of road, the greater uniformity will permit closer scheduling and fuller use of the route. Scheduling can then be done by the location or system schedule method with greater assurance that conflicts at points not scheduled will not occur. Convoy composition can be made uniform to some degree by specifying the maximum number of vehicles per march unit, march units per serial, serials per convoy, and gaps between serials, so that an approximately correct conversion can be made directly from

the number of vehicles to time length. These measures also facilitate traffic control. A system to simplify the adding and subtracting of time can be accomplished by converting all times to minutes for computation and reconvertng to hours for application. A conversion table can be prepared for making computations in hours or minutes.

- (4) What is done to systematize the coordination of schedules is dependent upon the complexity of the traffic plan, the experience of the planners and participants, and the resources available. Generally, whatever can be done to simplify procedures and reduce errors should be done. It is most important that a detailed analysis of the procedure to be followed within the traffic headquarters be prepared by the officer in charge. Reducing detailed procedures to writing serves to clarify them, suggests improvements, and provides a guide to all members of the traffic headquarters.

104. Directing

a. *Letters of Instruction, Orders, and Directives.* The effectiveness of a highway traffic plan depends upon wide dissemination of information concerning highway traffic circulation, regulation, and control. Commensurate with security, pertinent information is promulgated through official media to all highway users. This may be accomplished through letters of instruction, orders, and directives issued by higher headquarters. These media may be used to cover broad aims and policies over a considerable period of time, insure coordinated action by the whole command, and outline the establishment of policy and specific action to be taken when so directed.

b. *Standing Operating Procedure.* The administration and control of highway traffic is simplified and uniformity of performance is promoted when a standing operating procedure (SOP) sets forth highway regulation instructions, control measures, and procedures that can be made routine.

- (1) As a guide, matters pertaining to highway regulation which may be included in the SOP are as follows:
 - (a) Rate of march and maximum permissible speed.
 - (b) Frequency and duration of halts.
 - (c) March discipline.
 - (d) Special rules of the road.
 - (e) Methods for handling stragglers and/or disabled vehicles.
 - (f) Procedures for obtaining convoy clearance.
 - (g) Reports and reporting procedures.
 - (h) Intervehicular gaps and leads.
 - (i) Speedometer multipliers.

- (j) Interserial time leads.
 - (k) Control required such as the use of guides, flags, and/or markings.
 - (l) Additional information as required by the extent of operations.
- (2) The SOP facilitates coordination between the traffic headquarters and members of the general and special staff who generate requirements or contribute to highway regulation. The staff procedure follows a pattern similar to the following:
- (a) Based on estimates of the traffic and highway situation, an SOP reflecting directives from higher headquarters is prepared by the highway traffic headquarters with the concurrence of provost marshal, engineer, and interested general and special staff agencies. The SOP is published for the instruction of all concerned. It is revised as changes of an enduring nature require or is supplemented by special instructions for special situations. All such directives are published in the name of the commander.
 - (b) When an agency issues road movement instructions, it should coordinate with the highway traffic headquarters to insure that references to requirements for highway regulation are included. The highway traffic headquarters may remind units to comply with the SOP in submitting road movement tables for approval, advise in what detail the traffic headquarters will prepare the movement plan, and give exceptions to the SOP.

c. Highway Clearance.

- (1) The highway traffic headquarters must exercise highway regulation and establish procedures for all units in the command whether the units are assigned or not. Through these procedures and the utilization of highway intelligence, the traffic headquarters can schedule all highway traffic in accordance with the commander's desires. Before beginning a highway move, units must submit a request for clearance to the highway traffic headquarters within whose area the movement originates. If possible, the movement is scheduled 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 notified immediately and alternate times and routes are arranged.
- (2) DD Form 1265 (Request for Convoy Clearance) (fig. 14) is a dual-purpose document serving as a request and/or an authorization for movement. It is used by the requesting agency desiring to initiate a movement via highway and by the traffic

REQUEST FOR CONVOY CLEARANCE				DATE 16 July 1960	
SECTION I - GENERAL					
1. ORGANIZATION 2066 Trans Co (Lt Trk)		2. STATION Flak Kaserne APO 46		3. CONVOY COMMANDER Capt Gray	
4. PERSONNEL STRENGTH		5. POINT OF ORIGIN		6. DESTINATION	
a. OFFICER 5	b. ENLISTED 102	QM 601 APO 154		QM 79 APO 66	
7. DATE AND TIME		7a. DEPARTURE 200800 Jul 1960	7b. ARRIVAL 201600 Jul 1960	8. RATE OF MARCH 20 MIH	
SECTION II - CONVOY COMPOSITION					
9. NUMBER OF EACH TYPE OF VEHICLE AND DESCRIPTION (Include towed equipment)					
45 ea truck, cargo, 2½-ton, 6x6 5 ea truck, utility, ½-ton, 4x4 1 ea truck, medium wrecker, 5-ton, 6x6					
10. TOTAL NUMBER OF VEHICLES 51	11. NUMBER OF OVERSIZE/ OVER-EIGHT VEHICLES NA	12a. NO. OF SERIALS 3	12b. TIME INTERVAL 5 min	13a. NO. OF MARCH UNITS NA	13b. TIME INTERVAL NA
SECTION III - ROUTE DATA					
14. PROPOSED ROUTING (Indicate US Routes, State Routes, etc)					
N-6, Autobahn, N-58, N-3					
15. ETA AND ETD AT STATE LINES, MAJOR ROAD JUNCTIONS, MAJOR BRIDGES AND TUNNELS, METROPOLITAN AREAS AND OVERNIGHT HALT SITES (Continue on a separate sheet if additional space is required)					
LOCATION	ETA	OATE	ETD	OATE	
Start Point QM 601			0800	20 Jul	
Jct N-6/Autobahn	0946	20 Jul	1002	20 Jul	
Jct Autobahn/N-58	1423	20 Jul	1439	20 Jul	
Jct N-58/N-3	1510	20 Jul	1526	20 Jul	
Release Point QM 79	1600	20 Jul			
SECTION IV - LOGISTICAL DATA					
16. BRIEF GENERAL DESCRIPTION OF CARGO (Brief general description; i. e., organizational impediments, etc.) (Within security limitations)					
QM II and IV					

DD FORM 1 JAN 55 1265

Front

Figure 14. DD Form 1265 (Request for Convoy Clearance).

headquarters to grant clearance and issue instructions for the highway movement. This form is based upon the information supplied by the unit anticipating the movement and is generally prepared by the local transportation office or the transportation office responsible for traffic regulation. The request is then submitted to the appropriate traffic headquarters for clearance; it may be submitted orally, electrically, or in writing, depending on the urgency of the requirement. After receiving

17. ARE EXPLOSIVES TO BE TRANSPORTED? <input type="checkbox"/> YES <input type="checkbox"/> NO (If YES, describe below)						
CLASS	AMOUNT	DESCRIPTION	VEHICLE TO BE USED			
			NO.	TYPE		
NA	NA	NA	NA	NA		
18. STATEMENT WHY EXPLOSIVES CANNOT BE TRANSPORTED COMMERCIALY (Movements involving explosives and/or other dangerous articles are required to comply with all applicable regulations or directives)						
NA						
19. LOGISTICAL SUPPORT REQUIRED AT OVERNIGHT HALT SITES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If YES, complete the following) (Use separate sheet if additional space is required)						
DATE	INSTALLATION	GAE (gals)	OIL (gals)	RATIONE	BILLETS	OTHER
NA	NA	NA	NA	NA	NA	NA
20. REMARKS						
15 MPH through congested areas 1-hour noon lunch halt, vicinity Autobahn cutoff Nr 14 Refuel at QM 79						
21. REQUESTING AGENCY			22. APPROVING AGENCY			
2066 Trans Co (Lt Trk)			7A Traffic Headquarters			
23. REQUESTED BY (Typed name, grade and title)			24. APPROVED BY (Typed name, grade and title)			
J. T. GRAY, Capt, TC, Comdg			WILL WRIGHT, Maj, TC, Traffic Officer			
25. DATE	26. SIGNATURE	27. DATE	28. SIGNATURE			
16 Jul 1960	John Gray	18 Jul 1960	Will Wright			
INSTRUCTIONS: In cases where bona-fide emergencies exist, the information contained on DD Form 1265 and DD Form 1266 may be transmitted to the appropriate headquarters by telephone or electric transmission. In this event, reference will be made to item numbers in the sequence in which they appear on the form. Items which do not apply will be so indicated.						

Back
Figure 14—Continued

ing the request, the traffic headquarters having jurisdiction will, upon approval, issue the necessary clearance (movement) number for the convoy and supply any additional required information. The authorization will go back to the requesting agency through the same channels as the request.

- (3) The provost marshal and engineer will be informed as soon as a requirement for road movement is known so that they may prepare tentative plans for the support of the movement. The

degree of centralized control exercised will depend in large measure on the amount of movement. If little movement is anticipated, organizational control may suffice; if heavy movement is anticipated, the traffic headquarters will be required to initiate movement instructions, perhaps to the extent of preparing the road movement tables for the units. The traffic headquarters should, if possible, contact each unit to discover any special requirements—especially regarding start point time and convoy composition—before preparing the final plan. Some of the movements that are scheduled by the traffic headquarters are: convoys; oversize vehicles and loads; overweight, vehicles and loads; vehicles moving by infiltration; and road movement of troops on foot.

d. Movement Numbers.

- (1) Movement numbers are assigned to assist in identification, regulation, and control. The group numbering system is recommended. To illustrate how this works, let us assume that the number 7A-0642-P1 is assigned to a convoy.
 - (a) 7A designates the headquarters scheduling the movement: Seventh Army.
 - (b) 06 designates the date of the month of issue: the sixth day.
 - (c) 42 designates the number assigned the movement: the forty-second movement scheduled on the sixth day of the month.
 - (d) P1 designates the priority given the movement: first priority.
- (2) The movement number will be marked or displayed on the sides and the front of each vehicle in the convoy. Chalk or other suitable material may be used. Commanders will insure that numbers are removed as soon as the vehicles arrive at destination.

e. Priorities. Priorities should be 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 to the rear and forward-moving loaded vehicles have priority over empty vehicles moving in any direction. Priorities are normally established on the following basis, provided all other factors are equal.

- (1) Priority 1: tactical moves and emergency vehicles.
- (2) Priority 2: class V.
- (3) Priority 3: evacuation and classes I and III.
- (4) Priority 4: administrative troop moves.
- (5) Priority 5: classes II and IV.

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

- (1) If a breakdown of the traffic plan can be anticipated, alternate plans should be prepared to meet the emergency. These plans may involve rerouting, rescheduling, and reassignment of control and regulation personnel.
- (2) Traffic emergencies which cannot be anticipated require immediate solution in the field. Military police, in cooperation with highway regulation personnel, assist column commanders in taking immediate action. Where tactical considerations predominate, the decision is made by the column or unit commander. Military police will effect local emergency routings, giving due consideration to established highway regulation routes and schedules, and report such routings to the traffic headquarters and highway regulation points in the immediate area. Extensive rerouting will be accomplished only on order of the traffic headquarters.
- (3) Reports on emergency traffic situations and on the action taken are transmitted immediately from highway regulation points, traffic control posts, military police motor patrols, and highway regulation point patrols to the traffic headquarters. Progressive adjustments of traffic plans can thus be made. Changes in the plans resulting from an emergency are communicated to highway regulation points, traffic control posts, military police patrols, highway regulation point patrols and other agencies affected as soon as possible so that the plan can be modified locally.

105. En Route Procedure

Procedure to be followed by march units will be that described in FM 25-10 as implemented by orders or SOP emanating from the headquarters.

a. The following march restrictions are the prerogative of the commander and will be developed by the traffic headquarters based on the situation and local requirements:

- (1) Light lines and limit lines.
- (2) Maximum speeds.
- (3) March distances governed by speedometer multiplier.
- (4) Convoy composition.
- (5) Time gaps between march units and serials.
- (6) Halts and halt durations and procedures.
- (7) Instructions for passing columns.

b. Any cancellation or unforeseen delay in movements will be reported immediately to the traffic headquarters through the nearest highway regulation point, traffic control post, military police patrol, or highway regulation point patrol.

c. Deviations from prescribed routes and schedules will not be made without specific authority from traffic headquarters or unless emergency conditions arise.

d. Route damage, obstructions, or any information inconsistent with that shown on maps of routes will be reported to the nearest highway regulation point, traffic control post, military police patrol, or highway regulation point patrol to be reported to traffic headquarters.

106. Communications

Supervision and control over movements must be coordinated at all times and the transportation officer, highway traffic headquarters, highway regulation points, traffic control posts, military police patrols, highway regulation point patrols, and column commanders must be kept abreast of traffic conditions and changes affecting the operation. An adequate system of communications must connect the traffic headquarters with highway regulation points, traffic control posts, and highway regulation point patrols. It is imperative that highway regulation points insure rapid transmission of messages. The use of army aircraft should not be overlooked as an additional means of control and communications, especially in emergency situations.

CHAPTER 7

OPERATIONAL DATA

107. Planning Factors

Advance planning factors contained in FM 101-10 are for long-range or general planning; however, there is a vast difference between advance broad planning and precise operational planning. There is no substitute for actual experience data. Motor transport officers at all levels should provide for the collection and evaluation of operational data. At the lowest operating levels, data may be collected informally and maintained in pocket-size notebooks. At higher levels, a reporting system should be developed and procedures established for analysis of operational reports and records. As soon as experience factors are developed, they should supplant the broad factors in FM 101-10. Experience factors should be incorporated in historical reports for future use and for assistance in the revision of advance planning factors. Technical data and operational reports and analyses should be furnished by the appropriate transportation intelligence staff agency.

a. Planning factors should be developed for each type of vehicle or motor transport unit as follows:

- (1) Trips per truck.
- (2) Availability of trucks.
- (3) Intensity of use.
- (4) Loading and unloading time.
- (5) Mileage or other movement factors.
- (6) Total time consumed.
- (7) Weight of load.
- (8) Size of load.
- (9) Ton-miles.
- (10) Passenger-miles.
- (11) Empty miles.
- (12) Idle time.
- (13) Maintenance time.
- (14) Maintenance failures.
- (15) Fuel and lubricants consumed.

(16) Life of component parts and tires.

(17) Accidents.

b. Factors should be developed regarding the capability of highways. The following items should be considered as affecting highway capability:

(1) Enemy activity.

(2) Weather.

(3) Physical characteristics of the roadway.

(4) Characteristics of grades and curves.

(5) Bridges, fords, ferries, and other factors that might limit width, height, or weight capacity.

(6) Maintenance of roads and bridges.

(7) Vehicle characteristics.

(8) Civilian traffic requirements.

(9) Other military traffic including administrative and casual vehicles and troop movements.

(10) Density of and possible interference from movements of refugees and displaced persons.

c. The motor transport service may be directed to make special studies concerning the transportation necessary for certain logistical support operations. Planning factors should be based on actual experience. Where data are not available for specific projects, advance planning factors may be used. Generally these factors are a combination of advance and operational planning data. In operational planning it may be necessary to plan for an increase in the capability of the motor transport service. Capability may be increased in the following ways:

(1) Increasing the quantity of cargo loaded onto each vehicle.

(2) Increasing the number of hours vehicles are available for operation each day.

(3) Decreasing the time required for the vehicle to travel between origin and destination.

(4) Decreasing the time required to load and unload vehicles.

(5) Decreasing vehicle deadline time.

108. Report System

a. Significant data may be obtained from reports on any transportation operation. However, reports covering a series of similar transportation operations will provide more reliable and valid data. Personnel who actually accomplish transportation operations should provide the basic information upon which reports will be made. These reports will be collated, evaluated, and interpreted to provide planning data.

b. Reports for the motor transport service are kept at company and battalion level. Reports may be consolidated at appropriate headquarters in the chain of command and at the transportation staff section. However, reports containing consolidations of basic data rather than of averages should be transmitted to the transportation staff section charged with the ultimate evaluation, interpretation, and presentation of data.

c. The motor transport service uses three basic daily reports: the vehicle and equipment operational record; the company daily operations report; and the daily consolidated operations report. Essential information pertaining to maintenance, fuel, accidents, and similar matters will be reported on a weekly or monthly basis. Reports should be adapted to the local situation as directed by the commander. The basic forms are designed for gathering statistical and informational data of a general nature to facilitate evaluation and planning. For specific information or factors not normal to everyday operations, commanders must adjust forms to meet the needs of the units concerned.

- (1) *Vehicle and Equipment Operational Record*. DD Form 110 (Vehicle and Equipment Operational Record) is the basis for all road movement details. It is used for reporting load, distance, and time involved for each vehicle in each move. It is initially prepared by the dispatcher and is maintained by the driver. It is commonly referred to as a trip ticket, and in normal operations dispatch personnel check it for completeness and accuracy. (See TM 9-2810, TM 21-305, and FM 25-10.)
- (2) *Company Daily Operations Report*. Companies extract and consolidate pertinent information from vehicle and equipment operational records to prepare a company daily operations report. DA Form 1660-R (Consolidated Operations Report) may be used for this purpose.
- (3) *Consolidated Operations Report*. DA Form 1660-R (fig. 15) is used for compiling data from the vehicle and equipment operational record and the company daily operations report. The battalion, the motor transport group, and the motor transport command use DA Form 1660-R for analyzing performances of lower units and planning future operations. This report permits computation of average unit performances and comparison of unit performances, but care must be used in evaluating this information since missions and operating conditions play a major part in unit performances.
- (4) *Additional Data*. Additional data as requested may be consolidated and used to assist in evaluation and plans. Consumption of fuel and lubricants is an important gage of unit

CONSOLIDATED OPERATIONS REPORT																						
HEADQUARTERS		ASSIGNED TO												DATE/TIME								
154th Trans Bn (2nd)		40th Trans Group (2nd)												211800 July 1960								
LOCATION		LOCATION												TYPE OF DUTY								
Sandhofen		Pirmasens												General support								
UNIT AND TYPE	TASK VEHICLE DATA (Totals)							OPERATIONAL SUMMARY (Average per Vehicle)							PERSONNEL HAULS (Run Average) (Totals)				CARGO HAULS (Run Average) (Totals)			
	ASSIGNED	DEADLINED IN UNIT	DEADLINED IN SHOPS	OPERATIONAL	ON DISPATCH	AVAILABLE FOR DISPATCH*	RUNS (One-Way Trips)	OPERATIONAL HOURS	HOURS AT TERMINALS	HOURS EN ROUTE	MILES	RATE OF MOVEMENT*	MILES PER PASSENGER RUN	PASSENGERS PER PASSENGER RUN	TOTAL PASSENGERS	PASSENGER MILES*	MILES PER CARGO RUN	TONS PER CARGO RUN	TOTAL TONS	TON-MILES*		
2066 Trans Co (1st Bn)	60	4	4	52	55	2	5	10	2	8	130	16	X	X	X	X	13	4	20	240		
2230 Trans Co (1st Bn)	60	6	4	50	35	15	3	10	4	6	90	15	15	16	44	720	X	X	X	X		
646 Trans Co (2nd Bn)	60	5	5	50	45	5	4	12	2	10	140	14	X	X	X	X	17.5	8	32	560		
OPERATIONAL TOTALS	180	15	13	152	135	22	12	32	8	24	360	45	15	16	48	720	30.5	12	62	820		
UNIT AVERAGE	60	5	4	50	45	7	4	11	3	8	120	15	15	16	48	720	15.3	6	26	410		
TYPED NAME AND GRADE OF COMMANDING OFFICER												SIGNATURE OF COMMANDING OFFICER										
R. A. Bedford, Lt Col, TC												R. A. Bedford										
*These columns denote derived figures; all other columns are reported figures.																						
DA FORM 1660-R, 1 MAR 56																						

Figure 15. DA Form 1660-R (Consolidated Operations Report).

economy, and deadlines are measures of unit efficiency. Both may indicate need for corrective action or change of plans. Other data may be required to control critical supplies or provide specific planning figures.

CHAPTER 8

EMPLOYMENT OF LOCAL CIVILIANS

109. General

Wherever military operations are conducted, consideration should be given to the use of the local civilian manpower resources. Policies for the procurement and use of civilian employees will be established by theater headquarters within the provision of FM 27-10; United States national policy; the framework of treaties, agreements, or international law; and current security regulations.

a. The extent of the use of local civilians depends on conditions in the particular area. If the people are sympathetic and willing to support operations, many services may be provided entirely by the local population. If the local government is sympathetic but significant dissident elements exist, use of local personnel must be carefully controlled and strict security precautions enforced. If the local population is not sympathetic, strict limitations must be placed on the use of local civilians and extreme precautions must be instituted. G5 or the director of civil affairs will, after coordination with theater army civil affairs support units, provide information on the availability of labor and the category of skills to be found in the area.

b. There are two general types of local civilian labor: static and mobile. Static employees are employed within or near the area of their residence. Mobile employees are employed on a long-term basis. They are organized into units, with a cadre of military supervisors, and moved from place to place as required.

c. Local civilian labor may include personnel of the following categories: native personnel, refugees, evacuees, and displaced persons.

d. Every effort should be made toward maintaining good relations with and securing the cooperation of the local population. United States personnel of all grades and ranks supervising local civilian personnel should be extensively instructed in personnel management. Supervisory personnel should be specially indoctrinated in the habits, customs, laws, language, religion, and economic and political conditions in the area of operations. The same principles of sound personnel management apply everywhere. Praise and fair treatment elicit essentially the same reaction from a Korean as from a Frenchman. A hypercritical attitude

can be the greatest hindrance to success in the use of civilian employees. American supervisory personnel must consider all methods to find the best one for accomplishing a job. They must take time to explain the work of local civilians and to understand the reasons behind certain methods of operation in order to gain an appreciation of the civilian's accomplishment. If possible, the pattern of work in a locality should not be changed.

110. Advantages

Civilian personnel constitute a labor pool already housed and provided with basic necessities from the local area. Their use reduces the requirement for transporting personnel to the area and providing for their essential needs. Use of local civilian personnel in jobs normally performed by service troops reduces military manpower requirements, thus releasing soldiers for more critical tasks. Employment of civilians within a war-decimated area helps to revive the local economy and stimulate rehabilitation, thereby indirectly assisting military operations.

111. Limitations and Restrictions

a. Differences in language increase training requirements and the need for supervision.

b. Security is a problem, especially if there are subversive elements in the population. Strict adherence to the provisions of pertinent security regulations must be emphasized.

c. Pilferage of military goods is a constant problem. Every precaution must be taken to prevent and overcome it.

d. Legal aspects must be considered in contracting for civilian labor and in the settlement of claims arising from their employment.

e. The attitude of the individual has an important bearing upon the quality and quantity of the work he produces. A person who likes or accepts Americans and knows the reasons for his job will do a better job than one who is working only because he must.

f. Jobs such as driving trucks and servicing equipment must be classed as skilled occupations for which average civilian laborers often cannot be used without special training.

g. The location of the operation must be considered. Normally, civilian drivers cannot be used in combat areas.

h. Mobile civilian personnel should be employed in motor transport units so that they can go where the trucks go. However, static personnel may be employed in companies engaged in local hauling, as at ports, terminals, and depots.

i. In many countries customs and habits of the local civilians affect their employment in United States organizations. For example, religious

holidays and festivals might cause their absence at times not observed as holidays by United States forces.

j. Improvement in local health and hygiene will be necessary in some countries.

112. Methods of Employment

Local civilian personnel may be employed in any of the following ways as authorized by theater policy:

a. Contracting with existing commercial firms to provide certain services.

b. Employing civilians directly by the hour or week, etc.

c. Incorporating local civilian personnel into type B units. Units of the motor transport service may be formed in accordance with appropriate type B columns of tables of organization and equipment. These units use civilian personnel under military supervision. Units are formed and local personnel supervised under the policies of the theater commander.

d. Organizing entire units of local civilians and using them in the same manner as corresponding military service units.

113. Employment in Motor Transport Units

a. The degree to which local civilians can be used in motor transport units depends upon their skill and upon conditions in the area. The motor transport fields in which they may be used include management, driving vehicles, and servicing equipment. Extensive training programs may be required when local civilians lack technical and mechanical knowledge.

b. The greatest use of civilians in motor transport units will be as drivers. However, the use of civilians as drivers depends upon the existence of competent personnel, how receptive the civilians are to training and other requirements, and whether there are enough supervisory personnel competent to train and direct civilians in motor transport operations.

c. Less ability is required of civilians doing manual labor than of driver or maintenance personnel.

d. Because of their language ability and familiarity with local customs, selected local personnel may be used to supervise other local personnel.

114. Compensation

The method of compensation varies: the theater commander normally publishes the approved rates or scales. Payment may be in the accepted

currency of the country, or part or all of it may be in rations, tobacco, fuel, shelter, clothing, medical care, transportation, etc. The method of payment depends upon the availability of and the value attached to each type of payment.

115. Selection and Testing

a. An evaluation of aptitude and attitude is useful in selecting persons who can be trained as drivers. Even when language is a barrier, it is possible to eliminate unqualified and suitable individuals through selection procedures.

b. Personnel to be trained as drivers should be selected by actual performance tests when possible. Manual testing devices should be used when available. No civilian driver should be entrusted with a vehicle or other expensive equipment until he has demonstrated that he is skilled in its use and understands his responsibility for it.

116. Training

Local civilians should be trained as instructors and then employed to train other drivers. Within the limitations imposed by conditions and the ability of personnel, local civilians will be trained in accordance with standard procedures prescribed in TM 21-300.

117. Supervision in Actual Operations

Military personnel will exercise overall supervision over local civilian personnel employed in motor transport operations. In limited areas (terminals, ports, etc.) where close supervision is feasible, local civilian supervisors may be used. In all operations, intermediate supervision, including responsibility for proper care and operation of individual vehicles, may be placed in the hands of competent local civilian personnel.

118. Security

Care must be taken that the use of local civilians does not jeopardize the security of military forces and operations. Security necessitates proper identification of individuals. The theater commander prescribes the type of identification cards or passes to be used and the controls and accounting procedures for issuing them to local civilians. Civilian employees must be closely checked by the responsible screening agency. Normally, this is the responsibility of the area commander and is coordinated with G2, G5, and the provost marshal.

APPENDIX

REFERENCES

FM 5-36	Route Reconnaissance and Classification
FM 7-40	Infantry and Airborne Division Battle Groups
FM 19-25	Military Police Traffic Control
FM 19-30	Physical Security
FM 21-5	Military Training
FM 21-6	Techniques of Military Instruction
FM 21-26	Map Reading
FM 21-30	Military Symbols
FM 21-31	Topographic Symbols
FM 21-40	Small Unit Procedures in Nuclear, Biological, and Chemical Warfare
FM 25-10	Motor Transportation, Operations
FM 27-10	The Law of Land Warfare
FM 30-5	Combat Intelligence
FM 30-10	Terrain Intelligence
FM 30-16	Technical Intelligence (U)
FM 31-15	Operations Against Irregular Forces
FM 31-70	Basic Cold Weather Manual
FM 41-5	Joint Manual of Civil Affairs/Military Govern- ment
FM 41-10	Civil Affairs/Military Government Operations
FM 55-4	Transportation Movements in Theaters of Oper- ations
FM 55-6	Transportation Services in Theaters of Operation
FM 55-8	Transportation Intelligence
FM 55-15	Transportation Corps Reference Data
FM 55-32	Transportation Truck Battalion, Truck and Car Companies
FM 55-54	Highway Capability Estimating Guide
FM 100-10	Field Service Regulations, Administration
FM 100-15	Field Service Regulations, Larger Units
FM 101-5	Staff Officers' Field Manual, Staff Organization and Procedure
FM 101-10	Staff Officers' Field Manual, Organization, Tech- nical, and Logistical Data

TM 5-231	Mapping Functions of the Corps of Engineers
TM 9-2810	Tactical Motor Vehicle Preventive Maintenance, Supply, Inspection, and Training Procedures
TM 21-300	Driver Selection and Training (Wheeled Vehicles)
TM 21-305	Manual for the Wheeled Vehicle Driver
TM 38-660-1	Operation of Transportation Motor Pools and Driver Preventive Maintenance of Administrative Use Vehicles
TM 38-660-2	Maintenance Instructions and Procedures for Administrative Vehicles
AR 55-26	Transportation Movements
AR 58-5	Administrative Motor Vehicle Management
AR 117-5	Military Mapping and Surveying
AR 320-5	Dictionary of United States Army Terms
AR 320-50	Authorized Abbreviations and Brevity Codes
AR 380-5	Safeguarding Defense Information
AR 380-55	Safeguarding Defense Information in Movement of Persons and Things
AR 380-150	Security of Restricted Data
AR 385-55	Prevention of Army Motor Vehicle Accidents
AR 735-31	Accountability for Vehicles in Relay Operations
SR 380-350-2	Captured Enemy Documents (U)
DA Pam 108-1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings
DA Pam 310-series	Military Publications Indexes
DA Pam 690-80	Administration of Foreign Labor During Hostilities
TOE 29-500	Composite Service Organization
TOE 55-11	Headquarters and Headquarters Company, Transportation Motor Transport Command
TOE 55-12	Headquarters and Headquarters Detachment, Transportation Motor Transport Group
TOE 55-16	Headquarters and Headquarters Detachment, Transportation Motor Transport Battalion
TOE 55-17	Transportation Light Truck Company
TOE 55-18	Transportation Medium Truck Company
TOE 55-19	Transportation Car Company, Army, Theater Communications Zone, or Airborne Corps
TOE 55-28	Transportation Heavy Truck Company
TOE 55-500	Transportation Service Organization
DA Form 460	Preventive Maintenance Roster
DD Form 110	Vehicle and Equipment Operational Record
DD Form 314	Preventive Maintenance Schedule and Record

DD Form 317	Preventive Maintenance Service (Sticker—Due Date Next Service)
DD Form 1265	Request for Convoy Clearance
Standard Form 46	United States Government Motor Vehicle Operator's Identification Card
ATP 55-11	Transportation Motor Transport Units
TF 55-1758	Beach and Port Clearance by Highway Transport
FS 55-11	Operation of Truck Terminals

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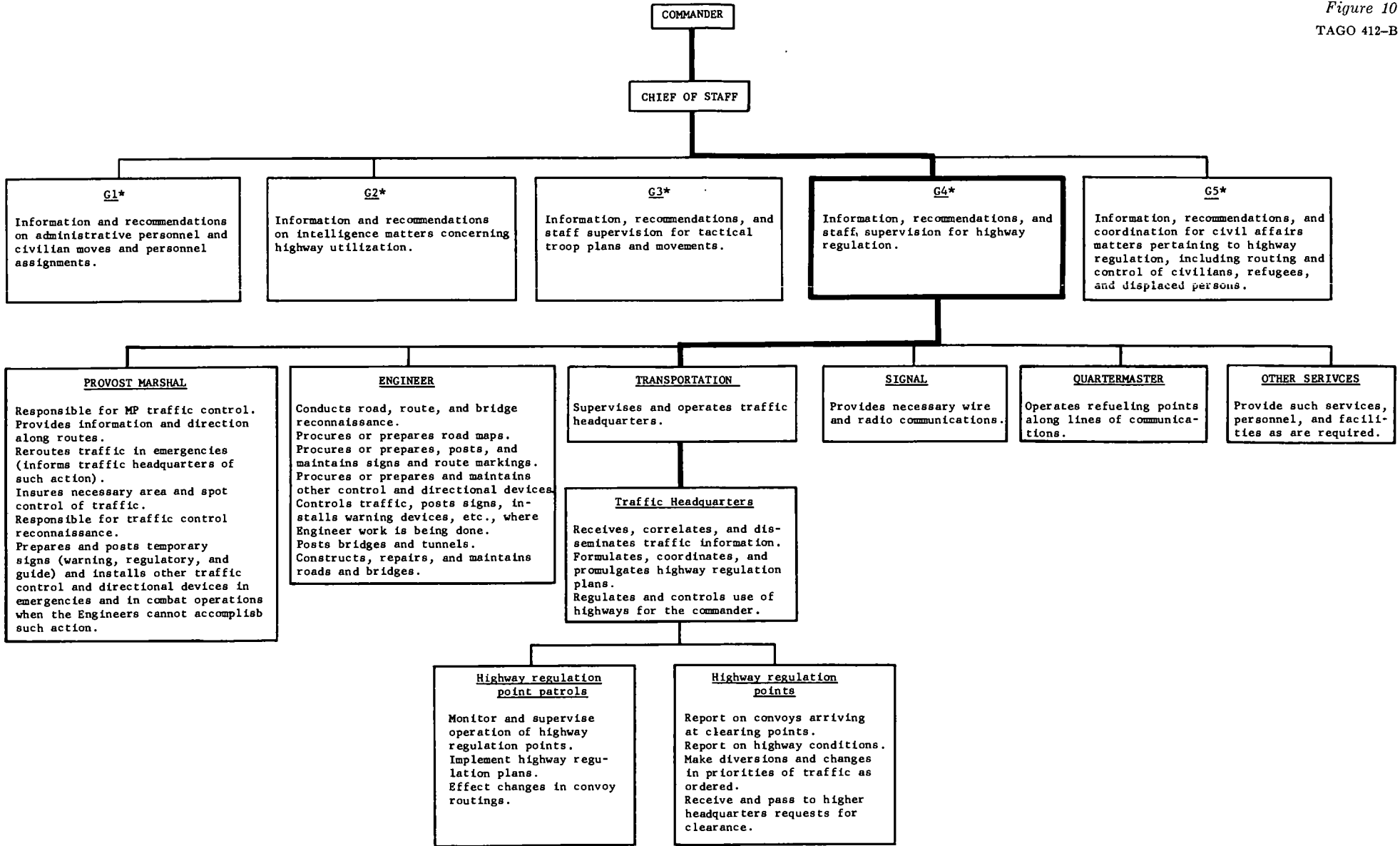
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USAR: Same as Active Army.

For explanation of abbreviations used, see AR 320-50.



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NOTE:
Close liaison must be maintained between the transportation service and concerned general and special staff agencies to reduce necessity for detailed staff supervision.

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