

APPENDIX A

ORDERS AND ANNEXES

Orders and annexes are critical components of corps engineer C2. The corps engineer brigade commander exercises functional control over engineer operations within the corps (engineer units supporting maneuver divisions, separate brigades, and cavalry regiments) by including critical instructions in the corps order and the engineer annex. The corps engineer brigade commander also issues a unit order to exercise both fictional and unit control over forces committed to corps-level operations. These units are normally task-organized by the corps under the control of the corps engineer brigade commander. Therefore, it is imperative that the corps engineer brigade commander understands how to use the combination of corps and unit orders to convey the plan.

This appendix is divided into two major sections. The first section deals with the corps OPORD, the engineer annex and the topographic operations annex. This section provides the base format of the corps OPORD, highlighting areas where the corps engineer may have direct input. It also outlines the format and content of the engineer and topographic operations annexes and provides sample overlays. The second section focuses on corps engineer unit orders. It provides a format and content for the corps engineer unit WARNORD and OPORD, including possible annexes, overlays, and FRAGOs.

THE CORPS OPORD, THE ENGINEER ANNEX, AND THE TOPOGRAPHIC OPERATIONS ANNEX

CORPS OPORD

Figure A-1, pages A-2 through A-5, is a sample format of the corps OPORD. Paragraphs in which the corps engineer brigade commander may provide engineer input are highlighted.

ENGINEER ANNEX

The engineer annex contains information not included in the base corps order that is critical to the corps engineer plan or required for subordinate engineer planning. It does not include instructions or orders directly to corps engineer units. All instructions or tasks are addressed to maneuver divisions, separate brigades, and cavalry regiments--not supporting corps engineer units. More important, the en-

gineer annex covers critical aspects of the entire engineer plan, not just parts that pertain to engineer units. The engineer annex is not a replacement for a unit order. For example, it does not give subunit orders and service support instructions to engineer units remaining under the corps engineer brigade command; those orders and instructions are contained in the corps engineer brigade order. The engineer annex should meet the following general criteria:

- Includes critical information derived from the EBA process.
- Ž Contains all critical information and tasks not covered elsewhere in the order.

(Classification)

Copy _____ of _____ copies
Issuing Headquarters
(Place (coordinates) country)
(Date-time group, month, year)
(Message reference number)

OPERATION ORDER (number) (code name, if used)

Reference(s): Map(s) and other references required.

Time Zone Used Throughout the Order:

Task Organization:

- Ž Must accurately reflect the engineer task organization of the unit's supporting maneuver divisions, separate brigades, and cavalry regiments, including the command or support relationship.
- Ž List units under the corps engineer brigade commander's command.
- Ž List units remaining under corps control.

1. SITUATION.

a. Enemy Forces. Include recant enemy engineer activities or capabilities that are critical to maneuver division, separate brigade, and cavalry regiment commanders or are essential to understanding the corps engineer plan.

b. Friendly Forces.

c. Attachments and Detachments.

- Ž State the effective time for engineer task organization if it differs from other units.
- Clarify or highlight changes in engineer task organization that occur during a phase of the operation. For example, releasing corps control of bridge units to divisions.

2. MISSION.

3. EXECUTION.

Intent.

a. Concept of the Operation.

- (1) Maneuver.
- (2) Fires.
- (3) Counterair operations.

Figure A-1. Corps OPORD

(4) Intelligence.

- Include the focus of engineer intelligence-collection efforts that impact on the maneuver plan.
- Provide subordinate units with information requirements that are command PIR, as coordinated with the G2 and the corps commander.
- Ž Include special topographic product Information, such as river and trafficability data.

(5) Electronic warfare.

(6) Engineer.

- Ž Describe the concept of engineer operations to support the maneuver plan.
- Establish the priority of effort and priority of support by mission and unit for each phase of the operation.
- Focus primarily on support to simultaneous deep, close, and rear operations.
- Ž Discuss corps-level missions only as they impact on division, separate brigade, and cavalry regiment commanders.

(7) (Others, as needed.)

b. Tasks to Maneuver Units.

- Ž Mission-essential engineer tasks to be accomplished by a specific maneuver element.
- Ž Mission-essential tasks to be accomplished by engineers task-organized to maneuver elements.

c. Tasks to Combat Support Units. May include corps-level tasks assigned to the corps engineer brigade. Only listed to inform division, separate brigade, and cavalry regiment commanders of tasks under corps control using corps-level forces.

d. Coordinating Instructions.

- Ž Critical engineer instructions common to two or more maneuver units.
- Ž Does not normally include SOP information unless it is needed for emphasis.
- Ž May include times or events in which corps-directed obstacle zones and ORAs become effective, if they differ from the effective time of the order.
- Ž Establish initial mission-oriented protective posture (MOPP) level for operation.

4. SERVICE SUPPORT.

a. General Concept of Logistics Support.

- Ž Concept for push of Class IV/V supplies.
- Ž Concept for logistics support of organic and supporting corps engineers task-organized to maneuver divisions, separate brigades, and cavalry regiments, if not listed in service

Figure A-1. Corps OPORD (continued)

- support annex.
 - Ž Concept for bridging supplies.
 - b. Materiel and Services.
 - (1) Supply.
 - Ž Division, separate brigade, and cavalry regiment allocations of Class IV or engineer Class V supplies, if not contained in the engineer annex.
 - Ž Tentative locations for transfer of Class IV/V supplies to maneuver divisions, separate brigades, and cavalry regiments.
 - Ž Locations of bridging supplies in the corps area.
 - Ž Standard map-product supplies.
 - (2) Transportation. Transport of engineer-related supplies by corps units or organic engineer haul assets.
 - (3) Services.
 - c. Medical Evacuation and Hospitalization.
 - d. Personnel.
 - e. Civil-Military Cooperation.
 - f. Host-Nation Support.
 - Ž Real estate procurement procedures.
 - Use of host-nation construction forces.
 - g. Contracting.
 - Ž Construction contracting procedures.
 - Use of LOGCAP.
 - h. Miscellaneous.
5. COMMAND AND SIGNAL.
- a. Command.
 - b. Signal.

Figure A-1. Corps OPORD (continued)

Acknowledge

Commander's Signature (optional)
 Commander's last name
 Rank

OFFICIAL:
 (Authentication)

Annexes:

Distribution:

Figure A-1. Corps OPORD (continued)

- Does not contain items covered in SOPs unless the mission requires a change to the SOP.
- Ž Contains information and tasks directed to major subordinate elements of the corps, not supporting engineer units.
- Contains clear, complete, brief, and timely directives, but avoids qualified directives.
- Includes only information and instructions that have been fully coordinated with other parts of the OPORD, the corps commander, and the staff.

The engineer annex includes any combination of written instructions, matrices, or overlays necessary to convey the essential details of the engineer plan. The engineer annex provides a standard format for both offensive and defensive operations. This format standardizes the organization of information included as written instructions. The actual content depends on the type of operation and engineer plan. A standardized annex format makes it easier for the engineer staff officer to remember what should be included, as well as for subordinate staff officers to find required information. The format tailors the five-paragraph order to convey critical information.

The engineer annex may also include matrices and overlays, as necessary, to convey the plan. Matrices may be used as part of the body of the annex or as separate appendices. They are used to quickly convey or summarize information not needing explanation, such as logistics allocations, corps obstacle zone priorities and restrictions, or the task summary (execution matrix). Finally overlays are used to give information or instructions and expedite integration into the overall combined arms plan. At corps level, information shown on overlays may include but is not limited to—

- Ž All existing and proposed friendly obstacles and control measures (obstacle zones, restrictions, and lanes; directed and reserve obstacles; and corps-level situational obstacles, including associated NAI/TAI).
- Known and plotted enemy obstacles (must also be on situation template).
- Ž Logistic locations and routes, as they apply to engineer operations.
- NBC-contaminated areas.
- Scatterable mine restrictions.
- Ž River-crossing locations and restrictions.
- Ž Proposed thorough decontamination sites.

Figure A-2, pages A-7 through A-11, is a sample format of a written engineer annex. Figures A-3 through A-5, pages A-12 through A-14, provide sample matrices and overlays.

TOPOGRAPHIC OPERATIONS ANNEX

The corps prepares a topographic operations annex to all OPORDs. This annex provides the direction needed by subordinate elements of the command to obtain support from topographic units and guidance for the employment of those units. The format for the topographic annex is shown in Figure A-6, pages A-15 through A-18. Proper preparation of the annex demands detailed identification and definition of all requirements for topographic products and services, whether provided by the DMA or field units. The preparation of the topographic annex is not limited to topographic products, but applies to any products and services in the MC&G field which are required to support the corps OPORD.

(Classification)

copy _____ of _____ copies
Issuing Headquarters
(Place (coordinates) country)
(Date-time group, month, year)
(Message reference number)

Annex _____ (Engineer) to OPORD _____

Reference: Map(s) and other references required.

Time Zone Used Throughout the Order:

Task Organization: List all engineer units and task-organize them to maneuver divisions, separate brigades, and cavalry regiments; the corps engineer brigade organization; or the corps.

- Ž List all engineer units supporting the corps and engineer units task-organized to other than the parent unit.
- May include a summary of low-density equipment, as necessary, to clarify unit task organization.
- Ž Address command/support relationships as appropriate.
- Clearly identify changes in engineer task organization that occur during the operation.
- Ž Must track with basic order.

1. SITUATION.

a. Enemy forces.

- Ž Terrain. Critical aspects of the terrain impacting operations, including river and trafficability data.
- Weather, Critical aspects of the weather impacting operations.
- Ž Enemy engineer capability/activity.
 - Known and plotted locations and activities of enemy engineer units.
 - Significant enemy maneuver and engineer capabilities that impact on engineer operations.
 - Expected employment of engineers based on the most probable enemy course of action.

b. Friendly forces.

- Designation, location, and activities of higher and adjacent engineers impacting on corps or requiring coordination.
- Ž Nonengineer units capable of assisting in engineer operations (such as nonengineer units capable

Figure A-2. Engineer Annex

of emplacing scatterable mines).

c. Attachments and Detachments.

- Ž List units attached or detached, only as necessary to clarify task organization.
- Highlight changes in engineer task organization occurring during operations along with effective times or events.

2. MISSION. Same as corps mission statement.

3. EXECUTION.

a. Scheme of Engineer Operations.

- Describe the concept of engineer operations to support the maneuver plan. Must tie critical tasks or main effort to the corps defeat mechanism.
- Establish the main effort of the engineer effort by mission and unit for each phase of the operation.

Ž Focus primarily on corps engineer support to simultaneous deep, close, and rear operations.

- Discuss corps-level engineer missions only as they impact on division, separate brigade, and cavalry regiment commanders.

(1) Obstacles.

- Supplement the narrative above, focusing specifically on details of the countermobility effort.
- Identify directed obstacle zones and ORAs used to support simultaneous corps deep, close, and rear operations. Assign zone responsibilities, priorities, and restrictions to obstacle zones. Zone restrictions may preclude the use of certain types of mines or obstacles or the use of obstacles on specific routes through zones.

Ž Identify, prioritize, and assign responsibilities for corps-directed tactical and reserve demolition obstacles. Also, provide execution criteria for reserve obstacles.

(2) Situational obstacles.

Ž Concept for the employment of situational obstacles. Focus on how they will be used to support the corps maneuver plan, including scatterable mines.

Ž Corps-planned and executed. Clearly identify location, intent, and execution criteria of corps-level obstacles planned and executed by the corps.

- Corps-planned/division, separate brigade, or cavalry regiment-executed. Assign responsibilities for executing corps situation obstacles emplaced and resourced by the corps. Discussion must include details on NAls, TAls, decision points, and execution criteria.
- Corps-resourced/division, separate brigade, or cavalry regiment-planned and executed. Assign intent and allocate resources to divisions, separate brigades, and cavalry regiments. May also state execution criteria.
- Authority. For each type, clearly state the headquarters maintaining the authority to use scatterable mines and any restrictions on duration (by zone).

Figure A-2. Engineer Annex (continued)

(3) Bridging.

- Ž Concept for the employment of float and fixed bridging in the corps area.
- Concept for host-nation bridging support.
- Locations of corps bridge parks/host-nation bridge supply points.

(4) Construction.

- Concept for horizontal and vertical construction in the corps area.
- Host-nation or contract construction capability.
- Ž Standards of construction.
- Ž Environmental guidance.
- Ž Use of LOGCAP for construction.
- Ž Use of EWL.

(5) Topographic engineering. Refer to the Topographic Operations Annex to the corps OPORD.

b. Subunit Instructions. (All tasks listed as division, separate brigade, and cavalry regiment missions or engineer units under corps control.)

- Ž Engineer tasks to be accomplished by a specific subordinate unit and not contained in the base OPORD.
- Engineer tasks to be accomplished by engineers supporting maneuver elements (only as necessary to ensure unity of effort).
- Corps-level tasks assigned to the corps engineer brigade organization are included, List only to inform subordinate unit commanders of tasks under corps control using corps-level forces.

c. Coordinating Instructions,

- Critical engineer instructions common to two or more maneuver units not already covered in the base OPORD.
- SOP Information, only if needed for emphasis.
- Ž Times or events in which obstacle zones and ORAs become effective, if they differ from the effective time of the order.
- Ž Corps PIR that must be considered by subordinate engineer staff officers or that require reports to the ACE.
- Mission reports required by the ACE (if not covered in Signal paragraph or unit SOP).
- Explanation of EWL, If used.

4. SERVICE SUPPORT.

a. Command-Regulated Classes of Supply.

Figure A-2. Engineer Annex (continued)

Ž Highlight subunit allocations of command-regulated classes of supply that impact on the operation's CSR.

Ž May summarize in a matrix or table.

b. Class IV/V Supplies Distribution Plan.

Ž State the method of supply (supply point or unit distribution) to be used for Class IV/V supplies for each subunit.

- Give tentative locations for Class IV/V supply points or locations for linkup of corps or theater push packages directly to units.
- Give allocation of Class IV/V supplies by division, separate brigade, cavalry regiment, zone, or a combination. May be summarized in a matrix or table.

c. Transportation.

Ž Allocation and priority of support of theater and corps haul or airlift assets dedicated to division, separate brigades, and cavalry regiments for Class IV/V supplies haul.

Ž Requirements for divisions, separate brigades, and cavalry regiments to supplement corps transportation of mission loads (for example, divisions, separate brigades, and cavalry regiments responsible for haul forward of PL ____, each division, separate brigade, and cavalry regiment provides ____ heavy expanded mobility tactical trucks (HEMTTs) to haul mission).

d. Health-Services Support. Address arrangements made for theater engineer units operating in corps areas.

e. Host Nation.

Ž Types and locations of host-nation engineer facilities, assets, or support.

Ž Procedures for requesting and acquiring host-nation engineer support.

Ž Limitations or restrictions on host-nation support (for example, host-nation personnel not authorized forward of PL____).

f. Personnel Support. Address arrangements made for theater engineer units operating in corps areas.

5. COMMAND AND SIGNAL.

a. Command.

Ž Location of key engineer leaders.

Ž Designated chain of command.

- Designated headquarters that controls the effort within work lines on an area basis.

b. Signal.

Ž Nets monitored by the ACE and the corps TAC and rear CP engineers for reports, if different than SOP.

Ž Designated critical engineer reporting requirements of subordinates, if not covered in coordinating

Figure A-2. Engineer Annex (continued)

Instructions or SOP.	
ACKNOWLEDGE	
	COMMANDER Rank
Official /s/ Name Position	
Appendices --Obstacle overlay (Figure A-3) --Large-scale breach overlay (Figure A-4) --Rear operations overlay (Figure A-5)	

Figure A-2. Engineer Annex (continued)

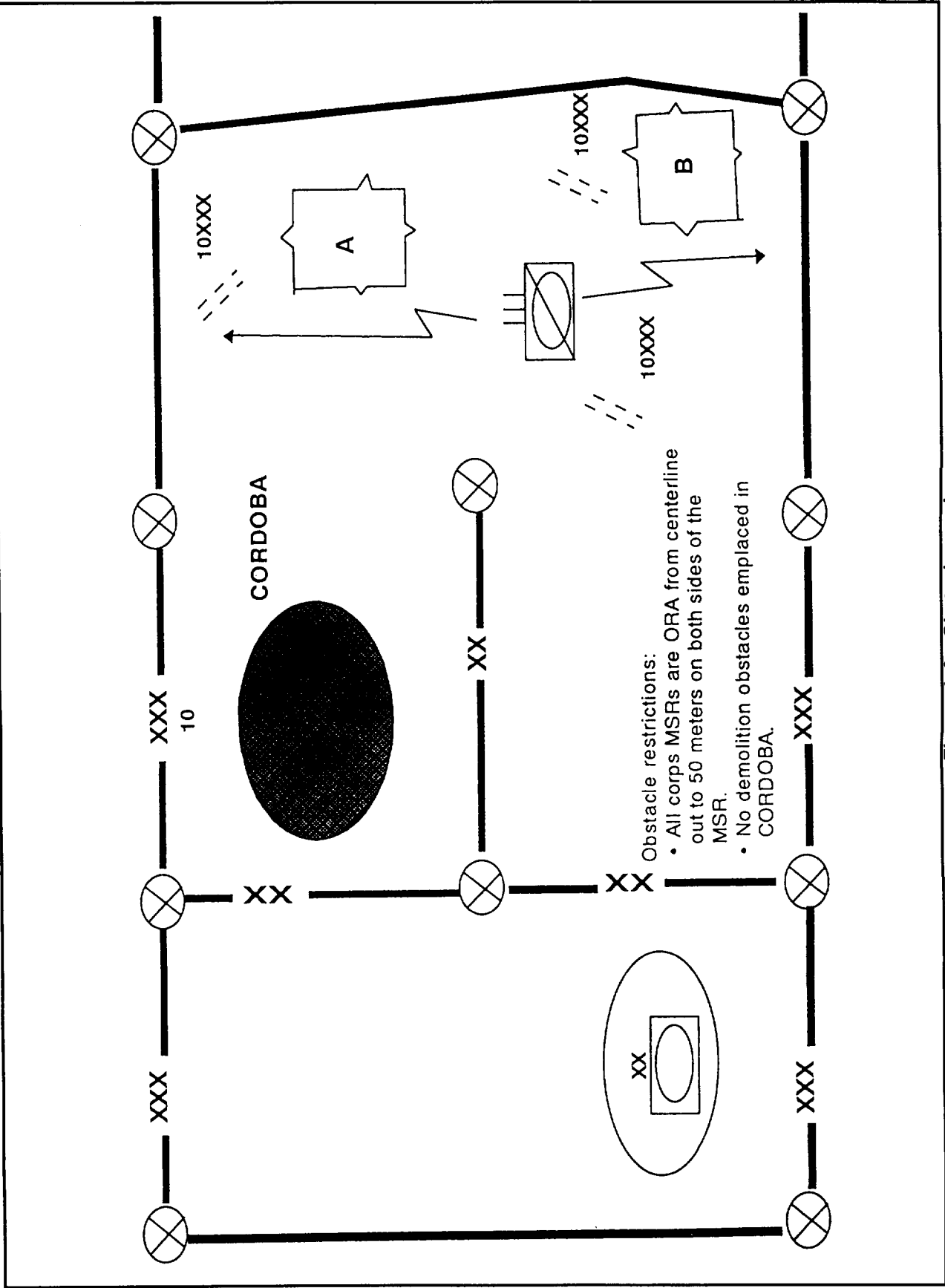


Figure A-3. Obstacle overlay

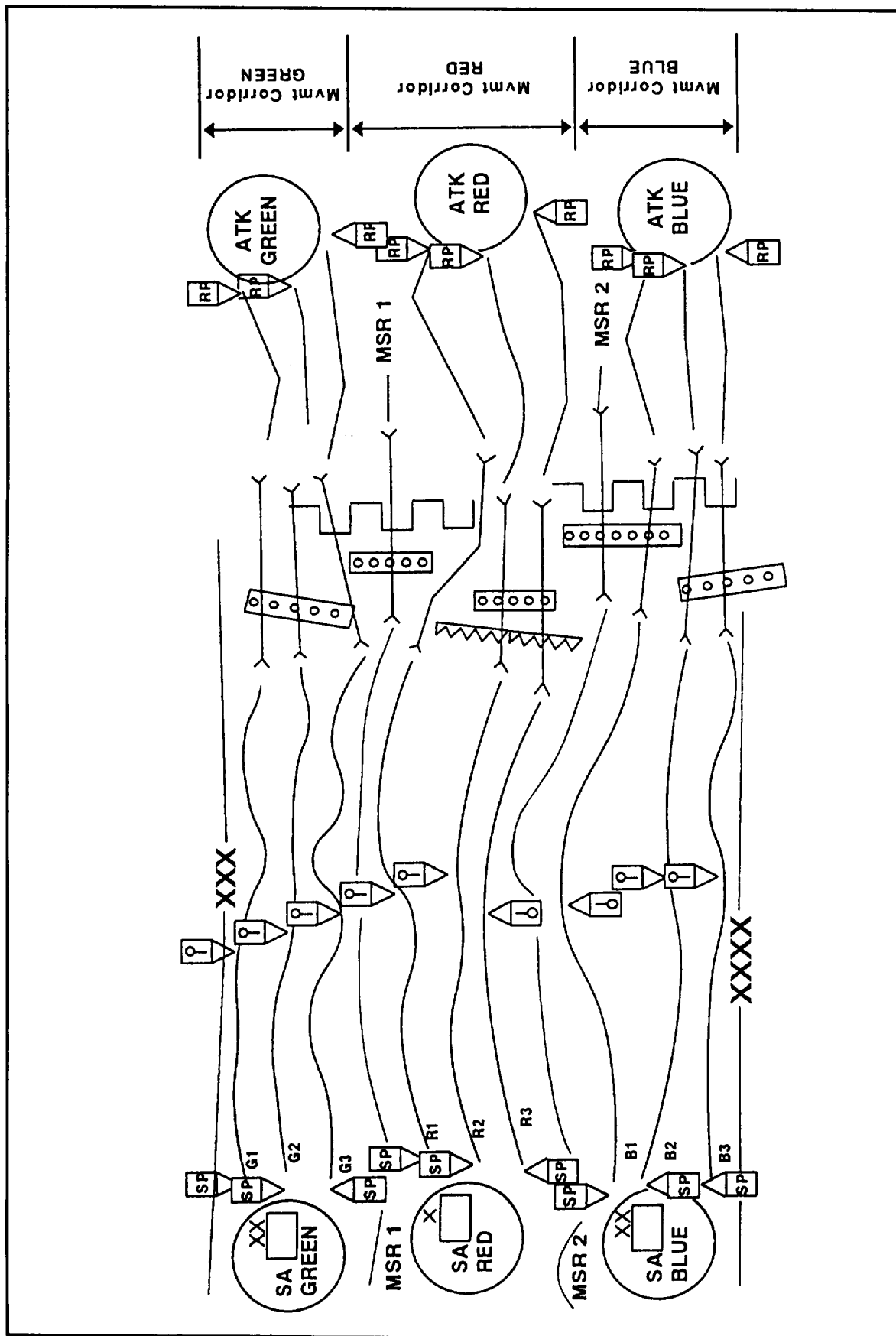


Figure A-4. Large-scale breach lane overlay

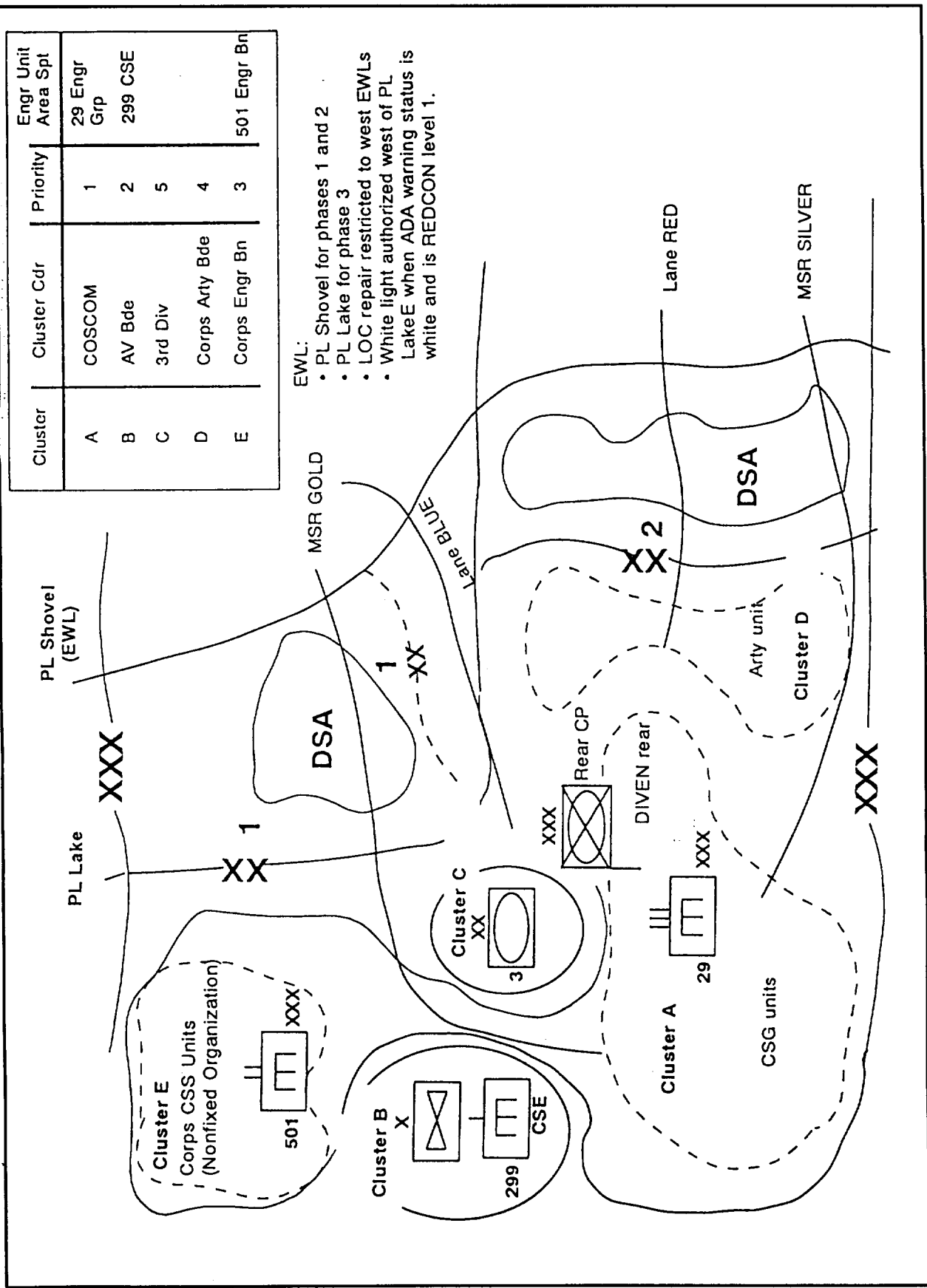


Figure A-5. Engineer rear-area operations

(Classification)

copy _____ of _____ copies
Issuing Headquarters
(Place (coordinates) country)
(Date-time group, month, year)
(Message reference number)

Annex _____ (Topographic Operations) to OPORD _____

References:

- a. List those standard maps that are required for an understanding of this annex.
- b. List those documents which provide the guidance required for the necessary planning functions that are relevant to this annex.

1. SITUATION.

- a. MC&G Requirements. List the MC&G products that are required to support the OPORD. Show desired area coverage and quantitative requirements using an appendix if necessary or by portraying them graphically using standard index bases.
- b. Available Products. Provide a general statement regarding the availability and adequacy of the MC&G data and related material required to support the OPORD.
- c. Capabilities. List those topographic engineer forces that are assigned or attached. Show the latest arrival date (LAD) for each topographic engineer unit that is contained in the time-phased force deployment data (TPFDD). If this is of sufficient length, use an appendix for recording detailed transportation requirements and procedures. Reference the appendix. Take notice that the format for the appendix should follow local procedures.
- d. Supporting Capabilities. List those topographic engineer forces that are not assigned or attached but which will be required to provide topographic support needed to implement this plan, including units not deployed. Specify the type of command relationship desired for each unit plus the type and duration of support required.

2. MISSION. Restate the corps OPORD mission statement.

3. EXECUTION.

- a. Concept of Topographic Operations.
 - (1) General. Describe how the command will provide the topographic support necessary to meet the commander's overall mission requirement. Include--
 - Time phasing of operations.
 - Ž Nature and purpose of topographic operations to be conducted.
 - Ž Joint or multinational topographic support.
 - Support from the DMA.

Figure A-6. Topographic annex

- Support provided by agreements, coordination, and cooperation necessary for the successful implementation of the OPORD. Describe the scope and extent of foreign/host-nation support that is available to enhance topographic operations in support of the OPORD.

(2) Deployment. Summarize the requirements for deploying topographic engineer forces and depot activities from their normal peacetime locations. Include the area of operations, emphasizing careful time planning of this deployment.

(3) Employment. Describe in general terms how deployed topographic engineer forces are to be employed to conduct topographic operations.

b. Tasks. Explain detailed responsibilities of commanders, staffs, and topographic units. In separate numbered subparagraphs, list the topographic tasks assigned to each element of the command and for those units that provide support to the OPORD. Each task should be spelled out in a concise statement, including a mission to be performed in terms of further planning or execution of the overall plan. These task assignments should be sufficiently detailed to ensure that all elements essential to the concept of the operations are described properly. Ensure that responsibilities are assigned to establish, validate, and submit MC&G requirements and to task topographic engineer units supporting the OPORD. State responsibilities for defining and adjusting command stockage levels at map supply points. Specify map and data storage and distribution responsibilities for pick-up and storage.

c. Coordinating Instructions. The final subparagraph, lettered appropriately, should be in separately numbered subparagraphs. List those instructions that apply to the entire command or to two or more elements of it that are necessary for proper coordination of the MC&G support. Specify points of contact (POCs) within the command who can authorize the release of war reserve stocks held or who can resolve command MC&G problems. State whether a push or pull system will be employed. Specify any restrictions or quantity of the special products which may be required. Also, explain the command's system for setting priority and for allocating resources to deal with demands on limited resources. Describe how notification of forces and agencies will be carried out and how notification will be time-sequenced. Provide the conditions under which contacts with host-nation agencies are authorized and identify those POCs.

4. ADMINISTRATION AND LOGISTICS.

a. Supply and Storage.

(1) MC&G products. Provide instructions on the MC&G supply and storage procedures and requirements. Give guidance for obtaining routine and emergency replenishment of MC&G products. Address any expected constraints on this replenishment. Include the planned locations of command and supporting MC&G storage sites and facilities. Specify the type and quantity of MC&G products to be held by the supporting command's units. Give guidance for lead times that are required for furnishing nonstandard special-purpose product support or responding to large quantity orders.

(2) Support of topographic engineer units. Specify the requirements needed for the provision of nontopographic as well as topographic logistics supports.

b. Transportation.

(1) MC&G products. Provide guidance for the movement of MC&G products from supporting supply points to the ultimate users. List, as a minimum, the time-phased transportation requirements list (TPTRL) portion of the TPFDD reflecting movement of MC&G materials. List any transportation shortfalls in the required support of topographic operations. Also, list contingency plans to fully carry out and sustain topographic operations in the event that full transportation requirements cannot be provided. An appendix may be used, if necessary, to list detailed transportation requirements and procedures.

(2) Topographic engineer units. Provide guidance for integrating the topographic engineer unit's transportation requirements into the command's movement order.

Figure A-6. Topographic annex (continued)

c. MC&G Support. Provide instructions for obtaining planned support. Itemize the division of responsibilities between organic units and supporting topographic engineer units to ensure that actions to procure and stock MC&G products are complementary. Identify POCs for emergency procurement. Normally, access to the DMA support is only available through the theater/JTF command.

d. Reports. Specify how reports are to be formatted as well as what time limits, methods, and classification apply to their submission. Enter this in the appendix. Follow local procedures for format.

5. COMMAND AND SIGNAL.

a. Priorities. Delineate the priority of MC&G support to supported units and the priority of production for MC&G products.

b. Command Relationships. Include primary and alternate locations of all major topographic engineer units and supporting DMA organizations. Specify the C2 relationships between the command and its attached or supporting MC&G units and organizations if this has not previously been addressed.

c. Command and Control. Provide a statement describing the scope and types of any special signal support that is required for MC&G operations. With the exception of survey units, most topographic units have few communications capabilities. Thus, explicit tasks are assigned to ensure that these units are effectively supported by the command's assets. This is especially critical in the case of distribution platoons operating map supply points. Refer to the signal annex of the OPORD.

/s/
Corps Commander

OFFICIAL:

Corps Engineer

Appendices:

- 1 - MC&G Requirements List
- 2 - MC&G Transportation Requirements (optional) (not shown)
- 3 - MC&G Reports (optional) (not shown)

Figure A-6. Topographic annex (continued)

(Classification)

Copy _____ of _____ copies
Issuing Headquarters
(Place (coordinates) country)
(Date-time group, month, year)
(Message reference number)

Appendix 1 to Topographic Annex to HQ OPLAN (Number)

MC&G Requirements List

Required items 1/	Coverage Required 2/	Coverage Available /3	Quantity /4
1. Standard Aerospace Products			
2. Standard Hydrographic Products			
3. Standard Topographic Products			
4. Standard Air Target Materials			
5. Survey Requirements			
6. Standard Multiuse Data Bases			

1/ Generalized description such as a map series, scale, or digital data. Stock number of a specific item is not required.

2/ Area to be covered described by geographic coordinates, political boundaries (identified by geopolitical codes), and recognizable geographic area Attach a graphic or list in a tab to the appendix.

3/ Attach as a graphic or list related to coverage required or source for special-purpose products in a tab to the appendix.

4/ Number of copies of each sheet, chart, or item needed to support the OPLAN. Attach a list by stock number in a tab to the appendix.

Figure A-6. Topographic annex (continued)

The types of products and services needed to carry out unit missions and the quantity and frequency of the support desired, are listed. As a minimum, maps and charts required for operational support must be identified.

To calculate the quantity of maps required for a particular OPORD, plot the geographical areas covered by the unit's areas of operations and interest on copies of appropriate indexes from the DMA or on a theater/JTF map catalog. A small-scale map of the general area may be used to plot and correlate the area to the index. Factors to be considered in setting up areas of operations and interest are given in FM 100-5. Areas of operations are designated by the next higher level of command. An alternative method is listing the stock numbers for all the sheets required. Usually, a combination of both methods is done since each has specific advantages.

The next step is to determine the size and type of units to be employed, since this defines the quantity of products required to support the OPORD. The theater/JTF commanders usually publish supplements to Army Regulation (AR) 115-11 which contain a list of generic units and the quantities of MC&G products each is authorized to order. If a supplement has not been published, the tables found in FM 101-10-1/2, Section IV, Topography, provide the necessary guidance. The quantity per sheet is then the sum of authorization for all subordinate units. The quantity per sheet multiplied by the number of sheets required for the geo-

graphical area is the basic load. The term *days of supply* is meaningless for maps since the speed with which a unit moves through any given area is determined by the mission as influenced by the weather, the terrain, and the enemy situation.

Planning stocks are those maps required by commanders and staffs to plan an anticipated operation. Allowances, most of the time, are no more than 20 percent of the basic load. Command guidance should define whether or not this quantity is authorized in addition to or as *part* of the basic load.

Operational stocks are those that have been consumed, through loss or destruction during execution of the OPORD. These stocks must be replaced. Operational stock allowances are usually limited to no more than 20 percent of the basic load.

Overlap must be considered. A simple addition of authorizations for all units under a command is not the total number of maps required for any particular map sheet. To figure this told correctly look at the geographic area coverage required for each unit at any level, based upon the unit's mission and employment capabilities. Questions such as "Do all divisions in a corps require coverage for the entire corps area?" need to be addressed. Entire coverage may be required for the corps aviation brigade, even though all the maps may not be in use at the same time.

ENGINEER UNIT ORDERS

The corps engineer brigade commander uses a unit order to exercise unit control over engineer units remaining under his command. At the outset of an operation, the corps engineer brigade commander uses his order to effect the necessary task organization of engineers in the corps, to assign initial missions, and to establish sustainment integration with the COSCOM and CSGs. Once the task organiza-

tion is effective and during combat operations, the corps engineer brigade commander directs subsequent unit orders only to those engineers under his command. Orders, missions, and instructions to engineers supporting maneuver divisions, separate brigades, and cavalry regiments in command relationships are included as tasks to the units in the corps order. The exception is the corps engineer unit WARNORD.

The corps engineer brigade commander issues WARNORDs to all engineers in the corps to facilitate parallel planning within engineer units and division, separate brigade, and cavalry regiment engineer staffs. WARNORDs to engineers supporting maneuver units are for planning only and are not executive.

CORPS ENGINEER UNIT WARNORD

The purpose of the WARNORD is to help engineer staff officers and engineer units initiate planning and preparations for an upcoming operation. The WARNORD is critical to foster parallel planning at the engineer-unit and maneuver-unit levels.

There is no prescribed format for the WARNORD. It may be either written or oral but should include the following information:

- **Heading.** WARNORDs must always begin with the words “Warning Order” to ensure recipients understand the information is for use only as a basis for planning and will be followed by orders. The addressees should also be listed in the heading. The corps engineer unit WARNORD should address all engineer units in the corps.

Ž **Situation.** This section includes a brief description of friendly and enemy situations and critical events. It may also include probable missions for the corps and specified or implied tasks, and it may assign tentative tasks for planning only to engineer units.

Ž **Attachments and Detachments.** This section gives tentative and known changes to the task organization. However, it must be clear to engineers supporting maneuver units that changes in task organization are for planning and will not be effective until after an order is received from corps by

the supported division, separate brigade, or cavalry regiment.

- **Earliest Time of Move.** This section states the earliest possible time that units must be ready to move. For units under the corps engineer brigade commander’s command, actual movement times may be given, if known. The earliest time of move is critical to synchronizing sustainment operations to support future missions.
- Ž **Nature and Time of the Operation.** This section provides recipients with as much information about the corps plan as possible to foster parallel planning and preparations and to set priorities. Depending on the maturity of the planning process, this section may include a concept of engineer operations or tentative scheme of engineer operations. Orders for preliminary action may also be included, assigning engineer tasks such as tactical/technical reconnaissance, establishing Class IV/V supply points, establishing bridge parks, and moving to linkup points. These orders are normally qualified as *be prepared* or *on order* tasks, depending on how the plan is established. Orders to engineers supporting maneuver units are always on order, with execution instructions coming through maneuver headquarters-generated orders.
- Ž **Time and Place of Orders Group.** Units under the corps engineer brigade commander’s command are told when and where to receive the entire order and who will attend. Units should identify the composition of the orders group in their SOP.
- Ž **Administrative/Logistical Information.** This includes instructions and warning information on changes in unit logistics operations and lash-up with maneuver

sustainment systems as required by future operations. This information may also direct movement to assembly areas and provide instructions for sustainment after movement.

- Ž Acknowledgement. An acknowledgement of receipt is always required to make sure it is received by all addressees.

CORPS ENGINEER UNIT OPORD

The corps engineer brigade commander issues OPORDs to all engineer units under his command. This OPORD may initially include any engineer unit operating in the corps area as necessary to effect the task organization, assign fissions, and establish sustainment responsibility at the outset of an operation. However, once the task organization is effected, all instructions and missions to engineers supporting maneuver units are conveyed in corps orders and are addressed to the maneuver unit commanders. Figure A-7, pages A-22 through A-27, is an outline of the content of corps engineer unit OPORDs using the standard five-paragraph field order. When the order is an OPLAN instead of an OPORD, assumptions on which the plan is based are included at the end of the Situation paragraph.

CORPS ENGINEER UNIT FRAGO

The corps engineer brigade commander will frequently need to modify his OPORD through the use of FRAGOs in order to make changes in engineer operations that allow the corps to take advantage of tactical and operational opportunities. The corps engineer brigade commander issues FRAGOs only to engineer units under his command. Changes in instructions to engineers supporting maneuver units in

command relationships are conveyed through input into the corps FRAGO. A FRAGO does not have a specified format, but an abbreviated OPORD format is usually used. The key to issuing a FRAGO is to maximize the use of the current OPORD by specifying only information and instructions that have changed. The corps engineer brigade commander can rarely issue FRAGOs to his subordinate commanders face-to-face. He must normally issue FRAGOs over the corps signal net. The corps engineer brigade commander may use the DBC, XO, or a member of his staff to issue the FRAGO in person to subordinate engineer commanders. This ensures that commanders understand the FRAGO and allows graphics to be provided. A FRAGO usually contains the following elements:

- Ž Changes to Task Organization. Any changes to unit task organizations made necessary by the modification to the order.
- Ž Situation. Includes a brief statement of current enemy and friendly situations that usually gives the reason for the FRAGO. It may also update subordinates on the current status of corps-level engineer missions.
- Ž Concept. Gives changes to the scheme of engineer operations and the corresponding changes to subunit tasks. Must also include any changes in the corps or corps engineer brigade commander's intent.
- Ž Coordinating Instructions. Includes changes to Service Support and Command and Signal paragraphs of the current OPORD made necessary by the change in scheme of engineer operations.

<div style="border-top: 1px solid black; width: 150px; margin: 0 auto; padding-top: 5px;">(Classification)</div>	copy _____ of _____ copies (Issuing Engineer Headquarters (Place (coordinates) country) (Date-time group, month, year) (Message reference number)
OPERATION ORDER (number) (code name, if used)	
Reference(s): Map(s) and other references required. Time Zone Used Throughout the Order:	
Task Organization: <ul style="list-style-type: none"> • Include all engineer headquarters of units under corps control. • Include all engineer headquarters of division, separate brigade, and cavalry regiment units, if the OPOD is the initial order for the operation. Ž Include all theater/JTF engineer units operating in the corps area. Ž List groups, battalions, companies, platoons, and detachments task-organized to headquarters other than their parent unit. • May list special equipment, if not clear in unit task organization. Ž Must streamline C2. Ž Address command support relationships, as necessary. 	
1. SITUATION. <ul style="list-style-type: none"> a. Enemy Forces. <ul style="list-style-type: none"> (1) Terrain and weather. <ul style="list-style-type: none"> • Key aspects of the terrain affecting operations. Ž Key and decisive terrain in the corps area that relates to operations. Ž River and trafficability data. Ž Expected weather conditions and impact on operations. Ž Light data and impact on engineer missions. (2) Enemy situation. <ul style="list-style-type: none"> Ž Macro picture of enemy forces facing the corps. Ž Current disposition of enemy forces, including the location of major enemy units (known and 	

Figure A-7. Corps engineer brigade OPOD

plotted), strength, designation (if known), composition, and current activities.

- Enemy engineer activities and capabilities.

Ž Most probable enemy course of action.

- Enemy activities, capabilities, and courses of action that affect corps-level engineer operations.

b. Friendly Forces.

(1) Higher.

- Theater/JTF and corps missions and commander's intent; paraphrase theater or corps commander's intent as it applies to engineer operations.

Ž Brief description of the theater/JTF and corps plans; highlight those aspects that give purpose to missions.

Ž Theater/JTF engineer plans and priorities; where applicable, describe these as they apply to corps engineer operations.

(2) Adjacent. Highlight missions of adjacent corps and theater/JTF engineer units that impact on corps missions.

c. Attachments and Detachments.

Ž List attachments and detachments of organic and supporting engineers to the corps, as necessary, to clarify the task organization.

- Highlight any attachments and detachments that occur during the operation, including the time or event that triggers change.

2. MISSION.

- WHO is the corps engineer brigade organization.

Ž WHAT, WHEN, WHERE, and WHY is the corps mission.

Ž WHAT also includes any essential corps-level engineer missions.

3. EXECUTION.

Intent. The corps engineer brigade commander's intent for the operation.

- Give the corps engineer brigade commander's vision of the operation and how it supports the corps plan.

- Describe the purpose of operations (WHY).

Ž Describe the "end state" of corps-level operations and its link to the "end state" of the corps operation.

- Do not describe the scheme of engineer operations or subunit tasks.

Ž Must link engineer intent to the corps defeat mechanism.

Figure A-7. Corps engineer brigade OPORD (continued)

a. Scheme of Engineer Operations.

- Ž Must be a clear, concise narrative of the engineer plan from beginning to successful end. Uses phases of the corps plan, organization of the defense, or battlefield framework to organize the narrative.
- Must focus on mission-essential engineer missions and corps engineer main effort only; it is not a summary of all engineer tasks. The corps engineer unit order will usually concentrate on engineer operations in the corps rear or corps-level missions in deep and close operations.
- Ž Must clearly identify the corps engineer unit's main effort and how it shifts during the operation to support the corps plan.

(1) Obstacles.

- Supplement the narrative above, focusing specifically on the details of the countermobility effort. Based on the nature of corps-level engineer missions, instructions may concentrate only on corps-directed obstacles and ORAs.
- Ž Identify obstacle zones used to support corps deep, close, and rear operations. Assign zone responsibilities, priorities, and restrictions to corps-level countermobility efforts and engineer units.
- Identify and assign responsibilities for corps-directed tactical and reserve obstacles to be prepared by corps-controlled engineer units.

(2) Situational obstacles.

- Concept for the employment of situational obstacles, focusing on how they will be used to complement or augment conventional tactical obstacle efforts, including scatterable mines.
- Discussion must include details on NAIs, TAIs, decision points, and execution criteria if the scatterable mine target is corps-directed and executed by corps-controlled engineer units.
- Ž Clearly state the headquarters maintaining the authority to use scatterable mines and any restrictions on duration (by zone).

(3) Bridging.

- Concept for employment of float and fixed bridging in the corps area.
- Ž Discussion must include details on crossing sites, bridge parks, and bridge classification.
- Ž Clearly state the headquarters controlling bridging in the corps area.

(4) Construction.

- Ž Concept for horizontal and vertical construction in the corps area.
- Ž Discussion must include details of standards of construction, environmental restrictions, locations of construction materials, and hand-off criteria.
- Ž Clearly state use of host-nation or contract construction support, including LOGCAP.

(5) Topographic engineering.

Figure A-7. Corps engineer brigade OPORD (continued)

- Ž Topography concept.
- Ž Procedures.
- Standard/special products.
- Ž Terrain-data management.

b. Tasks to Subordinate Units.

- Clear, concise listing of all tasks assigned to engineer units remaining under the corps engineer brigade commander's control.
- Ž Each engineer group, battalion, and separate company headquarters remaining under the corps engineer brigade commander's control.
- Ž Tasks assigned by unit and generally listed in the order they will be executed during the operation.
- Ž Clearly distinguished "be prepared" and "on order" tasks from normal tasks.
- Ž Tasks/instructions common to two or more units are not included.
- All corps-level missions identified during the estimate process, if necessary

c. Coordinating Instruction.

- Includes tasks and instructions that are common to two or more units subordinate to the corps engineer brigade organization.
- Must include all pertinent coordinating instructions listed in the corps order.
- Does not list SOP orders unless needed for emphasis or changed due to the mission.
- May include reporting requirements common to two or more units if not covered in Signal paragraph.
- May authorize direct coordination between subordinate or adjacent engineer-specific tasks.
- Gives the time task organization is effective.
- EWL.
- Ž Initial MOPP level.

4. SERVICE SUPPORT.

a. General Concept of Logistic Support.

- Ž Provide subordinates with the general concept of logistic support for units under the corps engineer brigade commander's control throughout the operation.
- Identify, in general, primary and backup (emergency) means of subunit sustainment for each type of engineer unit under the corps engineer brigade commander's control. Must address WHO (corps battalions under division control, theater battalions, or special separate companies); HOW (area support, unit support, supply point distribution, unit distribution); WHERE (CSA and CSGs);

Figure A-7. Corps engineer brigade OPORD (continued)

and WHAT (classes of supply and critical services).

- Keep consistent with task organization and command support relationships,
- Make maximum reference to corps CSS graphics.
- List the locations of key CSS nodes as they apply to the concept for logistic support (COSCOM, CSA, CSG, ASPs/ATPs, and so forth) and planned subsequent locations, if they change during the operation.

b. Materiel and Services.

(1) Supply. For each class of supply--

- List allocation and CSRs for each unit, based on missions.
- Ž List basic loads to be maintained by unit.
- Ž List method of obtaining supplies if different from general concept. Note: Mission logistics may be different than unit (scheduled) logistics.
- Ž Address any special arrangements or plans to sustain specific mission needs (Class IV/V or Class III push to sustain engineer preparation of defenses).
- Ž Include standard map products.

(2) Transportation.

- Primary and alternate MSRs during the operation.
- Ž Allocations of division or corps haul assets.
- Use of bridge trucks for corps haul missions.

(3) Services. For each service, list the location and means of requesting and obtaining services.

c. Medical Evacuation and Hospitalization. For each type of engineer unit, indicate the primary and backup means of medical evacuation and hospitalization, including locations of health-service facilities providing support on an area or unit basis.

d. Personnel.

- Ž Method of casualty reporting.
- Method of handling EPWs and locations of EPW collection points.
- Method of receiving replacements.
- Ž Method of receiving mail, religious services, and graves registration for each type of unit under the corps engineer brigade commander's control.
- Ž Finance support of local procurement.
- Ž Legal support.
- Ž Command Information.

Figure A-7. Corps engineer brigade OPORD (continued)

Ž Public affairs.

e. Civil-Military Cooperation. Engineer supplies, services, or equipment provided by host nation.

f. Miscellaneous.

5. COMMAND AND SIGNAL.

a. Command.

- Location of key leaders and corps engineer brigade CPs during the operation and planned movements.

Ž Location and planned movements of key corps C2 nodes.

- Designated chain of command.

b. Signal.

- Identify any communication/signal peculiarities for the operation not covered in the SOP.
- May designate critical reporting requirements of subordinates, if not covered in coordinating instruction or SOP.
- Designate frequency-modulated (FM) nets subordinate to corps engineer unit command and operations and intelligence (O/I) nets. Designate net for mission and routine reports.

Acknowledge

Corps engineer brigade commander's signature (optional)
Corps engineer brigade commander's last name
Rank

OFFICIAL:
(Authentication)

Annexes: Possible annexes may include but are not limited to--

- Synchronization Matrix
- Intelligence Annex
- CSS Annex
- Movement Annex

Overlays: Possible overlays may include but are not limited to--

- Decision Support Template
- Engineer Operations Overlay: includes corps maneuver graphics and engineer graphics, as necessary.
- Corps CSS Overlay.
- Corps Obstacle Plan.
- Other Operations: River-Crossing, Large-Scale Breach, and Base Camp/Base Cluster Defenses.

Distribution:

Figure A-7. Corps engineer brigade OPORD (continued)