



UNITED STATES MARINE CORPS

3D MARINE DIVISION (3) (REMO)

UNIT 35801

FPO AP 96602-5801

In reply refer to:

DivO P11270.1B

G4/Engr

24 JUN 1998

DIVISION ORDER P11270.1B

From: Commanding General

To: Distribution List

Subj: STANDING OPERATING PROCEDURES FOR ENGINEER OPERATIONS
(SHORT TITLE: ENGINEER SOP)

Encl: (1 LOCATOR SHEET)

1. Purpose. To promulgate standing operating procedures for engineer operations in the 3d Marine Division, and to furnish instructions regarding engineer training, equipment, maintenance, and support.

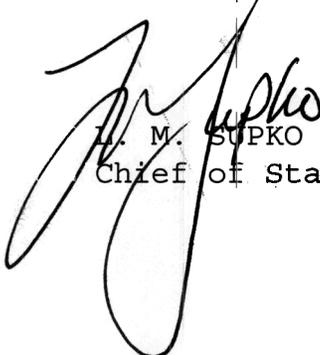
2. Cancellation DivO P11270.1A

3. Action. Commanding officers will ensure compliance with policies and procedures contained in this SOP, and other applicable references. If this SOP should conflict with directives issued by higher authority, the latter shall take precedence.

4. Summary of Revision. This revision contains substantial changes, and should be reviewed completely.

5. Recommendations. Submit recommendations concerning the contents of this SOP via the chain of command to this headquarters (A/CS, G4/Engr).

6. Certification. Reviewed and approved this date


L. M. SUPKO
Chief of Staff

DISTRIBUTION: A/D

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2. Providing intelligence and logistical recommendations to the Commanding General regarding mobility, countermobility, survivability and general engineering support.
3. Preparing detailed analysis of engineer tasks required to support the Commanding General's plans.
4. Maintaining liaison and coordination with higher and adjacent commands regarding engineer operations and engineer support.
5. Determining engineer units to accomplish required tasks.
6. Planning and coordinating engineer support not organic to the Division.
7. Planning and coordinating construction of defensive works (i.e. obstacles, minefields, and field fortifications).
8. Planning engineer intelligence collections and dissemination
9. Planning engineer reconnaissance and terrain studies. This includes assisting the AC/S, G-2 in terrain analysis for intelligence preparation of the battlefield (IPB).
10. Maintaining detailed minefield, barrier and obstacle records.
11. Planning and coordinating temporary pioneer-type construction. This includes repair and maintenance of Division cantonment areas, bridges, lines of communication, and helicopter landing sites.
12. Planning training for engineer and non-engineer personnel in engineer tasks.
13. Exercising staff supervision over procurement, storage, and distribution of engineer equipment and supplies.

Coordinating Division facilities issues

1002. COMBAT ENGINEER COMPANY (CEC), COMBAT ASSAULT BATTALION

1. Primary Mission. To enhance the mobility, countermobility, and survivability of the Division through close combat engineer support and limited general engineering support.
2. Concept of Organization. The CEC is organized into a company headquarters, a support platoon and five combat engineer platoons. The support platoon consists of three sections: an engineer equipment section; a motor transport section; and a utilities section. Each combat engineer platoon consists of a platoon headquarters with three combat engineer squads. This organization facilitates flexible and rapid task organization to meet the operational needs of the Division.

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3. Command and Control. The CEC company commander directs and controls all matters pertaining to the administration, operation, logistics, and security of the company. The CEC reports to Combat Assault Battalion and is operationally tasked directly by the Division. The CEC company commander performs command and staff functions necessary for planning, directing, and supervising assigned missions in support of Division operations.

4. Concept of Employment

a. The CEC is the primary provider of close combat engineer support for the Division. The unique structure and finite assets of the CEC require innovative employment alternatives to provide effective close combat engineer support to the Division. The normal focus of effort will be on mobility and countermobility essential to Division operations. In general, the CEC supports the operational needs of the Division by task organizing to meet the tactical situation. Task organized elements of the CEC may be in direct support or attached to maneuver units, based on the tactical situation and the Division's focus of main effort. Elements of the CEC not task organized for this type of support will normally remain under the centralized control of the company commander. These elements will usually remain to the rear of forward units in general support of the Division. When specific engineer requirements in support of the Division exceed the capabilities of the CEC, external augmentation may be provided by the Engineer Support Battalion, Force Service Support Group, or the Navy Mobile Construction Battalion (NMCB).

b. The concept of organization and employment of the CEC is based upon the following criteria:

(1) The Division has very limited organic engineer assets so the focus of engineer effort must be directed to support the focus of main effort in any situation. Normally, the main focus for the CEC will be mobility and countermobility for the Division focus of main effort and essential limited utilities support to the Division command post.

(2) Construction support (both vertical and horizontal) provided by the CEC will normally be limited to expedient, temporary, and essential construction designed to minimum standards to meet combat requirements.

(3) The utilities support provided by the CEC will be limited to essential mobile electric power, water production and storage, and hygiene support necessary to sustain Division operations.

c. The CEC is capable of performing the following specific tasks in accomplishing its primary mission:

(1) Conduct engineer reconnaissance and assist with other intelligence gathering efforts in support of Division operations.

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- (2) Plan, organize and coordinate breaching of explosive and non-explosive obstacles from the high water mark, inland, in support of Division operations.
- (3) Plan and coordinate the employment of assault bridge systems, and other standard bridge systems, when augmented, in support of Division operations.
- (4) Provide expedient repair and reinforcement of existing bridge structures in support of Division operations.
- (5) Construct expedient, short-span bridges using local material in support of Division operations.
- (6) Provide temporary repair of existing roads, and limited new construction and maintenance of combat roads and trails essential to Division operations.
- (7) Plan, organize, and supervise the construction of explosive and non-explosive obstacle systems essential to Division operations that require engineer equipment or engineer skills.
- (8) Plan and execute demolition missions in support of Division operations that are beyond the capability of other Division units.
- (9) Provide technical assistance and necessary equipment for the development of temporary protective positions and structures for personnel and equipment that are beyond the capability of other Division units.
- (10) Provide essential construction support which is temporary in nature and designed to meet the minimum needs of the Division.
- (11) Provide limited material handling essential to Division operations.
- (12) Provide limited utilities support consisting of mobile electric power (level 2), potable water production and storage, and essential hygiene services in support of Division operations.
- (13) Plan and coordinate construction and improvement of expedient rotary-wing landing sites in support of Division operations.

1003. ENGINEER SECTION, HEADQUARTERS BATTERY, 12TH MARINES.

Headquarters Battery, 12th Marines possesses limited engineer assets to support 12th Marines' mission. The primary mission of the engineer section is to provide limited mobility, countermobility and survivability for 12th Marines. The engineer section also provides mobile electric power (level 1) to 12th Marines. If necessary

12th Marines may be tasked to provide engineer equipment to support other elements of the Division.

1004. ENGINEER SECTION, MAINTENANCE PLATOON, HEADQUARTERS AND SERVICE COMPANY, COMBAT ASSAULT BATTALION. The Headquarters and Service Company, Combat Assault Battalion possesses limited engineer assets to support the Battalion's mission. The primary mission of the engineer section is to provide mobile electric power (level 1) to the Battalion. The engineer section also provides limited material handling equipment which will usually satisfy the Battalion's logistical requirements. If necessary, the Battalion may be tasked to provide engineer equipment and operator support to other elements of the Division.

1005 COMBAT ENGINEER PLATOON, COMBAT SUPPORT COMPANY, 3D MARINES

1. Primary Mission. To enhance the mobility, countermobility, and survivability for 3d Marines through close combat engineer support : limited general engineering support.

2. Concept of Organization. The Combat Engineer Platoon, Combat Support Company consists of a platoon headquarters, three combat engineer squads, and an equipment section. This organization facilitates limited combat engineer support for 3d Marines' focus of main effort.

3. Command and Control. The Combat Engineer Platoon reports to Combat Support Company and is operationally tasked directly by 3d Marines. The platoon commander performs command and staff functions necessary for planning, directing, and supervising assigned missions in support of 3d Marines' operations.

4. Concept of Employment

a. The Combat Engineer Platoon, Combat Support Company is the primary provider of close combat engineer support for 3d Marines. The normal focus of effort will be on mobility and countermobility essential to 3d Marines operations. In general, the platoon will be attached to the unit in greatest need of critical engineer support, based on 3d Marines' focus of main effort. When specific engineer requirements in support of the 3d Marines exceed the capabilities of the Combat Engineer Platoon, external augmentation may be provided by the Combat Engineer Company, Combat Assault Battalion.

b. The Combat Engineer Platoon, Combat Support Company is capable of performing the following specific tasks in support of accomplishing its primary mission:

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- (1) Conduct engineer reconnaissance and assist with other intelligence gathering efforts in support of Regimental operations
- (2) Plan, organize and coordinate breaching of explosive and non-explosive obstacles from the high water mark, inland, in support of Regimental operations.
- (3) Plan and coordinate the employment of assault bridge systems, and other standard bridge systems, when augmented, in support of Division operations.
- (4) Provide limited expedient repair and reinforcement of existing bridge structures in support of 3d Marines operations, when augmented with necessary engineer equipment.
- (5) Construct expedient, short-span bridges using local material in support of 3d Marines operations when augmented with necessary engineer equipment.
- (6) Provide temporary repair of existing roads and limited new construction and maintenance of combat roads and trails essential to 3d Marines operations when augmented with necessary engineer equipment.
- (7) Plan, organize, and supervise the construction of explosive and non-explosive obstacle systems essential to 3d Marines' operations that require engineer skills. This will normally require augmentation with additional engineer equipment.
- (8) Plan and execute demolition missions in support of 3d Marines' operations that are beyond the capability of other 3d Marines' units.
- (9) Provide limited construction support which is temporary in nature and designed to meet the minimum needs of the 3d Marines.
- (10) Provide limited material handling essential to 3d Marines operations.
- (11) Provide limited mobile electric power support (level 1) essential to 3d Marines command post operations.
- (12) Plan and coordinate construction and improvement of expedient rotary-wing landing sites in support of Regimental operations. This will normally require augmentation with additional engineer equipment.

1006. ENGINEER SECTION, COMMUNICATION COMPANY, HEADQUARTERS BATTALION. Communication Company, Headquarters Battalion possesses limited mobile electric power assets to support Division communication

assets. The primary mission of the engineer section is to provide level 1 mobile electric power to support Division command post communication requirements. The section may be tasked to provide additional mobile electric power to support Division command post operations or other Division requirements.

1007. SUMMARY. Engineers possess a variety of skills and equipment that can be great combat multipliers for the Division if used effectively. It is imperative that the limited engineer assets organic to the Division be employed efficiently to maximize their impact on each individual situation. Effective planning for the use of engineer assets is the key to maximizing their impact as combat multipliers.

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CHAPTER 2

ENGINEER TRAINING, LICENSING, AND SAFETY

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CHAPTER 2

ENGINEER TRAINING, LICENSING, AND SAFETY

2000. TRAINING REQUIREMENTS FOR ENGINEER UNITS. Engineer unit training will be conducted in accordance with the guidelines set forth in the current editions of MCO 1500.40, MCO P4790.2, and DivO P1500.25. Training will be mission oriented and Military Occupational Specialty skills progressive. Training programs will encompass both technical MOS skills and tactical skills. It will also include operations and maintenance of all organic engineer equipment. Tactical training plans will specifically emphasize skill progression based on the training standards established in the Marine Corps Individual Training Standards System (ITSS) and the Marine Corps Combat Readiness Evaluation System (MCCRES) (Volumes II and XI).

2001. TRAINING SUPPORT

1. Division units who wish to receive engineer-related training to enhance their ability to accomplish assigned missions will submit requests to the Commanding General (G-4/Engr) with a copy to Assistant Chief of Staff, G-3 (Trng). Requests will specify the type of training required, the size of the unit to be trained, and proposed training dates. It is the responsibility of the unit requesting training to reserve the range(s) for training and provide materials required for training (i.e., Class IV, Class V(W), etc.). Once approved, the requesting unit will be instructed to contact the unit assigned to conduct the training (normally Combat Engineer Company, Combat Assault Battalion, or Combat Engineer Platoon, Combat Support Company, 3d Marines).

2. The Combat Engineer Company, Combat Assault Battalion will be prepared to assist other Division units with training to enhance capabilities in the following areas:

- a. Mine Warfare
- b. Obstacle Construction and Breaching.
- c. Demolitions.
- d. Field Fortifications
- e. Booby Traps.
- f. Engineer Equipment Maintenance and Operations including licensing of operators).
- g. Other engineer-related skills (as directed)

3. Combat Engineer Platoon, Combat Support Company, 3d Marines will be prepared to assist other 3d Marines units with training to enhance capabilities in the following areas:

- a Mine Warfare
- b. Obstacle Construction and Breaching.
- c. Demolitions
- d. Field Fortifications
- e Booby Traps
- f Other engineer-related skills (as directed)

2002. LICENSING FOR ENGINEER EQUIPMENT OPERATORS

1. General. Licensing of engineer equipment operators within the Division will be in accordance with the provisions of the current edition of TM 11275-15/4 and this SOP.

a. All personnel who operate tactical engineer equipment (including engine-driven mobile electric power (MEP) generators and hygiene equipment) are required to have a valid operator's license for each item of equipment they operate or maintain. Licensing is required whether the equipment is self-propelled, towed, skid-mounted, stationary or man-portable. The "Qualified to Operate" section of the license will list each type of equipment an individual is authorized to operate and any restrictions, if any. In order to be valid, each entry in this section must be dated and certified by the signature and rank of the licensing official.

b. Maintenance personnel must be trained to minimum standards and licensed to operate all items of equipment that they are required to maintain. Accordingly, unit training plans will include operator training for maintenance personnel. Licensing of maintenance personnel will be in accordance with the same guidelines established for licensing operators.

2. Engineer Equipment Licensing for Division Units on Okinawa

a. The Combat Engineer Company, Combat Assault Battalion is assigned the responsibility for engineer equipment licensing for all Division units on Okinawa. This includes training and testing operators and mechanics, and issuing licenses. The only exception to this guidance is licensing for the Ditching Machine (TAMCN B0355) held by 12th Marines. Headquarters Battery, 12th Marines is responsible for the licensing program for this item of equipment.

b. Guidance for Licensing Officials

(1) Combat Engineer Company and Headquarters Battery will designate an engineer equipment licensing officer in writing. A copy of the appointing order for this officer will be forwarded to the Commanding General (G-4/Engr). The licensing officer will follow the guidelines set forth by the current edition of TM 11275-15/4 in carrying out his duties.

(2) Additionally, Combat Engineer Company will assign, in writing, a minimum of one licensing examiner each for engineer equipment and utilities equipment. These examiners should be subject-matter experts in equipment operation, and should possess a thorough understanding of test administration. These examiners will administer the testing program required to issue licenses for tactical engineer equipment.

(3) Licensing officials will conduct both written and practical examinations for each individual to be licensed. Before receiving a license, the licensee must satisfactorily complete the examination for that item of equipment. Upon satisfactory completion of the examination, the licensing officer will ensure that the licensee is issued a valid operator's license (SF-46 or OF-346). Qualifications to operate tactical engineer equipment will also be recorded in the licensee's Service Record Book (SRB) on Page 11. This entry will include the license number, issue date, expiration date, and the equipment the licensee is qualified to operate.

c. Procedures for Obtaining Engineer Equipment Licenses

(1) Organizations and units who require engineer equipment licenses for their personnel (except Headquarters Battery, 12th Marines for Ditching Machines) will request licensing by letter to Combat Engineer Company, Combat Assault Battalion. The following forms will be appended to the letter for each license candidate: (1) Application for Tactical Engineer Equipment Operator's License (TM 11275-15/4, Appendix C, Page C-2 and C-3) with Part I completed for each license candidate; and (2) Request for Medical Evaluation (TM 11275-15/4, Appendix C, Page C-5) complete with medical officer's signature. Engineer officers of each organization or unit (as required by this SOP) will ensure that personnel recommended for licensing meet all prerequisites for the requested license.

(2) Upon receipt of licensing requests, the licensing officer will contact the requester to arrange appropriate classes, practical application, and examinations necessary to complete licensing requirements for applicants. Upon successful completion of training and examination by applicants, the licensing officer will issue the appropriate license, and log the issuance into the Licensing Log (TM 11275-15/4). The licensing officer will complete the Tactical Engineer Equipment Operator History File and the Action Data File (TM

11275-15/4) and return them (with the application and medical forms) to the engineer officer of the applicant's parent unit. This engineer officer will ensure that the issuance of the license is properly recorded in the SRB (Page 11) of the applicant.

(3) Personnel desiring re-issue of a lost or destroyed SF-46/OF-346 will coordinate re-issue through Combat Engineer Company, Combat Assault Battalion (Headquarters Battery, 12th Marines for Ditching Machines). The licensee must provide a written statement from the unit commanding officer to the licensing officer that includes the following information: permit number and date, place and date of issue, specific equipment qualified to operate, any restrictions, and a statement that the permit was not suspended or revoked. The licensing officer will take necessary action to reissue the license per the guidance in TM 11272-15/4. The licensing officer will maintain a file documenting all re-issued licenses.

d. Organizations and units with tactical engineer equipment operators will maintain license files and logs in accordance with TM 11275-15/4.

3. Engineer Equipment Licensing for Division Units in Hawaii. Organizations and units assigned to 3d Marines which require engineer equipment licensing will coordinate with the Combat Service Support Group 3 and follow their procedures for obtaining licenses. These organizations and units will maintain license files and logs in accordance with TM 11275-15/4.

4. Licensing for Mobile Electrical Power (MEP) Equipment. All Division organizations and units utilize MEP equipment for tactical power requirements. Most Division organizations and units possess at least limited numbers of these assets. Accordingly, it is incumbent on commanders at all levels to maintain an adequate number of qualified (licensed) MEP operators for MEP assets they operate on a regular basis. Organizations and units desiring to temporarily loan MEP equipment for operations must have licensed operators for any equipment requested equipment.

2003 SAFETY

1. General. Many engineer activities are hazardous by nature, and it is the responsibility of commanders at all levels to ensure safe operations. The current editions of DivO P5100.1 and NAVMAT P-150 provide general guidance for safety training. Doctrinal publications and technical manuals also detail safety requirements for many engineer activities. Safety training will be an integral part of all engineer training and will emphasize the safest way to accomplish tasks. Safety will be stressed at all levels and will cover all aspects of engineer operations.

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2. Lifting Equipment Certification and Safety. The current edition of MCO P11262.2 provides guidance for the inspection and load testing of engineer equipment. Organizations and units that possess engineer lifting equipment will establish a load testing program in accordance with this guidance.
3. Marine Corps Calibration Program. The current edition of MCO 4355.5 provides guidelines for the calibration of all instruments, gauges and safety devices. Organizations and units with equipment that requires calibration will establish a calibration program based on these guidelines. The Division Engineer will monitor calibration programs for engineer equipment during Logistical Readiness Inspections (LRIs). Electronic Maintenance Company, 3d Force Service Support Group provides calibration support for the Division.
4. Hearing Conservation. The current edition of MCO 6260.1 governs hearing conservation for the Marine Corps. The current edition of DivO 6260.2 provides guidance governing local implementation of this program. The program is designed to prevent hearing loss among personnel assigned to areas of high intensity noise. Organizations and units that operate engineer equipment will establish a hearing conservation program in accordance with these orders.
5. Sight Conservation. The current edition of MCO P5100.8 provides guidelines for sight conservation for personnel engaged in activities which present a danger to the eyes. All personnel engaged in activities that are hazardous to sight will wear appropriate protective equipment. Proper supervision is crucial to a functional sight conservation program.
6. Foot Protection. The current edition of MCO P5100.8 provides guidelines regarding safety while working around foot hazards. Personnel such as mechanics and engineer equipment operators will the type of safety footwear prescribed by this order.
7. Live Fire and Demolition Training. The current edition of MCO 3570.1 provides guidelines for safety procedures during live fire and maneuver training. The current editions of FM 5-250, FM 20-32, and TM 08982A-14/2 provide guidelines for safety during live fire training with explosives, landmines, and the linecharge, respectively. Organizations and units will strictly adhere to these safety guidelines when conducting live fire engineer training.

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CHAPTER 3

MAINTENANCE OF ENGINEER EQUIPMENT

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CHAPTER 3

MAINTENANCE OF ENGINEER EQUIPMENT

GENERAL POLICY AND DEFINITIONS

1. General Policy. The current edition of MCO P4790.2 provides guidance regarding maintenance management for engineer equipment. Local guidance for maintenance management of engineer equipment is provided by the current edition of DivO P4790.1. Division organizations and units possessing engineer equipment will establish maintenance management programs for that equipment per the guidance in these orders and this SOP.

2. Definitions. For the purpose of this SOP, engineer equipment is defined as follows:

a. All wheeled or tracked self-propelled power units and trailers, and devices requiring a wheeled or tracked prime mover that are listed in the Table of Authorized Material (TAM) as Type 1, 2, and 3 and are under the Classification of Engineer Items heading as "B", "J", and "U" TAM Control Numbers (TAMCNs).

b. Non-vehicular equipment listed in the TAM under the Classification of Engineer Items, which is either gasoline or diesel engine powered, and is portable or skid-mounted. Examples of such equipment are pumps, chain saws, paint sprayers, outboard motors, mine detectors, etc.

c. All MEP and air conditioning equipment regardless of issue as end items or components of sets. This specifically includes non-TAM equipment such as commercial portable generators.

d. Chemical warfare decontamination equipment (M12A1 (TAMCN B0465) and M17 (TAMCN B1291) have components which merit classification as engineer equipment.

INSPECTION OF ENGINEER EQUIPMENT

1. General. Commanding officers have the responsibility to ensure the proper maintenance and serviceability of all engineer equipment under their charge. This requires an effective equipment inspection program to ensure adequate and effective maintenance procedures. Guidelines for an effective inspection program and specific inspection procedures are provided in the current editions of DivO P4790.1 and TM 4700-15/1.

2. Limited Technical Inspection (LTI). LTIs are conducted when a complete technical inspection is not required. Occasions requiring

LTIIs include but are not limited to: temporary loan of equipment, Logistical Readiness Inspections (LRIs), acceptance of new equipment, inspection prior and after deployment, and inspection prior to major repair. Organizations and units that do not have the technical expertise to LTI specific engineer equipment should follow the procedures provided in the current edition of DivO P4790.1 to schedule required inspections.

3. Acceptance Inspection. An acceptance LTI is required on all items of engineer equipment when received by organizations or units. This inspection will document the condition of the equipment at the time of receipt and must be retained for future reference per TM 4700-15/1. Organizations or units that do not have the technical expertise to conduct acceptance inspections for specific engineer equipment should follow the procedures provided in the current edition of DivO P4790.1 to schedule required inspections.

3002. ENGINEER EQUIPMENT READINESS

1. Reporting. Readiness reporting of engineer equipment will be accomplished per the guidelines provided by MCO 3000.11.

2. Deadline. The current edition of MCO P4790.2 establishes the criteria for deadline of engineer equipment and the proper maintenance management procedures. Organizations and units will follow these guidelines and procedures when reporting engineer equipment as deadlined.

3. Administrative Deadline. The current edition of DivO P4790.1 provides guidelines for local administrative deadline of engineer equipment. Commanders are encouraged to utilize this tool to enhance engineer equipment readiness and reduce man-hours for maintenance.

4. Combat Ready Storage Program (CRSP). The purpose of this program is similar to local administrative deadline, but at a higher level. The current edition of DivO 4790.3 provides guidance for the utilization of CRSP. Commanders are encouraged to utilize CRSP for storage of engineer equipment to the maximum extent possible. In establishing CRSP goals for engineer equipment, commanders must consider organic maintenance capabilities and normal mission requirements to ensure that they can continue to perform assigned missions once CRSP goals are met.

3003 REPAIR AND MAINTENANCE SUPPORT FOR ENGINEER EQUIPMENT

1. Scheduling Maintenance. Maintenance of engineer equipment will be scheduled in accordance with the current edition of TM 4700-15/1 and applicable equipment technical references.

2. Repair Feasibility. The current edition of MCO 4710.8 establishes the criteria and principles to be used in estimating the cost of major repairs to material for the purpose of determining the feasibility of economical repair.

3. Authorized Levels of Maintenance. Division organizations and units possessing engineer equipment are authorized to perform only organizational maintenance on that equipment.

a. The current editions of MCO P4790.2 and DivO P4790.1 provide guidance for maintenance management for engineer equipment. Organizational corrective maintenance for engineer equipment will be conducted in accordance with these orders and applicable technical instructions. Preventive maintenance is the key to minimizing the necessity for corrective maintenance. Accordingly, commanders will establish an aggressive preventive maintenance program to ensure optimal engineer equipment readiness.

b. Some Division units possess utilities equipment but do not have the technical expertise to perform organizational maintenance on it. The current edition of DivO P4790.1 establishes procedures to obtain support to maintain this equipment. Organizations and units requiring this type maintenance support for utilities equipment will follow the procedures established by this Order to obtain assistance.

(1) Combat Engineer Company, Combat Assault Battalion is the primary unit assigned the responsibility to perform this maintenance. They will provide organizational maintenance support to infantry units for all utilities equipment except refrigeration and air conditioning equipment.

(2) Headquarters Battalion has the only refrigeration mechanic in the Division and will provide organizational maintenance support for refrigeration and air conditioning equipment for all Division units.

(3) Maintenance on non-TAM items of utilities equipment is the responsibility of the owning unit and will generally be performed by contract.

c. The current edition of DivO P4790.1 establishes the procedures for units to request authority to perform limited intermediate maintenance on engineer equipment. Requests will be submitted to the Commanding General (G-4/MMO) following the guidelines in that order with a copy to G-4/Engr.

4. Cannibalization. The current edition of DivO P4790.1 governs maintenance by cannibalization or selective interchange of parts. Organizations and units will follow these procedures to obtain authorization to perform cannibalization for the repair of engineer equipment.

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5. External Maintenance Support. Intermediate maintenance is provided by the 3d Force Service Support Group in accordance with MCO P4790.2. Overflow organizational maintenance is also provided by the 3d Force Service Support Group. Procedures for requesting maintenance support from outside the Division are provided by DivO P4790.1.

3004. EQUIPMENT RECORDS AND FORMS. The current edition of TM 4700-15/1 provides guidance regarding the maintenance of engineer equipment records and forms. Organizations and units will maintain engineer equipment records in accordance with this guidance.

3005 PAINING AND MARKING OF ENGINEER EQUIPMENT

1. Painting of engineer equipment is one effective measure to prevent effects of weather such as corrosion. The current edition of MCO P4750.3 provides guidelines and specific procedures for painting engineer equipment. Application of chemical agent resistant coating (CARC) on engineer equipment is governed by the current edition of DivO 5100.2. Engineer equipment will be painted in accordance with the guidelines and procedures established in these orders. The Division Engineer Office will manage and assign CARC quotas (provided by G-4/MMO) for Division engineer equipment. These quotas will be assigned to organizations and units on a fair-share basis, based on need.

2. Organizations and units will apply tactical markings to engineer equipment in accordance with the current edition of DivO P4600.1.

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CHAPTER 4

ENGINEER SUPPORT FOR
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24 JUN 1998

LOCATOR SHEET

Subj: STANDING OPERATING PROCEDURE FOR OPERATIONS (SHORT TITLE:
ENGINEER SOP)

Location: _____
(Indicate location(s) of copy(ies) of this Manual.)

ENGINEER SOP

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INTRODUCTION

0001 GENERAL

1. This SOP is applicable to all organizations within and under the operational control of the 3d Marine Division (-)(Rein). Should the provisions of this SOP conflict with directives issued by higher authority, the latter shall apply.

2. All organizations (battalion and higher) possessing engineer assets will publish an SOP for the operation and maintenance of those assets. Additionally, Combat Engineer Company (CEC), Combat Assault Battalion (CAB) will publish an SOP covering the employment of engineers in support of the Division as well as the operation and maintenance of organic engineer assets. These SOPs should be a repetition of this or other directives, but should be tailored to the individual unit. They should be a document that is useful to the personnel at the working level.

3. All organizations and units required by this SOP to publish and Engineer SOP, will assign an engineer equipment officer in writing. This officer will be responsible for the proper operation and maintenance of all engineer equipment assigned to the organization/unit.

0002. MAGTF ENGINEERS. The role of the MAGTF engineer is to increase the rate of advance, modify terrain, provide critical ground support, participate in deception activities, increase survivability and sustainability, and support the efforts of the MAGTF elements in carrying out the commander's plans. Engineers in the 3d Marine Division fulfill many of these roles by carrying out missions related to mobility, countermobility, survivability and limited general engineering. CEC, CAB provides the bulk of the close combat engineer support for the Division. Other organizations and units within the Division possess limited engineer capabilities, and complete limited engineer functions in support of Division operations. Force engineer assets provide additional engineer support to the Division, providing depth to the efforts of Division engineer units. All engineer support for the Division will be rendered in accordance with FMFM 4-4, Engineer Operations, and FMFM 13, MAGTF Engineer Operations.

CHAPTER 1

ENGINEER UNITS, CAPABILITIES,
AND CONCEPT OF EMPLOYMENT

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ENGINEER SOP

CHAPTER 1

ENGINEER UNITS, CAPABILITIES, AND CONCEPT OF EMPLOYMENT

1000 ENGINEER UNITS

1. Definitions. For the purpose of this SOP, the following staff sections and units have a primary mission providing engineer support to the Division and subordinate elements:

- a 3d Marine Division Engineer Office
- b Combat Engineer Company, Combat Assault Battalion
- c. Engineer Section, Headquarters Battery, 12th Marines
- d. Engineer Section, Maintenance Platoon, Headquarters and Service Company, Combat Assault Battalion.
- e. Engineer Section, Communications Company, Headquarters Battalion.
- f Combat Engineer Platoon, Combat Support Company, 3d Marines.

2. Engineer SOPs. All organizations (battalion and higher) possessing engineer assets will publish an SOP for the operation and maintenance of those assets. Additionally, Combat Engineer Company (CEC), Combat Assault Battalion (CAB) will publish an SOP covering the operation and maintenance of engineer equipment, and the employment of engineers in support of the Division. These SOPs should not be a repetition of this or other directives, but should be tailored to the individual unit. They should be a tool useful down to the working level.

3. Assigning Engineer Equipment Officers. All organizations and units required by this SOP to publish an Engineer SOP will assign an engineer equipment officer in writing. This officer will be responsible for the proper operation and maintenance of all engineer equipment assigned to the organization or unit.

1001. DIVISION ENGINEER OFFICE. The Division Engineer Office performs as a Division special staff office under the staff cognizance of the Assistant Chief of Staff, G-4, and has the following responsibilities:

1. Advising the Commanding General on all engineer matters pertaining to the Division.

ENGINEER SOP

CHAPTER 4

ENGINEER SUPPORT FOR FIELD OPERATIONS

4000. GENERAL. The primary purpose of Division engineer units is to provide engineer support for Division combat operations. The unique structure and finite assets of engineers in the Division make it crucial that this support be used efficiently in order to optimize its effectiveness. Accordingly, engineer support for field operations will normally be limited to that support which is essential to sustain operations for which an organization or unit does not have adequate organic engineer capability. This type of support will most often come from Combat Engineer Company, Combat Assault Battalion (for organizations and units on stationed on Okinawa), or Combat Engineer Platoon, Combat Support Company, 3d Marines (for 3d Marines). Engineer support will be provided in consonance with the concept of employment described in Chapter 1 of this SOP, and applicable references.

4001. ENGINEER PLANNING. Engineer planning for field operations is a continuous process, and must be coordinated at all levels. One facet of this planning consists of the technical planning provided by engineer special staff officers and engineer units assigned to support specific operations. Another facet consists of the planning conducted by organizations and units that require engineer support, and the timely submission of requests for that support. No matter the type of engineer planning, it is critical that it be seamless at all levels, so as to maximize the effectiveness of critical engineer support. Commanders at all levels are responsible for effective and timely engineer planning. The Division Engineer has the primary responsibility to coordinate all engineer planning within the Division.

4002. ENGINEER INTELLIGENCE

1. Intelligence Gathering and Analysis. Combat engineers provide the commander with a crucial combat multiplier regarding intelligence. They may be tasked to conduct engineer reconnaissance in support of a specific mission and/or to gather specific intelligence, or may simply gather valuable intelligence as they accomplish other assigned tasks. They also provide expertise in terrain analysis, intelligence preparation of the battlefield, hydrographic analysis, and enemy engineer capabilities. Both Combat Engineer Company, Combat Assault Battalion, and Combat Engineer Platoon, Combat Support Company, 3d Marines are the units primarily responsible to provide critical engineer intelligence support to the Division.

2. Intelligence Reporting. Engineer intelligence must be reported at all levels (higher, adjacent, and subordinate) through command channels to the engineer officer and/or intelligence officer. Intelligence will normally be reported using one of the standard report formats depicted in the current edition of FMFRP 13-9.

3. Intelligence Recording. Engineer special staff officers (or the commander's designated representative when an engineer officer is not assigned) are responsible to maintain accurate records of all engineer intelligence received and its analysis. This includes, but is not limited to, maintaining all relevant engineer information on an engineer situation map when necessary, and maintaining accurate engineer report files.

4003 ENGINEER FIELD REPORTS

1. General. Engineer units will submit engineer field reports via command channels to the Division Engineer per the current edition of DivO P3300.25 and applicable engineer technical references. Reports will follow the standard formats depicted in FMFRP 13-9.

2. Engineer Situation Reports. During Division field and/or combat operations, engineer units (company and battalion) will submit engineer situation reports or fragmentary engineer situation reports as directed. These reports will follow the format depicted in FMFRP 13-9.

4004. MOBILITY OPERATIONS

1. General. For the purpose of this SOP, mobility is defined as the capability of the Division to move on the battlefield while retaining the ability to accomplish its assigned missions. From the engineer perspective, this means the ability to maintain adequate lines of communication (LOCs), main supply routes (MSRs), and helicopter landing sites to support field operations. This can include route reconnaissance, breaching operations, as well as maintenance and/or construction of LOCs, MSRs, and helicopter landing sites, limited to that which is essential to sustain operations.

2. Responsibility. The units primarily responsible for providing mobility for the Division are:

a. Combat Engineer Company, Combat Assault Battalion, which provides technical expertise for route reconnaissance, breaching operations, and repair/construction of LOCs, MSRs, and helicopter landing sites as well as engineer equipment support;

b. Headquarters Battery, 12th Marines, which provides mainly engineer equipment support for mobility operations in support of artillery operations.

c. Combat Engineer Platoon, Combat Support Company, 3d Marines which provides mainly technical expertise for route reconnaissance, breaching operations, and repair/construction of LOCs, MSRs, and helicopter landing sites as well as limited equipment support with pioneer tools.

3. Obtaining Support. Requests for engineer mobility support beyond the capability of an organization or unit will be directed to the Division Engineer via command channels. The Division Engineer is responsible for coordinating all engineer mobility support within the Division. Commanders requesting support are responsible for providing necessary augmentation for mobility operations to provide security and manpower to be supervised by engineer personnel providing support. Materials for engineer mobility operations will be procured through normal logistical channels.

4005 COUNTERMOBILITY OPERATIONS

1. General. For the purpose of this SOP, countermobility is defined as the construction of obstacles and emplacement of mine fields to delay, disrupt, and destroy the enemy by reinforcement of the terrain. The primary purpose of countermobility operations is to slow or divert the enemy, to increase time for target acquisition, and to increase weapon effectiveness.

2. Responsibility. All commanders are responsible for countermobility operations to the extent allowed by organic capabilities. The units primarily responsible for providing additional countermobility support for the Division are:

a. Combat Engineer Company, Combat Assault Battalion which provides both technical expertise for planning and supervising construction of obstacles and emplacement of mine fields and engineer equipment support;

b. Headquarters Battery, 12th Marines which provides mainly engineer equipment support for obstacle construction;

c. Combat Engineer Platoon, Combat Support Company, 3d Marines which provides mainly technical expertise for planning and supervising construction of obstacles and emplacement of mine fields, and limited equipment support with pioneer tools.

3. Obtaining Support. Requests for engineer countermobility support beyond the capability of organizations or units will be directed to the Division Engineer via command channels. The Division Engineer is responsible for coordinating all engineer countermobility support within the Division. Commanders requesting support are responsible for providing necessary augmentation for countermobility operations to provide security and manpower to be supervised by engineer personnel

2. Utilities. Engineer support of this nature consists mainly of mobile electric power (MEP) generation and distribution, and water/hygiene services support. The Division has very limited assets for providing utilities support so it is crucial that all assets be utilized efficiently in order to maximize support capability.

a. MEP. All Division MEP assets will be consolidated at Level 1 and Level 2 holders.

(1) Level 1 holders are those organizations and units that hold MEP equipment to support daily internal mission requirements. All Division organizations and units who possess MEP equipment are considered to be Level 1 holders. Level 1 holders are considered to be self-sufficient for normal operations and should request additional MEP support only when they cannot support operations with organic assets.

(2) Level 2 holders are those organizations or units designated to hold additional MEP equipment (above Level 1) for general support of the Division. The Division Level 2 holder is Combat Engineer Company, Combat Assault Battalion and is responsible to provide additional MEP equipment in general support the Division.

(3) Headquarters Battalion is responsible to provide the MEP equipment to support operation of the communications equipment for the Division command post in the field. They may also be tasked to provide MEP equipment to support other Division command post operations.

(4) Requests for MEP equipment support will be directed to the Division Engineer via command channels. The Division Engineer is responsible for coordinating all MEP support within the Division. All requests for MEP support for field operations will specify the location where support is required, the amount and type of power required (i.e., "75 kW of 400 Hz power", "100 kW of 60 Hz power", etc.), a specific description of what is to be powered, and whether or not the equipment should be trailer-mounted. Estimates of power requirements can be computed per TM 11310-15/1, and/or using the specifications found on the data plate of the equipment requiring power.

(5) Combat Engineer Company, Combat Assault Battalion will normally provide MEP support on a short term basis with a detachment from the company attached to the supported unit. Under some circumstances (i.e., off-island deployments, high OpTempo causing limited MEP operator availability from Combat Engineer Company, etc.) units may be authorized to temporarily loan MEP equipment. Units wishing to temporarily loan MEP equipment to support field operations must have a licensed operator to operate all temporarily loaned equipment. Procedures for temporary loan of equipment is covered by the current edition of DivO 4400.33.

b. Water and Hygiene Support

(1) Water. The Division has a very limited water production, storage and hauling capability. Combat Engineer Company, Combat Assault Battalion has the only production capability in the Division. They are capable of producing, storing and hauling sufficient water to support only the Division command post (or similar sized unit) in the field. Additional water support will be provided by the Force Service Support Group and will be coordinated by the Division Engineer. Requests for water support will be directed to the Division Engineer via command channels.

(2) Hygiene. As with water support, the Division has a very limited hygiene support capability. Combat Engineer Company, Combat Assault Battalion is the sole provider for the Division. They are capable of providing only essential hygiene services (field showers) to support the Division command post (or similar sized unit) in the field. Additional hygiene support will be provided by the Force Service Support Group and will be coordinated by the Division Engineer. Requests for hygiene support will be directed to the Division Engineer via command channels.

3 General Engineering Construction

a. General. For the purpose of this SOP, construction in this sense (general engineering) refers to additional construction requirements above that necessary for mobility, countermobility, and survivability. After these priorities, the focus of effort for construction using Division engineer assets will be on essential construction necessary for temporary Division cantonment areas. Construction requirements beyond this scope will require external support and will be coordinated by the Division Engineer.

b. Responsibility. The Division Engineer will coordinate all general engineering construction in support of Division field operations. The units primarily responsible for providing this type construction support for the Division are:

(1) Combat Engineer Company, Combat Assault Battalion which provides both technical expertise for planning and supervising limited general engineering construction and engineer equipment support;

(2) Combat Engineer Platoon, Combat Support Company, 3d Marines which provides mainly technical expertise for planning and supervising very limited construction of cantonment areas and limited equipment support with pioneer tools.

c. Obtaining Support. Requests for engineer support for general engineering construction will be directed to the Division Engineer via command channels. The Division Engineer is responsible for coordinating all general engineering construction support for the Division. Commanders requesting support are responsible to provide

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necessary manpower augmentation for the construction effort to be supervised by engineer personnel providing support. Materials for general engineering construction will be procured through normal logistical channels.

4. Material Handling Equipment

a. General. Division engineer units possess limited tactical material handling equipment. The main purpose of this equipment is internal logistical support for the Division.

b. Responsibility. The Division Engineer will coordinate all material handling equipment support for Division field operations. The units primarily responsible for providing this type support for the Division are:

- (1) Combat Engineer Company, Combat Assault Battalion;
- (2) Headquarters Battery, 12th Marines;
- (3) Headquarters and Service Company, Combat Assault Battalion (very limited);
- (4) Combat Engineer Platoon, Combat Support Company, 3d Marines (very limited).

c. Obtaining Support. Requests for material handling equipment support will be directed to the Division Engineer via command channels.

4008. ENGINEER SUPPORT REQUESTS. Due to the uncertain nature of field/combat operations, engineer support requirements will continually change based on the tactical situation. Proper prior planning is one key to efficient utilization of very limited engineer assets in Division. Commanders must ensure timely and accurate submission of requests (as soon as the need is apparent) for engineer support through the proper command channels to the Division Engineer. The Division Engineer is responsible for coordinating all engineer support for the Division. Accordingly, requests for engineer support when operating in the field will be filled as expeditiously as possible, based on the tactical situation, focus of effort, and availability of engineer assets.

4009. ADDITIONAL ENGINEER SUPPORT. Engineer support requirements that are beyond the capability of Division engineer assets will require support of external sources. The Division Engineer is responsible to determine whether engineer requests are beyond the capabilities of Division engineer assets. If external engineer support is required to sustain field operations, the Division Engineer will coordinate this support through the III MEF Engineer Officer.

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CHAPTER 5

ENGINEER SUPPORT FOR
GARRISON OPERATIONS

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CHAPTER 5

ENGINEER SUPPORT FOR GARRISON OPERATIONS

5000. GENERAL. Engineer support for the Division in garrison is similar to that provided for field operations. However, since the primary role of Division combat engineer assets is to support Division combat operations, the priority for support in garrison will be organizations and units training in the field. The Division Engineer is responsible to coordinate all garrison engineer support for the Division.

5001. TYPES OF ENGINEER SUPPORT AVAILABLE IN GARRISON

- 1 Planning estimates and field surveys of construction projects
2. Engineer equipment support to include both material handling equipment (MHE) and earth moving equipment.
3. Limited mobile electric power (MEP) equipment support beyond the organic capabilities of the supported unit.
4. Limited general engineering construction support essential to Division training and operations.
5. Specialized training in breaching operations, mine warfare demolitions, and sapper techniques.
6. Other special projects that are within the capability of Division engineer units when directed by the Commanding General, 3d Marine Division, Commanding General, III MEF, or when requested by the Commanding General, Marine Corps Base, Camp Butler.

5002. ENGINEER CONSTRUCTION SUPPORT IN GARRISON

1. General. Engineer projects that enhance training or operations will normally be approved. In order to be assigned to an engineer unit for completion, these projects must relate directly to the engineer unit's mission. They must cause the engineer unit to exercise skills that will enhance unit readiness. This type of support relates mainly to small-scale vertical construction (i.e., simple structures, targets, bunkers, etc.), but may also include small-scale horizontal construction (i.e., combat trails, light road improvement, etc.). Combat Engineer Company, Combat Assault Battalion has the primary responsibility to provide this type of support. However, other engineer units may also be tasked within their capability.

2. Procedures for Obtaining Construction Support

a. Requests. Request for construction support will be directed to the Division Engineer via command channels. Requesters will submit the Engineer Assistance Request (Appendix B). Approved requests will be assigned to engineer units by work order number with an appropriate priority.

b. General Criteria for Submission of Requests

(1) The project contributes directly to the training and/or readiness of the requesting unit and the unit to which it is assigned

(2) The project does not involve facilities maintenance that falls under the purview of the Commanding General, Marine Corps Base, Camp Butler (except as noted in Para 5004 below).

(3) The project is not to build items available through the federal supply system.

(4) The project is beyond the capability of the requester

(5) The project is short-term in nature, and requested completion date allows adequate time to complete the project.

(6) The requester provides adequate specifications, plans and drawings to complete the project.

(7) The requester provides the materials to complete the project

5003. ENGINEER PROJECT MANAGEMENT IN GARRISON

1. General. All formal construction projects undertaken by Division engineer units in garrison fall under the purview of the Division Engineer. These projects will be assigned to an engineer unit by either a Engineer Project Directive (Appendix C), a Minor Construction Work Order (Appendix D), or an Engineer Equipment Work Order (Appendix E) which authorize allocation of personnel and equipment usage for completion of projects. Division engineer units will not undertake construction projects without prior approval of the Division Engineer.

2. Major Projects. Major projects are defined as projects formally tasked to the Division by higher headquarters. Projects of this nature require expenditure of funds from a source other than the Division. Engineer Project Directives (Appendix C) assigning major projects to engineer units will include sufficient information and planning guidance for project completion. Priorities and deadlines issued in the Engineer Project Directive are directive in nature and may only be modified by approval of the Commanding General (G4/Engr).

Major projects will be considered complete only after they have passed final inspection by the Division Engineer (or designated representative).

3. Minor Projects. Minor projects are defined as projects of generally limited scope which do not involve expenditure of funds from outside the Division. These projects are normally assigned to engineer units using a Minor Construction Work Order (Appendix D), or an Engineer Equipment Work Order (Appendix E). Material for these projects must be furnished by the requesting unit, unless otherwise stipulated in the Work Order initiating the project.

4. Project Priorities. All formal projects assigned to Division engineer units will be assigned a project priority based on the following criteria:

a. Routine. Completion of the project is not to interrupt normal work routine, normal training requirements, or scheduled exercises. Units will initiate work within one month of assignment.

b. Priority. Takes precedence over all assigned routine projects. Completion of project may require deviation from normal work routine and normal training schedule in order to complete by the deadline stipulated in the initiating directive. Units will initiate work within two weeks of assignment.

c. Immediate. Takes precedence over all projects and training and normally requires extended work hours to complete by the deadline stipulated in the initiating directive. Units will start work as soon as issued written or verbal direction to start the project. A written Engineer Project Directive will normally follow verbal orders to initiate an immediate project.

5004. MINOR CONSTRUCTION TROOP TRAINING PROJECTS. The Commanding General, Marine Corps Base, Camp Butler (FacMaint) periodically provides engineer troop training projects (limited scope horizontal or vertical construction) in support of facilities, range, or training area improvement. These projects are authorized by the Facilities Maintenance Officer under the provisions of the current edition of BO P11014.1. They will normally require more than 48 man-hours to complete, and Facilities Maintenance provides the plans and materials. Once received by the Division Engineer, these projects are assigned to Division engineer units on Engineer Project Directives (Appendix C). Many of the projects offered by this program are initiated by Division organizations and units to improve, rehabilitate, or repair Base training areas and ranges. Requesters will use the Engineer Assistance Request (Appendix B) to request range and training area improvements.

5005. ENGINEER PROJECT REPORTS IN GARRISON

1. Division Reports. Engineer units assigned engineer projects by the Division Engineer will submit Engineer Project/Work Order Status Reports (Appendix F) to the Division Engineer. These reports will be submitted bi-weekly whenever working on engineer projects assigned by the Division Engineer.

2. Base Reports. Engineer units performing work originated by Marine Corps Base, Camp Butler work orders must provide military labor and engineer equipment operation statistics per the guidance provided in the current edition of BO 11014.1. These reports will be submitted to Base via the Division Engineer on completed work orders.

5006. ENGINEER EQUIPMENT SUPPORT IN GARRISON

1. General. Engineer equipment support of Division operations and training in garrison will be coordinated by the Division Engineer. The primary purpose of this support is internal logistical support for Division garrison operations and training, and applies mainly to material handling equipment (MHE) and utilities equipment. This type of support will normally require the supporting unit to provide equipment and operators to accomplish assigned tasks. Combat Engineer Company, Combat Assault Battalion has the primary responsibility to provide this type of support. Other engineer units may also be tasked within their capability.

2 Procedures for Requesting Engineer Equipment Support

a. All requests for engineer equipment support must include the following in order to determine actual support requirements:

- 1 Specific description of work to be accomplished
- 2) Expected duration of support required
- 3 Report date, time, location, and report to information.
- (4) Specific dimensions and weights for any cargo to be lifted or moved
- (5) Specific mobile electric power requirements i.e., 75 kW of 400 Hz power, 100 kW of 60 Hz power, etc.).
- (6) Specific number of personnel requiring water or hygiene support, and the level of support required.
- (7) Any other amplifying information that may be helpful to the supporting unit.

b. Routine Requests (i.e., less than 24 hours, short-term commitments, etc.):

(1) May be submitted via the following means

a Via LAN to: "G4ENGR@G4@3D MARDIV", or

b Via Transportation Coordinator's Automated Information Movements System (TC AIMS) to the Division Engineer.

(2) Must be submitted no less than 48 hours prior to the required time of support.

c. Non-routine requests for large-scale engineer equipment support (i.e., support required in excess of 24 hours, unit deployment turn-over, Alert Contingency MAGTF exercises, command post exercises, field training exercises, etc.):

(1) Must be submitted in writing to the Division Engineer.

(2) Must be submitted no less than 12 days prior to the required time of support.

3. Temporary Loans. The current edition of DivO 4400.33 provides guidance regarding temporary loan of equipment within the Division. Requests for temporary loan of engineer equipment will be directed to Commanding General, G4/Ops, with a copy to G4/Engr and G4/Sup. Procedures set forth above (Paras. 2.a. & 2.c.) also apply to temporary loans. Additionally, Division organizations and units that request temporary loan of engineer equipment must have properly licensed operators to operate all loaned equipment.

4. Material Handling Equipment. Requests for short-term MHE support will be directed to the Division Engineer, via command channels, as set forth above (Paras 2.a. & 2.b.). Due to the geographical location of Division organizations and units requiring this type support on a routine basis, the following general guidelines will normally apply:

a. Headquarters and Service Company, Combat Assault Battalion will normally provide routine MHE support at Camp Schwab.

b. Combat Engineer Company, Combat Assault Battalion will normally provide routine MHE support at Camp Hansen and Camp Courtney.

c. Headquarters Battery, 12th Marines will normally provide routine MHE support for Division units at Camp Foster.

d. All requests for MHE support will be directed to the Division Engineer via command channels.

e. These routine MHE support assignments may be altered by the Division Engineer whenever necessary to satisfy operational requirements.

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APPENDIX A

REFERENCE LIST

Marine Corps Orders

MCO 1500.40 Marine Corps Training Philosophy, Definitions
Priorities, and Requirements

MCO 1510.35 Individual Training Standards System (OccFld 03)

MCO 1510.95 Individual Training Standards System (OccFld

MCO 1510.96 Individual Training Standards System (OccFld 11

MCO P3000.11 MARES Introduction Policy Manual

MCO 3501.12 Marine Corps Combat Readiness Evaluation System Volume
XI (Combat Support)

MCO 3501.3 Marine Corps Combat Readiness Evaluation System Volume
II (Infantry)

MCO 3570.1 Policies and Procedures for firing Ammunition
Training

MCO 4355.5 Marine Corps Calibration Program

MCO 4710.8 Uniform Criteria for Repair Cost Estimates Used in
Determination of Economical Repair

MCO P4750.3 Painting And Registration Marking of Marine Corps
Tactical and Combat Equipment

MCO P4790.2 MIMMS Field Procedures Manual

MCO P5100.8 USMC Ground Occupational Safety and Health Program

MCO 6260.1 USMC Hearing Conversation Program

MCO P11262.2 Inspection, Testing, and Certification of Tactical
Ground Load Equipment

Division Orders

DivO 1500.25 Division Training SOP

DivO P3300.25 Division Combat SOP

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Division Orders (continued)

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Marine Corps Base, Camp Butler Orders

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Fleet Marine Force Manuals and Reference Publication

FMFM	MAGTF	g	Op		
FMFM	MAGTF		ng Op	ons	
FMFM	g	Op			
FMI	g	ep			
FM	xp	d			
FM	dm1	W:			

Technical Manuals

TM	:A	Mk	od	aran	ly:
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TM	/	Al	Qu	qu	emen

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Navy Publications

NAVMAT P-150 Safety Procedures for Shore Activities

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APPENDIX B

ENGINEER ASSISTANCE REQUEST

UNIT HEADING

11300
Code
Date

From: Commanding Officer
To: Commanding General, 3d Marine Division
Via: Commanding Officer

Subj: REQUEST FOR ENGINEER ASSISTANCE

Ref: (a) DivO P11270.1

Encl: (1) (Plans, sketches, drawings, etc.)

1. Brief description and location of work requested to be accomplished.
2. Specific justification
3. Date completion required. (Note: Explain fully the nature of the requirement for any deadline of less than 30 days).
4. Point of contact for additional information and telephone number.

I.M. SAPPER

ENGINEER SOP

APPENDIX C

ENGINEER PROJECT DIRECTIVE
(to be used for assignment of major construction projects)

UNIT HEADING

11100
Code
Date

From: Commanding General
To: Commanding Officer, Engineer Unit

ENGINEER PROJECT DIRECTIVE

a) (Requiring/Authorizing Directives)

Encl: (1 (Instructions, engineer estimates, designs, etc

1. Purpose

2. Information

a Background

b. Description

3 Action

a Time Frame/Phases/Priority

b. Materials/Equipment Considerations

c. Coordinating Instructions/Direct Liaison Authorization

4 Reporting Procedures

5 Completion Instructions

a. Summary Report

b. Acceptance Inspection

I.M. SAPPER

ENGINEER SOP

APPENDIX D

ENGINEER MINOR CONSTRUCTION WORK ORDER
(To be used for assignment of minor construction projects)

UNIT HEADING

11414
Code
Date

From: Commanding General
To: Commanding Officer, Engineer Unit

Subj: MINOR CONSTRUCTION WORK ORDER #

Ref: (a) DivO P11270.1
(b) (Other Requiring/Authorizing Directives)

Encl: (1 (Instructions, estimates, designs, etc.

1. You are directed to perform the following minor construction project:

- a. Work Description:
- b. Location:
- c. Organization:
- d. Point of Contact:
- e. Phone
- f. Priority:
- g. Required Completion Date
- h. Additional Instructions:

2. Notify this headquarters (G4/Engr. of any change in project plans and/or bill of materials.

3. Complete by date indicated or submit written justification regarding inability to complete on schedule. Provide projected completion date with request for extension.

4. Direct liaison is authorized with requesting unit

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5. Report starting date and progress on the Engineer Project Status Report.

I.M SAPPER

ENGINEER SOP

APPENDIX E

ENGINEER EQUIPMENT WORK ORDER

UNIT HEADING

4460
Code
Date

From Commanding General
To: Commanding Officer, Engineer Unit

ENGINEER EQUIPMENT WORK ORDER #

- (a) DivO P11270.1
- (b) (Other Requiring/Authorizing Directives)

Encl: (1 (Instructions, estimates, designs, etc

1. You are directed to provide the following engineer equipment support:

- a Work Description:
- b. Location:
- c. Organization:
- d. Point of Contact
- e. Phone:
- f Priority
- g. Required Completion Date:
- h. Additional Instructions:

2. Notify this headquarters (G4/Engr) of any change in project plans and/or bill of materials.

3. Complete project by date indicated or submit written justification regarding inability to complete on schedule. Provide projected completion date with request for extension.

4 Direct liaison is authorized with requesting unit.

ENGINEER SOP

5. Report starting date and progress on the Engineer Project Status Report.

I.M. SAPPER