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Special Text, ST 55-30-1, Transportation Intelligence, November 1950

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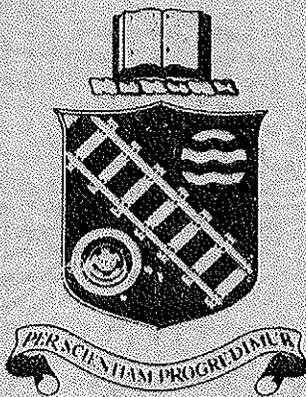
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SPECIAL TEXT

ST 55-30-1

TRANSPORTATION INTELLIGENCE



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THE TRANSPORTATION SCHOOL
Fort Eustis, Virginia

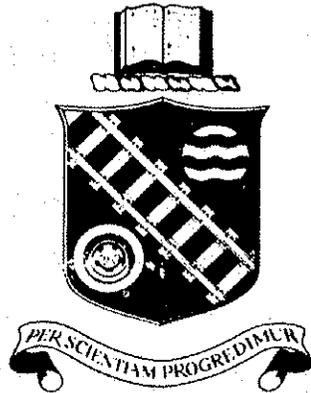
NOVEMBER 1950

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SPECIAL TEXT

TRANSPORTATION INTELLIGENCE



This text is approved for resident and extension course instruction at The Transportation School only. It reflects the current thought of this school and conforms to printed Department of the Army doctrine as closely as possible.

ST 55-30-1

THE TRANSPORTATION SCHOOL
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R E S T R I C T E D
CHAPTER 1

INTRODUCTION

Section I. PURPOSE AND SCOPE

1. PURPOSE

This text is intended to establish procedures for the production of transportation intelligence and to assist Transportation Corps personnel in fulfilling their intelligence functions.

2. SCOPE

This text furnishes basic information concerning the collection and processing of transportation information and the dissemination of the resulting intelligence to using agencies. It describes current practices employed by the Transportation Corps in carrying out its intelligence mission, and basic principles and definitions are included. The types of information which are required to produce transportation intelligence are indicated, and transportation intelligence training, standing operating procedure, and counter-intelligence are discussed. In addition, detailed information requirements for rail, highway, and marine intelligence are given. Since the US Air Force is responsible for air transportation intelligence and the Corps of Engineers for pipeline intelligence, these subjects will not be treated in this text.

Section II. IMPORTANCE OF TRANSPORTATION INTELLIGENCE

3. INTELLIGENCE MISSION OF TRANSPORTATION CORPS

The accomplishment of the intelligence mission of the Transportation Corps is a function of the Chief of Transportation, who is charged with initiating traffic and transportation surveys for the Department of the Army and other governmental agencies. Such surveys determine the transportation capabilities of domestic and foreign transportation systems, as well as the adequacy and availability of their transportation equipment.

4. PURPOSE AND IMPORTANCE OF TRANSPORTATION INTELLIGENCE

a. Transportation intelligence furnishes the Chief of Transportation with the information necessary to determine the capabilities of surface transportation systems throughout the world. The Director of Intelligence of the Department of the Army is concerned with the capabilities of foreign governments to wage war, either as potential enemies or as potential allies. Transportation intelligence assists the Director of Intelligence in the preparation of National Intelligence Surveys, Strategic Intelligence Digests, and Special Studies as required. It aids war planners and operational planners of General and Special Staffs of the Department of the Army in preparing strategic and operational plans and logistical estimates. Finally, the Transportation Corps uses such information in planning and operating transportation systems.

b. Transportation is an all-important link in the chain of military operations. The movement of men and materiel has always been of primary importance to success in battle, but the extent and complexity of modern warfare has caused transportation intelligence to assume an increasingly important role.

c. A complete picture of the transportation system of a country or area is dependent upon information concerning all modes of transportation within that country or area. Full understanding of the movements agency, its scope of control, and its operating system is also vital. Such information should be collected in peacetime and kept current and in as much detail as possible so that, if the military forces of the United States must assume control of a particular transportation system, they could do so immediately and ultimately could superimpose their type of operation upon the indigenous system. Detailed information concerning the characteristics of each transportation mode must include the administrative organization and the system's extent, including locations of all major facilities of each transportation mode, the method of controlling each mode, the role of each mode in the country's economy, and the relationship of the modes to each other. From this information, present capacities can be determined. However, a knowledge of the country's resources which could affect the expansion of each transportation mode is necessary to determine future capabilities.

5. DEFINITIONS

a. Transportation intelligence is evaluated and interpreted information about land transportation facilities of a country or area. Outstanding characteristics and inter-relationships of such facilities are revealed, together with the role of the facilities in the economy of the country or area and their potential role in military operations.

b. Railroad intelligence is evaluated and interpreted information concerning the railroad system of a country or area. Such information includes facilities, equipment, capacities, characteristics, and potentialities, together with the conclusions drawn therefrom.

c. Highway intelligence is evaluated and interpreted information about the highway system of a country or area including facilities, equipment, capacities, characteristics, and potentialities, together with conclusions drawn therefrom.

d. Port, beach, and inland waterway intelligence is evaluated and interpreted information about the ports, beaches, and inland waterways of a country or area including facilities, equipment, capacities, characteristics, and potentialities, together with the conclusions drawn therefrom.

e. Other intelligence definitions. For other intelligence definitions, attention is invited to FM 30-5.

CHAPTER 2

TRANSPORTATION INTELLIGENCE IN THE OFFICE OF THE CHIEF OF TRANSPORTATION

6. PROCUREMENT OF TRANSPORTATION INFORMATION

Although the collection of information for intelligence purposes is a function of the Director of Intelligence, the Transportation Corps has limited authority to collect transportation information incidental to normal operations. Information which is collected by Transportation Corps units or personnel is sent directly to the Military Planning and Intelligence Division in the Office of the Chief of Transportation (OCOFT). To obtain other information which has been collected by agencies of the Director of Intelligence, a representative from the Military Planning and Intelligence Division in OCOFT sits on the Reading Panel in the Office of the Director of Intelligence and reviews all information which is available. Requests are made for copies or excerpts of those items which are of transportation intelligence interest. When this information is received in the Military Planning and Intelligence Division, it is sorted and recorded. That portion which is primarily of railroad interest is sent to the Railway Transportation Service Division where it is processed; that which is primarily of highway interest is sent to the Highway Transportation Service Division for processing; and information which pertains to ports, beaches, and inland waterways is processed within the Military Planning and Intelligence Division itself. The flow of information which is of interest to more than one processing agency is coordinated by the Military Planning and Intelligence Division.

7. PROCESSING TRANSPORTATION INFORMATION

a. Broadly speaking, processing is the means by which information is transformed into intelligence. It involves recording, evaluation, and interpretation. (For methods and techniques employed in the processing of information, see FM 30-5).

b. After information has been processed by the Highway Transportation Service Division or the Railway Transportation Service Division, the resulting intelligence is returned to the Military Planning and Intelligence Division, where it is incorporated in reports and special studies. Transportation intelligence of direct and immediate value to Transportation Corps units is disseminated directly to them through Transportation Corps technical channels. All transportation intelligence which is processed in the Military Planning and Intelligence Division is sent to the Director of Intelligence who disseminates it to other using agencies through Intelligence Division publications. (For means and methods of dissemination, see FM 30-5.) In addition, the Military Planning and Intelligence Division maintains a transportation intelligence library (fig. 1).

8. USE OF TRANSPORTATION INTELLIGENCE

Transportation intelligence developed in peacetime becomes the basis for further production of transportation intelligence within a theater of operations during time of war. Accordingly, the system which produces transportation intelligence must not only meet the needs of strategic staff and higher level operational planners, but also the needs of transportation field units.

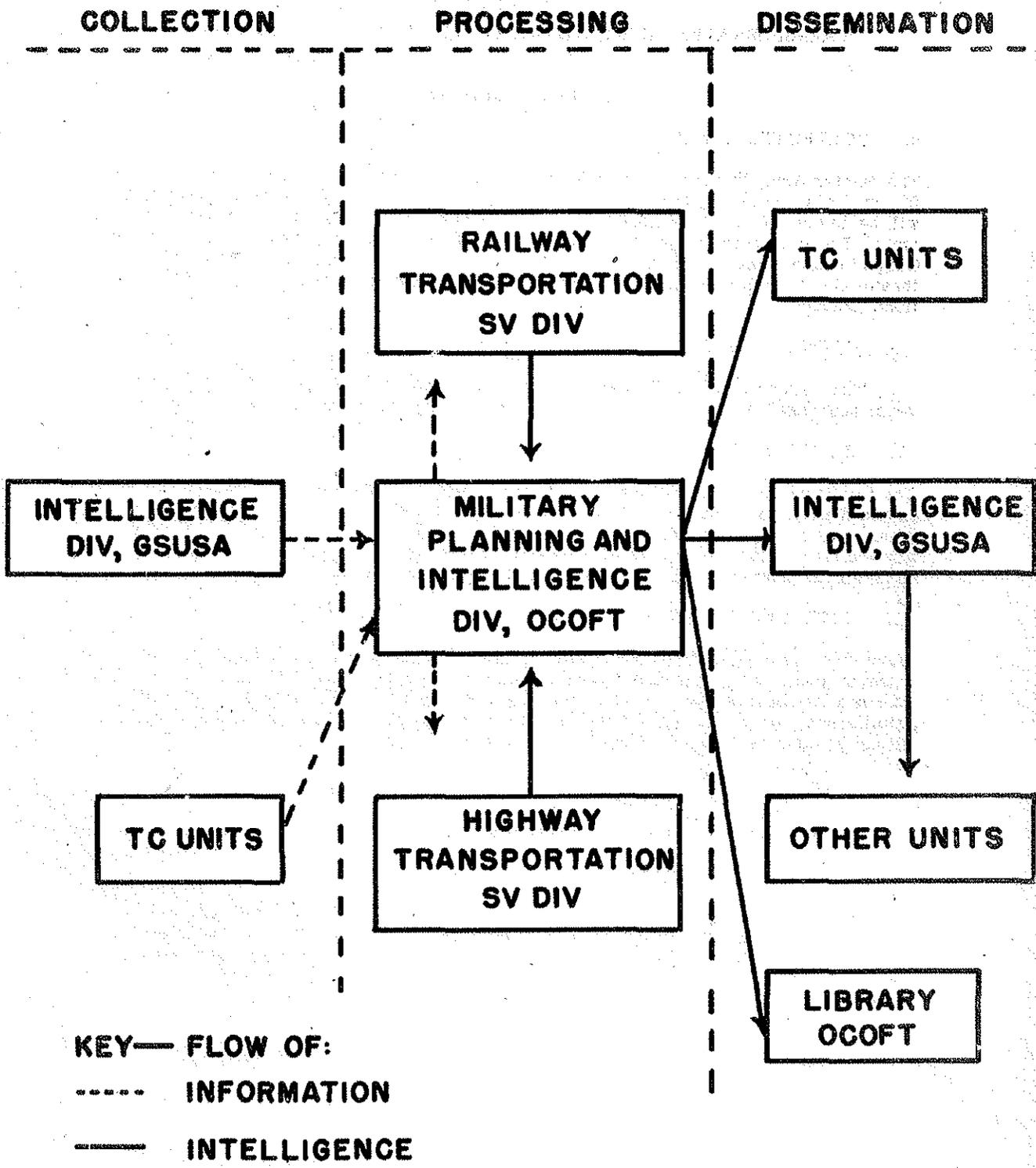


Figure 1. Production of transportation intelligence.

CHAPTER 3
TRANSPORTATION INTELLIGENCE IN THE THEATER OF OPERATIONS

Section I. GENERAL

9. COLLECTING AGENCIES

The theater Army transportation officer will establish intelligence sections as required for producing necessary transportation intelligence. Essential elements of information will be determined by Transportation Corps planners and Transportation Corps operating units. These essential elements of information will be forwarded through Transportation Corps technical channels to the theater Army transportation officer, who will request the theater G-2 to collect the necessary information. Collecting agencies in a theater of operations include:

- a. All Transportation Corps units and personnel.
- b. The organic facilities of higher, lower, and adjacent units, including troops, intelligence personnel, and special information services organic to and attached to combat units.

10. COORDINATION

The transportation officer of a combat division, corps, or an army is of inestimable value in coordinating the collection of transportation information by combat units. At army group, army, corps, and division levels, the organically assigned transportation officer will maintain close liaison with the unit intelligence officer and other staff officers so as to effect the production and dissemination of transportation intelligence. (fig. 2).

11. INTELLIGENCE WITHIN TRANSPORTATION CORPS UNITS

Within Transportation Corps units, the production of transportation intelligence is a command responsibility. The commander will utilize to the best advantage all organic and attached intelligence agencies to produce complete, accurate, and timely transportation intelligence. Where no organic intelligence section exists, definite intelligence functions should be assigned to the best qualified personnel available.

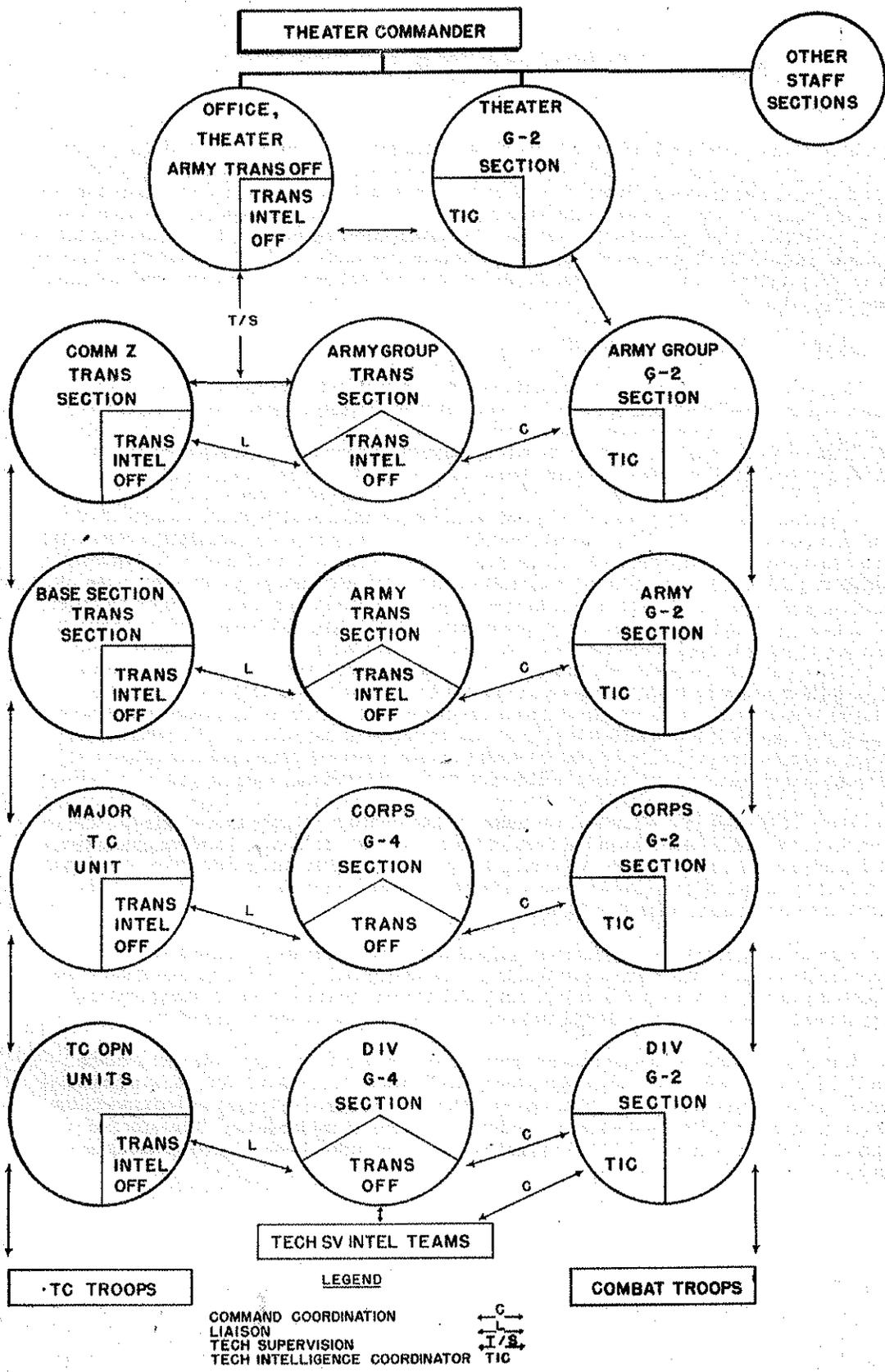


Figure 2. Transportation intelligence organization within the theater of operations.

Section II. ESSENTIAL ELEMENTS OF INFORMATION

12. GENERAL

Generally, there is only a limited amount of intelligence available to the intelligence officer and the commander. After all the available intelligence has been incorporated into the estimate of the situation, the lacking intelligence required to estimate the situation forms the basis for the essential elements of information. The intelligence officer must make a collection plan in which he analyzes the essential elements of information and determines those collecting agencies which are best able to procure the information. This plan is not published, but it forms the basis for specific requests, directives, and orders to the collecting agencies.

13. TYPE OF INFORMATION INCLUDED

a. The essential elements of information for transportation intelligence will consist of information about the enemy, terrain under control of other governments, meteorological conditions, and transportation installations, facilities, and personnel in the territory held by the enemy. The commander requires such information to formulate details of his plan of operation and to carry on operations.

b. Transportation Corps personnel must be alert for information about Transportation Corps installations and supplies, as well as facilities and trained transportation personnel which can be used by our forces in actual operations. Essential elements of information relative to equipment, installations, and supplies will include data as to the type, quantity, condition, and capacity of each item. In many cases, additional information such as gage, type of fuel, type of traction, speed, gross weight, and vertical and horizontal clearances is needed to permit intelligent planning for the use of the equipment. When spare parts are involved, exact nomenclature is required to prevent confusion. The Transportation Corps staff at army or theater level will eventually have to decide the disposition of captured installations; detailed information about the installation is therefore necessary-- its use; its potentialities; availability, size and condition of supplies; utilities available; and the installation's relationship to the transportation system and other facilities. Interrogation of former employees is the best means of obtaining this type of information.

c. Some of the detailed essential elements of information relative to the terrain are: beach data, including beach gradient both above and below tide range; location, condition, and description of exits from the beaches; the soil's suitability for traffic; hard standings for storage; closed storage areas; cover afforded; natural avenues of travel; maximum grades and curvatures on railroads, etc.

d. Essential elements of information may also pertain to weather. Weather information of particular value to the Transportation Corps is that which permits long and short-range predictions of the most probable tides, surf, and swell; snowfall; temperature; and any other weather condition which might influence Transportation Corps operations.

e. Essential elements of information pertaining to communication lines will include details relative to rail lines, highways, inland waterways, and ports. Air reconnaissance, interpretation of aerial photographs, and questioning civilian employees at transportation installations are possible methods of obtaining this type of information. The specific types of information to be collected regarding communication lines will be given detailed coverage in chapters 7, 8, and 9.

Section III. AGENCIES FOR COLLECTING

TRANSPORTATION INFORMATION

14. TRANSPORTATION CORPS TECHNICAL SERVICE INTELLIGENCE TEAMS

The Technical Intelligence Branch is directly under the Director of Intelligence, and it is this branch which coordinates and directs the search for information by technical intelligence agencies. Certain services have parallel technical organizations which equip and train technical service intelligence teams. These technical service intelligence teams are assigned to the theater of operations, from which they are in turn assigned or attached to division, corps, and armies in the combat zone and to communications zone organizations. The duties of technical service intelligence teams are as follows:

- a. To collect and evaluate enemy materiel and equipment.
- b. To instruct troops in the handling, use, and maintenance of captured materiel.
- c. To locate, evaluate, and exploit enemy installations insofar as the design, construction, research, production, or storage aspects of these installations are responsibilities of the respective services represented by the technical service intelligence teams.
- d. To question and examine enemy production experts.
- e. To select captured enemy equipment and expedite its flow for intelligence purposes.

15. OTHER COLLECTING AGENCIES

In addition to the technical service intelligence teams combat units may possibly be used to collect transportation information. The value of combat units in this respect will be in direct proportion to their training in transportation intelligence requirements. The transportation officer on the staff of all combat units should recognize their importance as collecting agencies and effect close coordination with the operations and training officer regarding transportation intelligence training. Specific reconnaissance missions or requests for specific types of information should be sent to combat units through the technical intelligence coordinator at division level. Tactical air and photographic reconnaissance units should not be overlooked as valuable collecting agencies.

Section IV. SOURCES OF INFORMATION

16. GENERAL

a. Transportation intelligence demands detailed and accurate information about the existing transportation modes and facilities. This requires full exploitation of all sources which will produce such information. Theoretically then, the best means of obtaining transportation information would be by inspecting the entire transportation system and recording the information collected. However, this is impracticable in a hostile country, and maps, records, and other documents pertaining to the transportation system must be relied upon to furnish the majority of transportation information. Photographs are among the most effective sources of transportation information as they may range in complexity from an aerial photograph of a complete installation or facility down to a view of a minute portion of any piece of equipment. Maps showing the interrelationship of the transportation system of a country or area are particularly desirable. In addition, operating manuals and instructions contain information which is extremely valuable to transportation planners, and a surprising amount of information can be extracted from a timetable by a technical expert.

b. Sources of transportation information which are easily exploited during peacetime become very difficult, or even impossible, to exploit during time of war. Though the collection of transportation information is a continuous process, it is essential that the majority of our transportation information be collected prior to the outbreak of hostilities.

c. Following is a list of sources of transportation information:

- (1) Documents:
 - ✓(a) Maps, blueprints, and plans.
 - ✓(b) Historical and technical studies and reports.
 - (c) Timetables, schedules, operating rules, engineering data, etc.
 - (d) Foreign and domestic periodicals and newspapers.
 - (e) Financial digests and reports.
 - (f) Related library publications.
 - (g) Sailing directions.
 - (h) Publications of US Hydrographic Office.
 - ✓(i) Port data from world shipping lines.
 - ✓(j) Port intelligence reports from US Department of Commerce.
- (2) Photographs, aerial and other.
- (3) Personal observations and contacts.
- (4) Technical expositions.
- (5) Equipment and name plates.
- (6) Prisoners of war, deserters, and civilians, including:
 - (a) Tourists.

- (b) Economists and scientists.
- (c) Contractors.
- (d) Manufacturers.
- (e) Suppliers.
- (f) Export-import firms.
- (g) Friendly foreign nationals and native sympathizers.

d. Many of the sources of information mentioned in subparagraph c above will be exploited by agencies within the Zone of Interior and the higher headquarters within the theater of operations. There must be a continuous exchange of information between higher, lower, and adjacent units. For instance, reconnaissance elements of the railway operating battalions in support of combat units in the forward areas are able to secure considerable information from captured railway documents, equipment, and native railway personnel. Such information will be of value to the army transportation officer, as well as to higher Military Railway Service headquarters.

17. ENEMY ORDER OF BATTLE

Liaison must be established and maintained between the transportation officer and the intelligence officer at all levels of command so that the transportation officer will have access to available enemy order of battle information when it is required for planning and operating.

18. ENEMY MILITARY PERSONNEL

Information is obtained from prisoners of war as to enemy identifications and the extent and condition of enemy equipment and transportation facilities. The transportation officer assigned to combat divisions, corps, and armies should maintain close liaison with the corresponding intelligence sections and attached interrogation prisoner of war teams, so that he can immediately and fully exploit prisoners of war, civilians, and repatriates who are transportation technicians or who have knowledge of enemy transportation facilities.

19. ENEMY DOCUMENTS

Enemy documents consist of any written, printed, engraved, or photographic matter which may contain information relative to hostile armies, countries, equipment, and facilities. Enemy documents offer clear, concise, and accurate records since they are prepared by the enemy for his information and guidance. When examined systematically by competent personnel, captured documents constitute one of the principal available sources of transportation information.

20. CAPTURED ENEMY MATERIEL

Much information of both technical and strategic value can be obtained from equipment captured from the enemy. When properly processed, such equipment furnishes intelligence for both immediate and future use. Reports of first-hand observers concerning enemy use of materiel provide technical and specialist information useful in determining characteristics, capabilities, and limitations of the enemy's equipment. Captured equipment is equally as important as prisoners of war and captured documents, although this importance is not so immediately evident. Prisoners may talk as soon as they are captured; documents can be readily translated by interpreters; but materiel must be studied by experts before much can be learned from it. This study and analysis of enemy materiel is called technical intelligence. It is a responsibility of combat units

to gather and secure all enemy materiel that has been captured and to make it available to the services; likewise the services must study the materiel and report their observations. The evaluation and processing of captured enemy materiel is discussed in detail in FM 30-15.

21. SOURCES OF INFORMATION REGARDING TERRAIN AND WEATHER

Since Transportation Corps units have no organic means of collecting information pertaining to enemy terrain or the weather in subareas, they must rely upon agencies of the combat arms. However, the importance of obtaining such information must not be underestimated.

Section V. OPERATION OF TRANSPORTATION INTELLIGENCE

22. GENERAL

The four fundamental features of transportation intelligence (direction of the collection effort, collection of information, processing of information, and use of intelligence) represent the lowest common denominator of the operational cycle of transportation intelligence. Transportation intelligence is a continuous process and can be initiated in any one of these four phases (fig. 3)

23. THE COLLECTION PLAN

Information requirements which cannot be met by available collecting agencies should be submitted to higher headquarters and adjacent units as essential elements of information. To assist the intelligence officer in selecting the agency to exploit the appropriate sources of information, a collection plan should be prepared. Such a plan will enable the intelligence officer to make reasonable requests upon collecting agencies. See figures 4 and 5 for sample collection plan and requests for information, respectively.

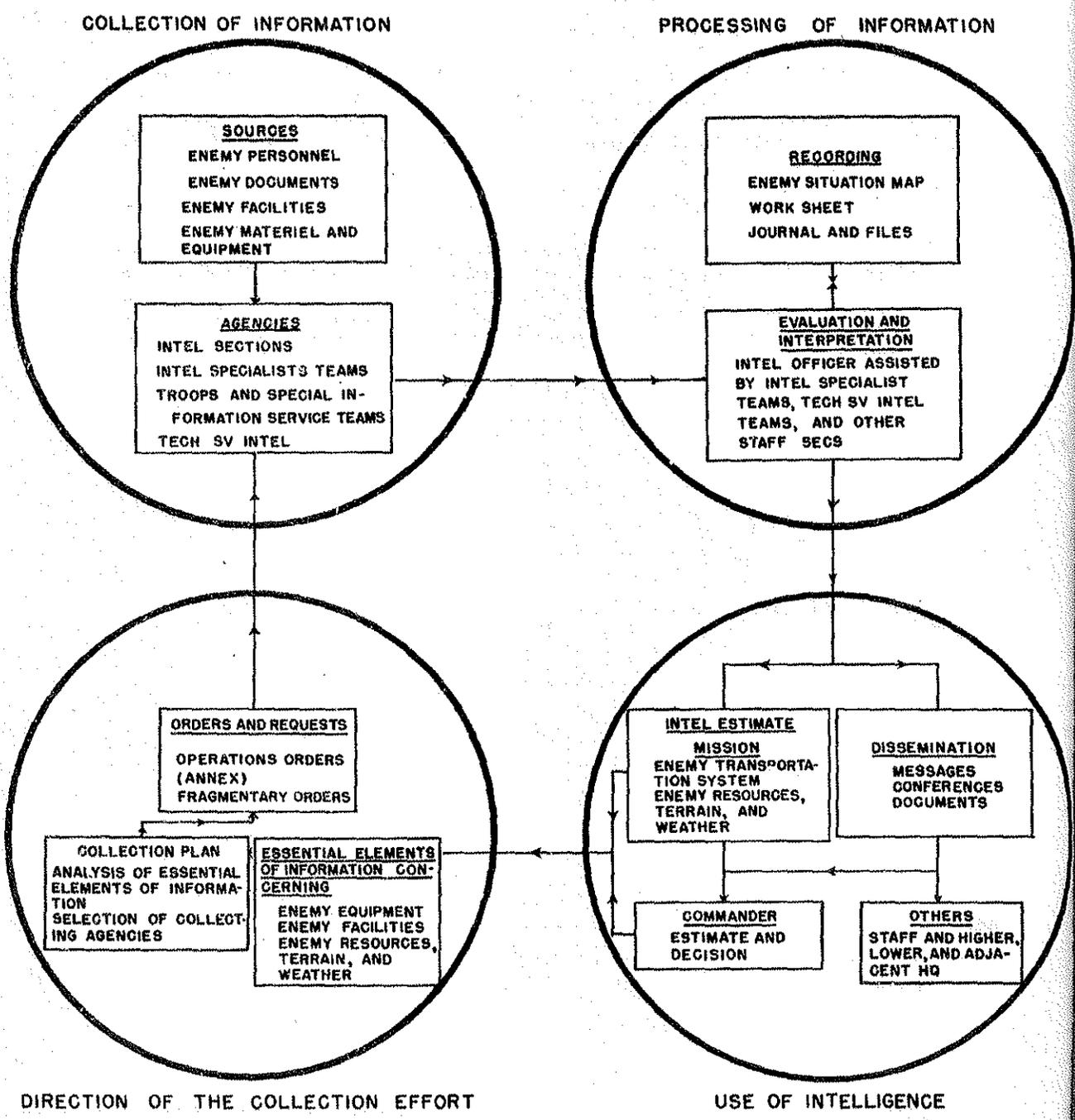


Figure 3. Operation of transportation intelligence.

PERIOD COVERED: 010800 JUN TO 070800 JUN			G-3	Corps	16th	18th	26th	Div	Div	G-2	REPORTING TIME
ESSENTIAL ELEMENTS OF INFORMATION	CHARACTERISTICS	BASIS FOR SPECIFIC ORDERS AND REQUESTS	Recon Co	TO	Inf	Inf	Inf	Engr	Arty	/ A-2	
1. Determine capacity Route 60 between FORT EUSTIS and ferry at NEWPORT NEWS.	a. Roads (1) Width (2) Type (3) Condition (4) Shoulders	Report width, type, condition of road and shoulders, Route 60 between FORT EUSTIS through DENBIGH.			X						By 022000 JUN
		Report width, type, condition of roads and shoulders, Route 60 between DENBIGH to JAMES RIVER BRIDGE at NEWPORT NEWS.				X					By 022000 JUN
		Request strip aerial photo, smallest possible scale, Route 60 between FORT EUSTIS and JAMES RIVER BRIDGE.								X	Earliest practicable date.
		Request two copies all available maps covering Route 60 between FORT EUSTIS and JAMES RIVER BRIDGE.						X			By 020800 JUN
	b. Bridges (1) Location	Request grid coordinates all bridges Route 60 between FORT EUSTIS and JAMES RIVER BRIDGE.	X						X		By 022100 JUN
	(2) Type and condition (3) Road width (4) Type surface (5) Vertical clearance (6) Rated capacity (7) Detours	Request following information regarding all bridges on Route 60 between FORT EUSTIS AND JAMES RIVER BRIDGE: Location, type, condition, road width, type surface, vertical clearance, rated capacity, and possible detours.						X			
	c. Bottlenecks (1) Location (a) Steep inclines (b) Sharp curves (c) Other restrictions (2) Width of roadbed at typical and limiting points. (3) Crossroads and grade crossings.	Request following information regarding all possible bottlenecks on Route 60 between FORT EUSTIS and JAMES RIVER BRIDGE: Location of steep inclines, sharp curves, and other restrictions; width of roadbed at typical and limiting points; crossroads; and grade crossings.	X								By 022100 JUN

Figure 4. Transportation intelligence collection plan.

THESE SPACES FOR MESSAGE CENTER ONLY		
TIME FILED 010740	MSG CEN NO. 26	HOW SENT MSGR
MESSAGE (SUBMIT TO MESSAGE CENTER IN DUPLICATE)		(CLASSIFICATION)
No. 14	DATE 01 JUN	
To: G-2, 1ST INF DIV		
REQUEST GRID COORD BRIDGES ROUTE 60 FT EUSTIS AND JAMES RIVER BRIDGE NEWPORT NEWS PRIOR 022000 JUN.		
TRANS O, 1ST INF DIV		010730
OFFICIAL DESIGNATION OF SENDER		TIME SIGNED
/S/ BRUEHL		
AUTHORIZED TO BE SENT IN CLEAR	SIGNATURE OF OFFICER	SIGNATURE AND GRADE OF WRITER

THESE SPACES FOR MESSAGE CENTER ONLY		
TIME FILED 010800	MSG CEN NO. 48	HOW SENT MSGR
MESSAGE (SUBMIT TO MESSAGE CENTER IN DUPLICATE)		(CLASSIFICATION)
No. 25	DATE 01 JUN	
To: CG DIV ARTY, 1ST INF DIV		
REPT ALL GRID COORD BRIDGES ROUTE 60 FT EUSTIS AND JAMES RIVER BRIDGE NEWPORT NEWS PRIOR 022000 JUN.		
G-2 1ST INF DIV		010750
OFFICIAL DESIGNATION OF SENDER		TIME SIGNED
/S/ KIPLINGER		
AUTHORIZED TO BE SENT IN CLEAR	SIGNATURE OF OFFICER	SIGNATURE AND GRADE OF WRITER

THESE SPACES FOR MESSAGE CENTER ONLY		
TIME FILED 020800	MSG CEN NO. 48	HOW SENT MSGR
MESSAGE (SUBMIT TO MESSAGE CENTER IN DUPLICATE)		CONFIDENTIAL (CLASSIFICATION)
No. 32	DATE 02 JUN	
To: G-2, 1ST INF DIV		
REF INFO BRIDGES ROUTE 60, GRID COORD 654.05; 1602.05, 655.1:1599.8, 658.5:1594.4, 660.25:1585.6. SKETCH MAP ATTACHED.		
CG, DIV ARTY, 1ST INF DIV		021600
OFFICIAL DESIGNATION OF SENDER		TIME SIGNED
/S/ SLUMPF		
AUTHORIZED TO BE SENT IN CLEAR	SIGNATURE OF OFFICER	SIGNATURE AND GRADE OF WRITER

THESE SPACES FOR MESSAGE CENTER ONLY		
TIME FILED 020830	MSG CEN NO. 48	HOW SENT MSGR
MESSAGE (SUBMIT TO MESSAGE CENTER IN DUPLICATE)		CONFIDENTIAL (CLASSIFICATION)
No. 38	DATE 02 JUN	
To: TRANS O, 1ST INF DIV		
REF INFO BRIDGES ROUTE 60, FOL CONFIRMED GRID COORD 654.05:1602.05, 655.1:1599.8, 658.5:1594.4, 660.25:1585.6. SEE ATCHD SKETCH MAP.		
G-2, 1st INF DIV		020815
OFFICIAL DESIGNATION OF SENDER		TIME SIGNED
/S/ KIPLINGER		
AUTHORIZED TO BE SENT IN CLEAR	SIGNATURE OF OFFICER	SIGNATURE AND GRADE OF WRITER

Figure 5. Requests for information

Section VI. DISSEMINATION

24. DEFINITION

Dissemination is the timely distribution of information and intelligence in suitable form and sufficient detail to all authorized personnel and agencies who can use it.

25. CRITERIA

The adequacy of intelligence dissemination may be judged by the following criteria in the order listed.

- a. Information and intelligence must be placed in the hands of the ultimate user in time to permit evaluation and interpretation, formulation of plans, and initiation of action before the intelligence picture has changed.
- b. Only the minimum essential intelligence that can be used by the unit concerned is disseminated.
- c. Disseminated matter should be in such form that the recipient can readily locate details of interest to him.

26. METHODS

- a. Conferences. The exchange of information between various units or agencies is facilitated by frequent personal contacts. In addition to formal conferences, telephone calls and liaison officers should be used to the utmost.
- b. Messages. When it is impossible to transmit important information in person or by telephone, special messages should be used. These may be transmitted by airplane, motorcycle, motor messenger, radio, telegraph, or any other rapid means of communication. All messages must be pertinent, clear, concise, and complete. Coding and ciphering of messages should be in accordance with security requirements. Messages that are of no value to the enemy (either because of content or the speed of combat) should be transmitted in the clear.
- c. Intelligence documents. Some of the intelligence documents which will include transportation intelligence and information are as follows.
 - (1) The Periodic Intelligence Report. This document sums up the information that has been collected, evaluated, and interpreted during a given period.
 - (2) The Intelligence Annex. Paragraph 1a of the Operations Order may contain a brief summary of the enemy situation; however, if the intelligence available is more than six or eight lines, it is preferable to place it in an Intelligence Annex.
 - (3) Intelligence Estimate. Transportation intelligence which a commander needs in order to arrive at a decision or to plan an operation should be included in the Intelligence Estimate.
 - (4) Maps, sketches, diagrams, etc. These are valuable means of dissemination provided they are accurate, pertinent, and properly annotated.
 - (5) Technical Intelligence Summaries. These publications offer a complete résumé of technical intelligence on such subjects as enemy equipment, techniques, methods of operation, technical personnel, etc.

CHAPTER 4

TRANSPORTATION INTELLIGENCE TRAINING AND STANDING OPERATING PROCEDURE

27. TRANSPORTATION INTELLIGENCE TRAINING

a. General. Before a Transportation Corps unit can carry out its assigned mission, the commander must be familiar with the characteristics, capabilities, and limitations of available transportation facilities and equipment. Although the commander ordinarily obtains valuable intelligence from the headquarters that assigns the mission, he is nevertheless dependent upon his own and subordinate intelligence agencies for the collection, processing, and dissemination of vital supplementary information. To this end, he utilizes intelligence training which may be defined as those steps taken to insure the efficient performance of intelligence responsibilities by each soldier and by intelligence personnel of all echelons. Many command failures are, in the final analysis, the result of insufficient information; conversely, sound intelligence within a unit is the result of sound and effective intelligence training.

b. Responsibility. (1) The commanding officer is responsible for intelligence training within his command. He must insure that all officers and enlisted men understand their intelligence duties. In service units such as the Transportation Corps, specialized training must be given to acquaint all personnel with the need for technical (transportation) intelligence and the type of information needed to produce this intelligence. In organizations higher than battalion, the commanding officer is assisted by an intelligence officer in carrying out this responsibility. *Ta Gen.*

(2) The intelligence officer is directly responsible for training his intelligence section and for supervising the training of intelligence sections of all subordinate echelons of command. He also collaborates with the operations officer in the preparation of training programs, and he supervises the intelligence training of all personnel in accordance with the policy of his commanding officer.

c. Methods. The methods of intelligence training are prescribed in FM 21-5, "Military Training"; TM 21-250, "Army Instruction"; and in the "Aggressor Force" series; FM 30-101, FM 30-102, FM 30-103, and FM 30-104.

d. Scope. Training in transportation intelligence will not be restricted to personnel assigned to the intelligence and transportation sections of various headquarters. Appropriate instruction in transportation intelligence will be given to all officers and enlisted men who are expected to participate in the collection of transportation information or the production of transportation intelligence. Limited training should be given to combat troops because they are potential collecting agencies. Personnel having intelligence duties will be given additional instruction appropriate to their assignment. During peacetime, full use should be made of the "Aggressor Force" concept, both in the field and in theoretical instruction.

28. STANDING OPERATING PROCEDURE (SOP)

No fixed form can be prescribed for an SOP because the contents and scope will vary with the level of command, the theater of operations, the state of training and the experience of the unit, the situation, and the enemy. The outline forms presented in FM 101-5 are suitable for use at all levels of command.

CHAPTER 5

INTELLIGENCE FUNCTIONS OF THE TRANSPORTATION OFFICER ASSIGNED TO A COMBAT UNIT

29. GENERAL

The transportation officer assigned to a combat unit has a technical intelligence responsibility similar to that of other Special Staff officers. His primary fields of interest are similar to those of the engineer officer, since the engineer officer is concerned with the construction, reconstruction, and maintenance of the transportation facilities which the transportation officer operates. The transportation officer assigned to a combat unit is potentially the most forward representative of the Transportation Corps, and as such furnishes transportation information to his own, higher, and adjacent headquarters (including communication zone bases, sections, and headquarters). The transportation officer should participate actively in all phases of transportation intelligence--the direction, collection, processing, and use. He should maintain close liaison with the technical intelligence coordinator, who is a part of the G-2 section. He should assist in directing the efforts of the Transportation Corps technical service intelligence team so that important information regarding enemy equipment, facilities, technical personnel, etc, will be collected. Specifically, the intelligence mission of the transportation officer assigned to combat units is as follows:

- ✓ a. Collection of technical information pertaining to the Transportation Corps as a whole and the production of transportation intelligence required by the unit to which he is assigned.
- * ✓ b. Coordination with the technical intelligence coordinator and the operations officer (G-3) regarding collection of information and training troops in transportation intelligence.
- ✓ c. Dissemination of transportation intelligence through Transportation Corps technical channels to higher, lower, and adjacent Transportation Corps units, and to other interested agencies through normal intelligence channels.
- ✓ d. Supervision of attached or assigned Transportation Corps technical service teams.

30. DUTIES REGARDING ESSENTIAL ELEMENTS OF INFORMATION

The technical intelligence coordinator of a combat unit receives essential elements of information from higher or adjacent units, or he may receive a specific request or order from the transportation officer to collect certain items of transportation information. This information can be collected either by the Transportation Corps technical service intelligence team or by other intelligence collecting agencies of the combat unit. The technical intelligence coordinator should be kept informed of all essential elements of information or special requests for information which are received by the transportation officer.

31. CONTINUOUS OPERATION

The collection of transportation information and the production of transportation intelligence must be a continuous process. Failure to appreciate the importance of a continuous flow of valid transportation intelligence will result in incomplete knowledge of the transportation facilities, equipment, technical personnel, etc, which will become available to the combat unit in an area to be overrun. As a result, full utilization of the existing transportation system and facilities will not be possible.

32. EQUIPMENT REPORTS

a. Since the transportation officer of a combat unit has no organic Transportation Corps troops who will come into early contact with the enemy or who will be within overrun areas, troops of the combat unit must safeguard equipment and facilities which are uncovered and make reports concerning them. These reports should include type of equipment, location, the time and circumstances of uncovering, and measures which have been taken to safeguard the equipment. Such reports will normally be submitted through command channels to the battalion S-2 and then through intelligence channels to division G-2, where the information will be turned over to the technical intelligence coordinator who will inform the transportation officer. The transportation officer should then direct a Transportation Corps technical service intelligence team to investigate the equipment. If no Transportation Corps technical service intelligence team operates within the division area, the transportation officer will notify the transportation officer of the next higher headquarters through his technical channel.

b. To fully utilize the collecting capabilities of troops, intelligence personnel, and the special information services within the combat unit, the transportation officer must, through the intelligence officer, insure that all personnel who are potential collecting agencies are well informed of the value of transportation intelligence to the unit and of the requirements for transportation information.

CHAPTER 6

COUNTERINTELLIGENCE AND SECURITY

33. OBJECTIVE OF COUNTERINTELLIGENCE

The objective of counterintelligence is to reduce or, if possible, destroy the effectiveness of the enemy's intelligence system.

34. RESPONSIBILITY

Counterintelligence is a command responsibility. This responsibility cannot be delegated; however, the Transportation Corps unit intelligence officer plans for and recommends the adoption of appropriate counterintelligence measures and, in coordination with the operations officer, plans for and supervises counterintelligence training.

35. SAFEGUARDING TRANSPORTATION INTELLIGENCE

Provisions of AR 380-5 will be followed in safeguarding transportation intelligence.

36. INSTALLATION SECURITY

a. Responsibility. Transportation Corps installation commanders have primary responsibility for internal security at their installations. This responsibility is exercised under current policy as established by the Chief of Transportation or higher authority.

b. Guide for establishing security measures. Consideration should be given to the following as a guide for the establishment of adequate security measures:

(1) Personnel and visitor control. (a) Transportation Corps installations should be restricted to personnel on duty therein and to such other persons as have official business to transact within the installation.

(b) At the discretion of the installation commander, relatives, friends, and members of the press may visit installations, provided operating efficiency and security are not impaired.

(c) Individuals will not be given special consideration or treatment not normally accorded visitors without prior approval of the next higher headquarters. Installation commanders should exercise their own discretion in emergency cases where time does not permit prior clearance.

(d) Representatives, officers, or employees of a foreign government having an official status must comply with requirements for such visitors as set forth in AR 380-5.

(e) Appropriate identification permitting access to the installation should be issued by the installation commander. Credentials issued by higher military authority, reputable concerns, or other governmental agencies may be considered as adequate identification.

(f) Escorts will be furnished only in unusual circumstances.

(2) Property inspections. (a) All packages brought into Transportation Corps installations should be subject to inspection at the discretion of the installation commander.

(b) Persons carrying Government property or classified documents out of an installation should be required to present a property pass or DA AGO Form 996, Classified Document Receipt, signed by an authorized person.

(3) Vehicular traffic. The control of vehicular traffic entering and leaving Transportation Corps installations is subject to the discretion of the installation commander.

(4) Guards. Guards should be provided in such numbers as required for adequate protection of the installation. Sufficient weapons and ammunition will be provided for emergency use.

(5) Pilferage control. Guards will be provided wherever they are considered essential for the protection of Government property. Special consideration should be given in the following cases.

(a) At ports of embarkation and debarkation. Continuous gangplank hatch guards should be provided for vessels carrying critical or security cargo or cargo which may be easily pilfered.

(b) Small critical items should be consolidated in large substantial containers that can be bound with metal bands or straps.

(c) Doors and hatches will be sealed wherever possible.

(d) Small packages of high value such as instruments, drugs, watches, etc, will be under the personal custody of the transportation officer in charge of their storage or movement.

(6) Safeguarding arms and ammunition. Arms and ammunition will be safeguarded in accordance with AR 45-80 and changes thereto.

(7) Emergency plans. All transportation installation commanders should have current disaster and evacuation plans, as well as a plan to cope with possible internal disorders.

CHAPTER 7

SPECIFIC REQUIREMENTS FOR RAILROAD INTELLIGENCE

37. GENERAL

Essential information on rail lines may be found on maps, equipment registers, maintenance of way and mechanical manuals, timetables, and engineering department line of road charts. Such information includes location and condition of single and multiple track lines; bridges; tunnels; passing tracks; water towers; stations; marshaling, switching, and storage yards; signal systems; and roundhouses. The above documents and publications may also show the type gage and the power system used; that is, whether steam, Diesel, electric, etc. Written data also furnish valuable information, such as inventories of engines and rolling stock showing type and condition, and detailed reports of damages with estimates of time and materials needed to make repairs.

38. TYPES OF INFORMATION REQUIRED FOR RAILROAD INTELLIGENCE

Specific types of information required for railroad intelligence are as follows:

a. Map of system or subdivisions indicating:

- (1) Each gage separately.
- (2) Single and multiple tracks on main line.
- (3) Electrically operated railroads.
- (4) Tracks under construction (at given date).
- (5) Proposed construction (at given date).
- (6) Track numbers.

b. General description of system with reference to ownership, organization, and methods of operation.

c. Mileage and gage of system or subdivisions.

- (1) Miles of right-of-way and miles of track by gages.
- (2) Over-all clearances to include tunnels, bridges, station platforms, buildings, rock cuts, overhead structures, etc.

d. Right-of-way.

- (1) Type, length, and weight of rail.
- (2) Type of rail fastenings.
- (3) Type and spacing of ties.
- (4) Nature of ballast.
- (5) Track condition including standard of maintenance.
- (6) Location, source, and availability of stocks for maintenance of right-of-way.

- (7) Maximum permissible axle loads and any special weight or speed restrictions.
- (8) Maximum degree of curve; that is, minimum radius of curves.
- (9) Maximum percentage of grade (profile preferred).
- (10) Ruling grade (directional).
- (11) Adequate drainage.

e. Signal, dispatching, and other communications facilities.

- (1) General methods of protecting train movements on main tracks; for example, absolute block system, permissive block, or manual block (information to be given for single and multiple track operation separately).
- (2) Wayside signals (semaphore, disk, light, or color light).
- (3) Interlocking between switches and signals.
- (4) Sections on which telegraph, telephone, carrier circuit, or radio communications exist.
- (5) General efficiency of communication circuits for train operation and dispatching.
- (6) Sources of power for operating signals and lines of communication, including interlocking plants.
- (7) Control points and connecting circuits above or below ground.

f. Electrification.

- (1) Sections electrified, including yards and terminals.
- (2) Source and nature of electric power (alternating current or direct current and voltage in transmission and distribution system).
- (3) Distribution system.
- (4) Location of power plant and substations.
- (5) Method of current distribution (overhead catenary or third rail).
- (6) Possibility of maintaining electric services despite enemy action.
- (7) Alternate forms of motive power in case of failure of electrical power.

g. Locomotives.

- (1) Number, type and gage, make, wheel arrangement, type of brake dimensions, weight, tractive effort, fuel used, whether road or switching, type of injectors, boiler pressure, type brakes, and equipment (date of information to be given).
- (2) Adequacy for requirements, including condition of repair.
- (3) Number of locomotives normally at each engine house.

h. Locomotive facilities.

(1) Location, capacity, and efficiency of locomotive shops and other repair facilities, condition of buildings, machinery for repairs, types of repairs, and transfer tables.

(2) Fuel and fuel supplies--source, method of supply, adequacy, and refueling facilities.

(3) Source, quality, and adequacy of water supply, with chemical analysis of available supply, indicating treatment necessary for use in locomotive boilers and stations with water spouts.

(4) Suitable water for personnel.

(5) Locomotive service and availability of spare parts.

(6) Location of storehouses and stocks carried.

i. Rolling stock.

(1) Numbers by type and gage, indicating number of axles; type and size of journals and bearings; trucks, rigid or having springs; tonnage and capacity; dimensions; and condition, with particular emphasis on details of tank cars, refrigerator cars, and heavy duty flat cars.

(2) Types of brakes.

(3) All coupler and buffer details with dimensions to include height from rail.

j. Special equipment.

(1) Numbers by type, particular use, gage, capacity, and condition (derricks, locomotive cranes, etc).

(2) Numbers of crew members and location of crew necessary for operation.

(3) Accessory equipment (crew cars, etc).

k. Rolling stock and special equipment facilities.

(1) Location, capacity, and efficiency of building and repair shops.

(2) Minor facilities for repairs.

(3) Location, source, and availability of spare parts.

l. Unusual equipment, such as articulated trains, autorailers, motor rail cars, dual gage equipment, narrow gage, and truck transfer equipment.

m. Traffic.

(1) Nature and density, including tonnage of principal commodities carried and extent to which life of community depends on railroads.

(2) Tonnage (net and gross) and speed of trains.

(3) Train control system.

(4) Special features and difficulties of operations.

(5) Frequency of passenger traffic as compared to freight traffic.

(6) Nature and adequacy of loading facilities.

n. Capacity.

(1) Number of trains per day in each direction, number of cars, and net tons per train on main lines.

(2) Methods of increasing capacities.

o. New construction (date of information to be given).

(1) Tracks under construction.

(2) Other constructional works in hand (doubling of single track; enlargement of stations; provisions for additional repair shops; strengthening of bridges; electrification; enlargement of track facilities at ports, terminals, stations, and yards, etc).

(3) Proposed construction and new construction completed.

(4) Tracks and other railroad facilities abandoned or taken up.

p. The following physical characteristics in detail for each road:

(1) Extent of rail net.

(2) Gage.

(3) Number of tracks in main line.

(4) Mileage between each station.

(5) Motive power (name plates).

(6) Ruling grade indicating direction of ruling grade and sections on which helper engines are normally required (profiles are preferable).

(7) Maximum degree of curves (minimum radius of curves).

(8) Location of junctions and branch lines.

(9) Location of stations, whether passenger or freight (if possible, obtain plans of station) high or low platforms; station tracks; train tracks; capacities; storage and warehouse facilities; and heavy lift facilities.

(10) Passing track intervals and length of track.

(11) Location and capacity of sidings, including industrial sidings.

(12) Location and capacity of terminals, transfer points, and yards including classification yards, hump or level (if possible, obtain plans of terminal); whether through or stub end sidings and on which side of road situated.

(13) Location and dimensions (including height) of military loading and unloading platforms and ramps, whether side or end loading approaches, hard stand, truck circulation and parking; and parking area for personnel.

(14) Location, dimension, and type of construction of important engineering work, including all bridges and viaducts, the capacity of each, and individual lengths of spans in each, tunnels (including nature of rock, length lined, shored, ventilated, etc); and notable cuts and fills.

(15) Location of facilities for watering, fueling, and turning (turntables and wyes) locomotives.

(16) Vulnerable points.

(17) Normal and maximum capacities of each division (or foreign equivalent) in number of trains per day in each direction, number of cars, and net train loads.

q. Port clearance by rail.

(1) Rail facilities in port area, including wharf apron and transit shed tracks.

(2) Capacities for heavy lift at port.

(3) Storage and classification yards in back-up area with capacities.

(4) Railroad net capacity for port clearance.

(5) Railroad marine equipment other than ferries.

(6) Coal loading and unloading facilities at ports.

r. Train ferries.

(1) Location of terminals and distance between them.

(2) Number, description, motive power, and condition (at given date) of ferries; capacity of each in number of railroad coaches and cars, and capacity of each in number of personnel and heavy trucks.

(3) Full detail of piers, including methods of operation and type and source of power and alternate power.

(4) Time taken for crossing, mooring, unmooring, and moving trains on and off.

(5) Speed and direction of current.

s. Physiography.

(1) Terrain over which railroads operate.

(2) Climate.

(3) Precipitation.

t. Economic condition of railroads, including minimum civilian rail transportation requirements.

u. System of weights and measurement.

v. Indigeneous labor.

(1) Degree of technical railroad ability.

(2) Inclination for work.

(3) Sympathies (cooperation).

(4) Elements of unrest.

(5) Economic condition of individuals.

CHAPTER 8

SPECIFIC REQUIREMENTS FOR HIGHWAY INTELLIGENCE

39. GENERAL

Specific information is required with respect to vehicles and highway facilities (routes), to include roads and structures (bridges and tunnels), fords, and ferries. These data must be further supplemented and supported by information about the commercial highway transport system of a given area, its equipment, fuels, operating methods, terminal facilities, and operating personnel. General highway traffic data and related statistics are also required.

40. TYPES OF INFORMATION REQUIRED FOR HIGHWAY INTELLIGENCE

Specific types of information required for highway intelligence are as follows:

a. Vehicles. General information required on highway transport vehicles and motor operating facilities include:

- (1) Number manufactured and quantity of imports and exports by type of vehicle.
- (2) Inventory of motor vehicles by types and, if utilized for general transportation, the estimated number of animal-drawn cargo-hauling vehicles operating in a given area on a given date.
- (3) Type and capacity of vehicles available and generally employed for cargo hauling; operating characteristics, engine horsepower, and fuels used.
- (4) Road repair equipment and facilities--location and quantity of mechanical equipment for highway maintenance and repair (stonecrushers, rollers, graders, bulldozers, asphalt plants, snowplows, etc).
- (5) Specific information with respect to vehicles of unusual size or unusual operating characteristics.

(a) Net weight, pay load, gross weight, gross combination weight, and gross vehicle weight distribution.

(b) Wheel base, track, or tread; angle of approach; angle of departure; and ground clearance.

(c) Maximum permissible road speed, grade, and bank; minimum turning radius; fordability; and flotation.

(d) Traction, momentum, power, cruising range, and shipping dimensions.

(e) Over-all length, width, and height.

(f) Body type (whether van, stake, platform, etc).

b. Routes. Routes which connect various localities and places of importance and the facilities and structures which are part of any given route are extremely important in the preparation of intelligence studies and logistical plans. With respect to highway routes, accurate up-to-date information of the following nature is essential:

(1) Starting points, route numbers, mileages, and termini.

(2) Location of intersections and connections with networks of neighboring nations.

(3) Location, length, and percent of grades greater than 7 percent.

(4) Location and description of sections where traffic is confined for long distances by defiles, swamps, embankments, cuts, etc.

(5) Vulnerable points--location, length, usable width, and vertical clearance of bottlenecks, such as tunnels having limited overhead clearance.

(6) Location and description of possible detours; distance between and length of places suitable for passing on narrow roads, showing location in relation to a known point such as a town.

(7) Conditions affecting operations, such as seasonal restrictions (by dates) due to snow, rainfall, and avalanches.

(8) Highway maintenance policy, including methods employed to keep roads open.

c. Roads. Streets and highways are components of the highway facility or route. With respect to streets and highways, specific information is required regarding the following:

(1) Location and details of surface or traveled way, including:

(a) Type of material.

(b) Thickness.

(c) Width (in feet).

(d) Condition of surface.

(2) Details of shoulders or berm, such as:

(a) Width (in feet and inches).

(b) Type of material and whether it is stabilized.

(c) Condition as of a given date.

(3) Width of roadbed at typical or limited locations.

(4) Radius to center of pavement of sharp curves that may restrict or prevent operation of trucks or trucks and trailers.

(5) Detailed descriptions including dimensions, surfacing material of streets in cities and towns, ports, and other important transportation centers. Particular emphasis should be given to those streets that connect the docks or rail terminals with city street systems proper.

d. Structures. Bridges and tunnels that are highway structures are components of the highway facility and are most often the limiting points or bottlenecks. Highway structures (generally those over 75 feet in length) are strategically important and detailed information regarding the following items is a prime requisite in the collection of technical information relative to the extended use of highways:

(1) Bridges.

(a) Location (mileage from known location).

(b) Type (suspension, steel truss, concrete slab, etc) with particular reference to piers and abutments.

(c) Over-all length (abutment to abutment).

(d) Length of span; multiple span, length of greatest span and typical length of other spans (in feet).

(e) Roadway width and type surface.

(f) Vertical clearance.

(g) Restricted approaches (sharp turns or grades).

(h) Rated load-carrying capacity and gross weight of the heaviest loads known to have been carried over a particular bridge.

(i) Location and conditions which would make difficult the construction of temporary bridges to replace existing structures.

(j) Possible detours around the structure.

(2) Tunnels.

(a) Location (mileage from known location).

(b) Length.

(c) Usable roadway width and type of surface.

(d) Vertical clearance (highest and lowest point over roadway).

(e) Possible detours around the structure.

e. Ferries. Road ferries are components of highway facilities since they allow routes to traverse obstacles. In this respect they function in lieu of, or as a supplement to, bridges. The technical information required includes the following:

(1) Location of terminals.

(2) Distance between terminals.

(3) Round trip crossing time, including loading and unloading time.

(4) Available hard stand at terminal points.

(5) Description of ferries to include condition, motive power, fuel, and number of units available at a given date.

(6) Capacity of each ferry in short tons and in numbers of passengers and trucks (state size).

(7) Seasonal restrictions (if any) and depth of stream.

(8) Possible alternate routing.

f. Fords. When flow in cross-drainage channels is infrequent or when the volume of water is small compared to the width of the channel, fords are often built in lieu of bridges. This is particularly true in arid or semiarid regions. With respect to fords, detailed information of the following nature is required:

- (1) Location with relation to a known point.
- (2) Condition of approaches.
- (3) Length of the ford (width of stream bed).
- (4) Type of surface (paved, crushed rock, brick, etc) or information concerning aspects of the stream bed which would limit its use.
- (5) Depth of water and speed of current at different seasons and any seasonal restrictions imposed by climatic conditions.

g. Supplemental data.

- (1) Fuels and lubricants.
 - (a) Kinds of fuel and lubricants available.
 - (b) Capacity and location of fuel storage facilities (tank farms).
 - (c) Location, size, and operating capacity of petroleum pipelines.
- (2) Commercial highway transport system.
 - (a) Cargo--information supplemented by maps, indicating the main truck routes, schedules, and type and capacity of vehicles used.
 - (b) Passenger--information on passenger-carrying bus routes with maps, timetables, and characteristics of vehicles used.
 - (c) Vehicle repair facilities.
 1. Location.
 2. Size and capacity of major workshops and automobile and truck factories.
 - (3) Traffic data and related statistics.
 - (a) Flow charts or reports that indicate traffic density as of a given date.
 - (b) Maximum number of vehicles by types (passenger cars, light trucks, heavy trucks, busses (rated capacity)) known to have passed over a highway during a peak hour.
 - (c) Weight of heaviest vehicles which normally use the highway. Preferably stated in terms of maximum axle loads and frequency of such loads.
 - (d) Speed in miles per hour at which motor vehicles normally operate over a road.
 - (e) Copies of the traffic laws and regulations of the area or country.
 - (f) Location of areas adjacent to ports and other transportation centers that are suitable for parking areas, bivouacs, dumps, and warehousing.

CHAPTER 9

SPECIFIC REQUIREMENTS FOR MARINE INTELLIGENCE

41. GENERAL

a. Inland waterways. Maps offer the best source of information on inland waterways. They show location, type (such as river, lake, canal), width and controlling depth, bridge crossings, channel markings, and such over-all data on locks as can be indicated. Written material accompanying a map should give full details on the locks with special attention to the extent of damage and to the repairs needed. Any bridge destroyed to obstruct a channel or any military bridge which interferes with navigation must be described fully. Damage to the banks which will require immediate or early attention should be clearly indicated. Special problems of a particular waterway (such as silt control, artificial control of water level, flooding, or icing) should be subjected to considerable research before the intelligence is ready for use in planning.

✓ b. Ports. Preliminary port data developed in peacetime are usually available. Such data include over-all port capacity; length, width, reach, and capacity of handling equipment; location and depth of water alongside all piers and quays; location and depth of all channels and anchorage grounds; location and type of breakwaters and levees; tidal data; and miscellaneous information on bridges, underwater cables, etc. Means of clearing the port, such as railroads, canals, rivers, and highways, must be considered when planning for port operations. An estimate should be made of the number of trained civilian stevedores available in the port area for possible military use. The tank farm facilities and the total space available for open storage and for warehousing in or near the port area must be known. When a port is captured, all preliminary data must be verified, all new construction reported, and all damage surveyed. The damage will often be extensive as a result of bombing and demolitions, and particular attention must be given to clearing underwater demolitions and obstacles (including mines) prior to using the port. This requires close coordination between the Transportation Corps, the Corps of Engineers, and the Navy.

42. TYPES OF INFORMATION REQUIRED FOR MARINE INTELLIGENCE

a. Maps indicating relative location and importance of the facility or area.

b. Character of the harbor and approaches, including:

(1) Description of the approach channel to include the controlling depth, length, and width and the need for pilotage.

(2) Entrance channel data to include controlling depth and width.

(3) Description of breakwaters, jetties, etc, including location, length, and construction.

(4) General harbor and channel depths, extent of silting, and nature and frequency of maintenance dredging.

(5) Bridges over navigable channels; information should include location and type of bridge and horizontal and vertical clearance at mean low water mark.

(6) Locked basins (wet docks); information should include length, width, and controlling depth; name of the facility; number of locks; detailed information as to number of gates, type of gate (such as swing or roller); and method of operating gate.

(7) Number of usable alongside berths for simultaneous operation. (Use the follow-

ing chart; disregard Naval wharves and piers).

Class of berth	Size vessel accommodated		Equivalent vessel type
	Length (ft)	Draft (ft)	
A	450	24-28	Liberty or Victory
B	350	18-21	CI,-M-AVI
C	250	16	Standard coaster
D	200	12	Small coaster
		6	Lighter

(8) Name, length, beam, and draft of largest vessel to enter port, with date of entry.

c. Anchorages:

(1) Number, location, and type of anchorage berths as follows:

(a) Class I: minimum dimensions—800 yards, diameter; 38 feet, depth.

(b) Class II: minimum dimensions—500 yards, diameter; 30 feet, depth.

(c) Class III: minimum dimensions—300 yards, diameter; 20 feet, depth.

(2) Nature of bottom.

(3) Extent of shelter afforded.

d. Weather, tides, and currents:

(1) Weather information should include items concerning direction, intensity, frequency, and duration of winds, storms, floods, rain, ice, fog, and electrical disturbances. Seasonal occurrence of these phenomena should also be indicated.

(2) Tides, including spring and neap tides, in feet and the effect of the winds on tides.

(3) Tidal currents, direction and velocity.

e. Adjacent beaches:

(1) Location.

(2) Length and width in feet.

(3) Type of soil (suitability for traffic).

(4) Offshore obstructions (reefs, derelicts, etc).

(5) Offshore gradient.

(6) Number of exits and type, construction, and location of each.

(7) Distance to railway.

(8) (Distance to highway.

f. Port clearance:

(1) Railway.

- (a) Name of operating company.
- (b) Number of tracks serving port area.
- (c) Gage.
- (d) Location and condition of spurs, sidings, loading areas, and areas served.

(2) Highway and road.

- (a) Name or number.
- (b) Width in feet.
- (c) Type of road.
- (d) Condition.
- (e) Area served.

(3) Inland waterways.

- (a) Name.
- (b) Depth (feet), width (feet), controlling depth (feet), and safe draft (feet).
- (c) Current (mph) and tidal current (mph).
- (d) Largest vessel that can navigate (feet)—length, beam, and draft.
- (e) Canals.
- (f) Locks—type, method of operation, timing, dimensions, etc.
- (g) Description of waterway between two identifiable points.
- (h) Nature of bottom and of banks.
- (i) Description of aqueducts—length (feet), width (feet), height above stream or valley floor (feet), and construction.
- (j) Description of dams and feed water stream (location, power plants, etc).
- (k) Ports and harbors (winter harbors, basins, etc).
- (l) Seasonal closing—freeze-up date, opening date.
- (m) Floods (extent, season, duration, fluctuation, etc).
- (n) Traffic statistics (tonnage moved in metric or long tons, commodities, methods of dispatch, average haul, relative importance, etc).
- (o) Limiting factors (speed restrictions, constructions, etc).

g. Electric generating plants:

- (1) Name.
- (2) Location.
- (3) Capacity.
- (4) Voltage and type (ac or dc).
- (5) Cycle frequency.
- (6) Operational condition.

h. Traffic data:

- (1) Principal commodities shipped and received.
- (2) Exports and imports (in long tons) to include coastwise traffic.

i. Port and harbor improvement:

- (1) Presently under way.
- (2) Planned or proposed.

j. Piers and wharves (quays).

(1) General.

- (a) Name of pier, wharf, etc.
- (b) Location on waterfront.
- (c) Type of construction (kind of piling, deck, fill, etc).
- (d) Primary use (general cargo, grain, coal, bunkering, passengers, etc).
- (e) Usability and state of repair.
- (f) Owning and operating agency.
- (g) Dockage charges.
- (h) Wharfage charges.

(2) Description.

- (a) Dimensions.
- (b) Depth of water alongside (feet) in measured intervals along entire length (both sides in case of a pier) at mean low water.
- (c) Usable berthing space (length in feet).
- (d) Apron width (feet).
- (e) Deck above mean low water (feet).
- (f) Capacity (pounds per square feet).
- (g) Whether lighted.

(h) Fuel oil line (size and delivery rate per hour).

(i) Water line (size and delivery rate per hour).

(j) Condition.

(k) Obstructions alongside.

k. Transit sheds.

(1) Type of construction.

(2) Condition.

(3) Length and width (feet).

(4) Number of floors.

(5) Height between floors (feet).

(6) Total floor area for freight (square feet).

(7) Allowable floor load (pounds per square feet).

(8) Elevator or ramp.

(9) Whether lighted.

l. Materials handling equipment.

(1) Type—crane, derrick, conveyor, tractor, trailer, truck, etc.

(2) Capacity of each type.

m. Railway connections:

(1) On open wharf.

(2) On apron.

(3) Inside transit shed.

(4) In rear of transit shed.

n. Highway or road exits from pier or wharf.

(1) Name, width (feet), and surfacing (type).

(2) Construction and condition.

o. Purpose of electric current.

(1) Lighting: volts, amperes.

(2) Power: volts, amperes.

p. Vessel - operating lines using facility.

q. Storage facilities, warehousing:

- (1) Name of warehouse.
- (2) Location.
- (3) Kind of storage (general or cold).
- (4) Cold storage facilities (freezers, coolers, power used, etc).
- (5) Picture, numbered and annotated.
- (6) Description (type of construction).
 - (a) Number of floors.
 - (b) Height between floors (feet).
 - (c) Allowable floor load (pounds per square feet).
 - (d) Total floor space that can be occupied (square feet).
 - (e) Total capacity of each floor (cubic feet).
 - (f) Temperature (degrees F).
 - (g) Truck platform (length in feet).
 - (h) Railway serving the warehouse—gage, surface, number trucks, total length (feet), method of loading from warehouse, number tracks.
 - (i) Equipment in warehouse (quantity, kind, capacity, and operating condition), including elevator.
- (7) Distance to water terminal (miles), method of transfer between ship and warehouse (rail, truck, conveyor), and bottlenecks, if any.

r. Open freight storage.

- (1) Name and location.
- (2) Commodity stores, area (square feet).
- (3) Distance to water terminal (miles, method of transfer between ship and storage (rail, truck, etc)).
- (4) Materials handling equipment (cranes, derricks, conveyors, etc), including method of operation (electric, steam, etc).

s. Grain elevators.

- (1) Name and location.
- (2) Type of construction, storage capacity (bushels).
- (3) Vessel berth—number, length each (feet), direction of berth, depth of water alongside in measured intervals along entire length at mean low water (feet), and pictures (numbered and annotated).
- (4) Equipment for unloading (stiff-leg cranes, towers, shovels, dumpers, continuous belts, etc).

- (a) From vessels.
- (b) From cars.
- (5) Equipment for loading (spouts, galleries, etc).
 - (a) To vessels.
 - (b) To cars.
- (6) Normal loading and unloading capacity per hour.
 - (a) Car to elevator (number of cars).
 - (b) Elevator to car (bushels).
 - (c) Ship or lighter to elevator (bushels).
 - (d) Elevator to ship or lighter (bushels).
- (7) Railway serving (name).
 - (a) Gage.
 - (b) Number of tracks, total length (feet).
 - (c) Car capacity.
- (8) Other equipment (scales, cleaning, drying and clipping equipments, etc).

t. Tank farms.

- (1) Name and location.
- (2) Type of tank construction (whether surface or subsurface, steel, concrete, etc).
- (3) Number of tanks, total storage capacity (42-gallon barrels).
- (4) Distance to water terminals (miles).
- (5) Number and size of pipelines.
- (6) Description of pumping equipment.
- (7) Other equipment (refining, etc).
- (8) Railway serving.
 - (a) Gage.
 - (b) Number of tracks.
 - (c) Total length (feet), capacity (cars), loading rack (cars).

u. Bunkering facilities.

- (1) Fuel oil.
 - (a) General.

1. Name of pier on wharf used for bunkering.
2. Reference number on map.
3. Type construction.
4. Berthing space for bunkering (feet).
5. Depth of water alongside in measured intervals along entire length, mean low water (feet).

6. Bunkering capacity (barrels per hour).
7. Number of discharge lines.
8. Size of lines (inches).
9. Fittings (whether standard or metric, flanges, couplings, etc).

(b) Owner.

(c) Location.

(d) Storage facilities (tanks).

1. Location of tank farm.
2. Number of tanks.
3. Type of construction.
4. Total storage capacity (42-gallon barrels).
5. Intake pipelines (description of origin).
6. Type of pumping equipment.
7. Number of lines.
8. Size (inches).

(e) Source of supply.

(f) How received.

(g) Grades kept in stock.

1. Maximum supply (barrels).

2. Normal supply (barrels).

(h) Barges (list and describe).

(2) Coal.

(a) Owner.

(b) Location.

- (c) Berthing space for bunkering (feet).
- (d) Depth of water alongside, mean low water (feet).
- (e) Storage capacity for bunker coal (type of storage facility—covered, pockets, open on tracks in cars, etc).
- (f) Normal amount in stock.
- (g) Source (kind, quality, and location of mines or oversea source).
- (h) Bunkering alongside pier or wharf (method, equipment, and capacity per hour in tons).
- (i) Bunkering by lighter (method and equipment, delivery rate per hour, etc). (See Form TCPL-6 for floating equipment).
- (j) Cost of coal per gross ton:
 - 1. Bringing to ship.
 - 2. Placing aboard.
 - 3. Trimming in bunkers.

v. Ship repair yards (general):

- (1) Name and location.
- (2) Number of building ways and largest vessel built.
 - (a) Type of fabrication (wood, steel, etc).
 - (b) Source and type of power for plant.
 - (c) Capacity of plant and draft in channel (largest vessel that can be built and moved out).
 - (d) Repair facilities (machinery, etc).
 - (e) Detailed description of type repairs undertaken (hull, engine, etc).
 - (f) Largest shafts produced (length of bed and swing of largest lathe).
 - (g) Largest castings produced (long tons).
- (3) Description of outfitting piers and equipment.

w. Drydocks.

- (1) Type (graving or floating).
- (2) Type of construction.
- (3) Entrance width.
- (4) Type of gate or caisson.
- (5) Usable length and width.

- (6) Method of emptying and flooding.
- (7) Power and size of pumps.
- (8) Time taken to empty or float (hours).
- (9) Depth over sill or keel blocks (feet).
- (10) Lifting capacity in long tons.
- (11) Tidal difference, high and low (feet).
- (12) Largest vessel handled (feet).
- (13) Crane service (description, type, power, capacity, location, etc).

x. Marine railways.

- (1) Type and construction.
- (2) Width of cradle at top of keel blocks (feet).
- (3) Length of cradle (feet).
- (4) Depth over keel blocks in outboard position at mean high water.
 - (a) Forward end (feet).
 - (b) After end (feet).
- (5) Hauling equipment.
 - (a) Type.
 - (b) Power used.
- (6) Lifting capacity of cradle (long tons).
- (7) Tidal difference, high and low (feet).
- (8) Largest vessel handled (feet).
- (9) Description of crane service (type, power, capacity, location, etc).

y. Tugs and powered vessels.

- (1) Purpose for which used.
- (2) Base from which operated.
- (3) Number available.
- (4) Length, over-all (feet).
- (5) Beam (feet).
- (6) Draft, loaded --- light (feet).
- (7) Power plant (steam, etc).

- (8) Indicated horsepower.
 - (9) Open or covered.
 - (10) Dry cargo capacity (long tons).
 - (11) Liquid cargo capacity (42-gallon barrels).
 - (12) Bunker capacity (long tons or barrels).
 - (13) Operational condition.
- z. Dry cargo barges.
- (1) Dry cargo (dump).
 - (a) Purpose.
 - (b) Base from which operated.
 - (c) Number available.
 - (d) Length, over-all (feet).
 - (e) Beam (feet).
 - (f) Draft loaded (feet).
 - (g) Open or covered.
 - (h) Cargo capacity (long tons).
 - (i) Mechanical equipment.
 - (j) Operational condition.
 - (2) Water.
 - (a) Purpose.
 - (b) Base from which operated.
 - (c) Number available.
 - (d) Length, over-all (feet).
 - (e) Beam (feet).
 - (f) Draft loaded (feet).
 - (g) Capacity (long tons).
 - (h) Method of delivery to ship.
 - (i) Rate (long tons per hour).
 - (j) Power (dumps, etc).
 - (k) Operational condition.

(3) Fuel.

- (a) Purpose.
- (b) Base from which operated.
- (c) Number available.
- (d) Length, over-all (feet).
- (e) Beam (feet).
- (f) Draft loaded (feet).
- (g) Capacity (long tons, coal).
- (h) Capacity (barrels of oil).
- (i) Discharging equipment (coal).
- (j) Pumping equipment.
- (k) Size of fittings (inches).
- (l) Rate (tons or barrels per hour).
- (m) Operational condition.

(4) Crane.

- (a) Purpose.
- (b) Base from which operated.
- (c) Number available.
- (d) Length, over-all (feet).
- (e) Beam (feet).
- (f) Draft (feet).
- (g) Type of crane.
- (h) Lifting capacity (long tons).
- (i) Reach (feet).
- (j) Length of boom (feet).
- (k) Power (steam, electricity, etc).
- (l) Self-propelled or dump.
- (m) Operational condition.

aa. Miscellaneous.

- (1) Latest port and town plans.

- (2) Hydrographic charts.
- (3) Tentative and detailed plans of railway marshaling yard within the tributary to the port area.
- (4) Pictures of entire port areas and of important sections, including shots of individual port and port clearance facilities and equipment from various angles. Pictures of facilities and equipment should be identified with port plan reference number of a particular pier or wharf. Date, as well as direction and distance from which picture was taken, should be indicated.
- (5) Indigenous labor, including stevedores, longshoremen, towboatmen, riggers, ship fitters, crane operators, machinists, welders, divers, and other marine specialists.

APPENDIX I

REFERENCES

FIELD MANUALS

FM 30-5 Military Intelligence --Combat Intelligence
FM 30-15 Examination of Enemy Personnel, Repatriates,
Civilians, Documents and Materiel
FM 30-101 The Maneuver Enemy
FM 30-102 Handbook on Agressor Military Forces
FM 30-103 Agressor Army Order of Battle
FM 30-104 Agressor Army Representation Operations and
Equipment
FM 101-5 Staff and Combat Orders

ARMY REGULATIONS

AR 45-80 Ordnance Property
AR 380-5 Safeguarding Military Information

FORMS

DA AGO Form 996 Classified Document Receipt