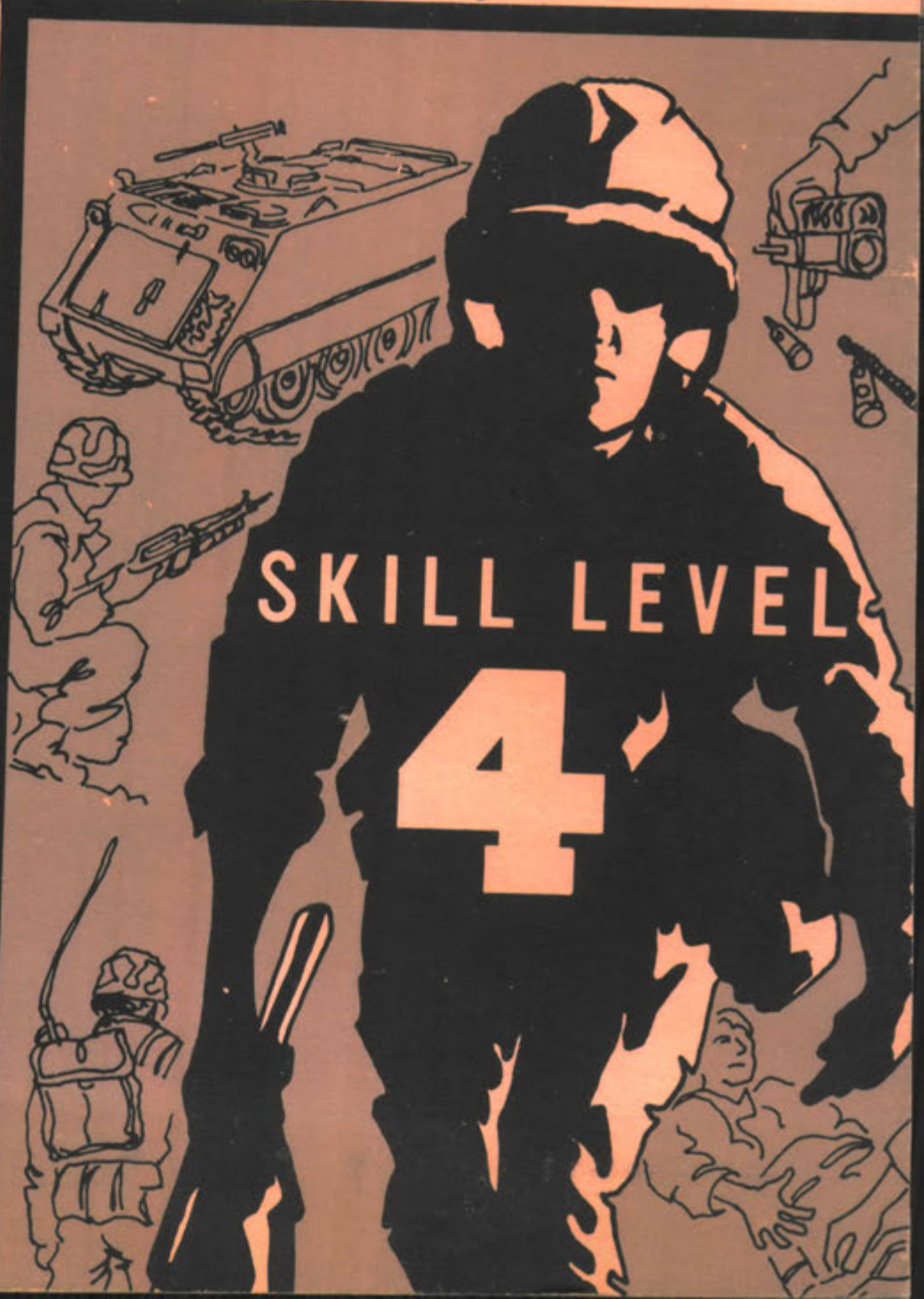
HEADQUARTERS
DEPARTMENT OF THE ARMY

FM 7-11B4

SOLDIER'S MANUAL

11B40 - INFANTRYMAN

FM 7-11B4 1982



COMMANDER'S ATTENTION

Distribute this manual to each soldier in MOS 11B Skill Levels 3-5.

This Soldier's Manual is designed to tell the soldier what tasks he must be proficient in to be MOS qualified. If the soldier follows the road map it provides, he should progress readily to positions of responsibility commensurate with his aptitude and motivation.

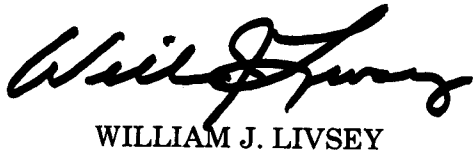
Initial distribution of Soldier's Manuals will be "pushed down" to the unit level, based upon assigned strength in the particular MOS and skill level. If additional manuals are needed by the unit for MOS study, libraries, or other training needs, requests for publications may be sent directly to the US Army Publications Center, 2800 Eastern Boulevard, Baltimore, Maryland 21220.

Soldier's Manuals are designed on the modular system. Each skill level manual builds upon another. As an example, a skill level 3 soldier needs manuals 1 through 4. Levels 1 through 3 tell the level 3 soldier what he needs to know for proficiency at his present skill level. The skill level 4 manual tells him what he must be able to do at the next skill level. The point is - he needs all 4 manuals to know all he needs to know.

The individual soldier is responsible for retaining and maintaining his manual. Upon promotion to grades E5, E6, E7, or E8, the soldier must order his next higher level manual directly from the preparing agency.

> To comply with guidance of the Assistant Secretary of Defense (Manpower and Reserve Affairs), this Soldier's Manual has been reviewed for the use of neuter language. Unless otherwise noted, the third person singular "he" stands for both masculine and feminine genders.

This Soldier's Manual was prepared by the US Army Infantry School.



WILLIAM J. LIVSEY
Major General, USA
Commandant

RESERVE COMPONENT COMMANDER

ARMY NATIONAL GUARD ARMY RESERVE

The information on this page is for you, the Reserve/Guard component commander. Although this manual lists the critical tasks to be performed by the Active Army soldiers in their MOS on equipment available in the Active Army inventory, most tasks in this manual are applicable to reservists/guardsmen without changes. However, some tasks may require modification because of differences in equipment, facilities, and training time available. Because of these differences, you, as a Reserve/Guard component commander, will need to be innovative and seek ways to enable your soldiers to accomplish their critical tasks.

This manual has not undergone the review process necessary to make it completely applicable to Reserve/Guard components. However, some Reserve/Guard component tasks have been identified. In the meantime, Reserve/Guard components will be using the manual prepared for their Active Army counterpart. As necessary, change sheets will be published and distributed to your unit.

Many tasks learned in basic combat training and advanced individual training are in this manual. There are other critical tasks that your reservists/guardsmen must learn on their own. Study materials have been prepared and can be ordered from the proponent agency. Your job is to make sure that the necessary study materials are available in your unit training center.

NOTICE TO RESERVE COMPONENTS

This manual will not be effective for the Army National Guard and the Army Reserve until ***after*** the 1979 SQT. ***Do not*** (repeat ***do not***) destroy FM 7-11B4, dated 14 May 1976. Your SQT in 1979 will be based on FM 7-11B4, dated 20 November 1978.

SOLDIER'S MANUAL

11B40 - INFANTRYMAN
Skill Level 4

The new Table of Contents, Introduction, and Tasks contained in this document provide for upgrading and updating **FM 7-11B3** to form **FM 7-11B4** for Skill Level 4 soldiers (E-7s).

ATTENTION:

Collating your manuals is not a requirement. However, USAIS suggests that you do collate them.

FM 7-11B3, is updated as follows:

1. Remove the following from FM 7-11B3:

Front Cover
Pages i thru vii

2. Insert the following pages as indicated below:

MAJOR AREA	ADD PAGES	AFTER PAGE
Front Cover - SL 4	N/A	N/A
Commander's Attention and Contents - SL 4	Pages i thru vii	Cover
SL 4 Introduction and Road Map	Section IV Divider thru 1-IV-B-17	1-III-B-14
Nuclear, Biological, and Chemical	2-I-B-28.1 thru 2-I-B-32.3	2-I-B-27.3
Basic Individual Techniques	2-II-A-14.1 thru 2-II-A-15.3	2-II-A-13.2
106-mm Recoilless Rifle	2-III-I-12.1 thru 2-III-I-12.4	2-III-I-11.4
TOW	2-III-J-11.1 thru 2-III-J-11.6	2-III-J-10.3
Mines	2-IV-B-15.1 thru 2-IV-B-17.1	2-IV-B-14.7
Leadership	2-VI-A-7.1 thru 2-VI-A-7.6	2-VI-A-6.6
Training	2-VI-B-3.1 thru 2-VI-C-3.2	2-VI-B-2.3

—MAJOR AREAS—	ADD PAGES	AFTER PAGE—
Basic Tactics	2-VII-A-4.1 thru 2-VII-A-6.7	2-VII-A-3.2
Specialized Missions	2-VII-B-3.1 thru 2-VII-B-8.2	2-VII-B-2.4
Offense (Tactics)	2-VII-C-5.1 thru 2-VII-C-7.7	2-VII-C-4.6
Defense (Tactics)	2-VII-D-7.1 thru 2-VII-D-11.3	2-VII-D-6.3
Mech In (Tactics)	2-VII-E-8.1 thru 2-VII-E-9.4	2-VII-E-7.5
Section VIII	Section VIII Divider thru 2-VIII-E-3.2	2-VII-E-9.4
Appendix C. Consolidated List of References (FM 7-11B4)	C-1 thru C-2	B-3
Questionnaire and Reorder Form		C-2

3. File this change sheet in front of the SL 3 change sheet for reference purposes. The proponent agency of this field manual is the United States Army Infantry School. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) or the questionnarie provided with this manual, direct to Commandant, United States Army Infantry School, ATTN: ATSH-I-V-TDD, Fort Benning, Georgia 31905.

Field Manual
No. 7-11B4

*FM 7-11B4

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 20 November 1978

SOLDIER'S MANUAL 11B
INFANTRYMAN SKILL LEVEL 4

Contents

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price $4.45
Stock Number 008-020-00677-7

*This field manual supersedes FM 7-11B4, dated 14 May 1976.

SECTION II
COMBAT TECHNIQUES

SECTION III
WEAPONS

SECTION IV
HAND GRENADES, MINES, AND DEMOLITIONS

SECTION V
TACTICAL VEHICLES

SECTION VI
LEADERSHIP AND TRAINING

SECTION VII
TACTICS

SECTION VIII
OPERATIONS

CHAPTER 1

LIGHT WEAPONS INFANTRYMAN

SECTION IV
SKILL LEVEL FOUR
INTRODUCTION AND ROAD MAP

HOW TO USE THE SOLDIER'S MANUAL

Refer to the Introduction to Skill Level 1, pages 1-I-A-1 thru 1-I-A-5, for an explanation of a Soldier's Manual. Refer to pages 1-I-A-7 thru 1-I-A-9 for an explanation of a Task Summary.

COMMON SKILL LEVEL 4 TASKS

The Soldier's Manual for Skill Level 4 soldiers (grade E7) contains basic combat tasks that **all** 11B40 Infantrymen must be able to perform. These tasks are listed on the Road Map for Skill Level 4 in chapter 1 under COMMON TASKS for all Skill Level 4 Infantrymen. The Road Map will tell you the page on which each task can be found.

Your duty position may require you to be able to do some add-on tasks. The table below lists the duty positions which require add-on tasks and the number of add-on tasks required. A list of tasks for each duty position and the page on which each task can be found are listed on the Road Map for Skill Level 4 in chapter 1 under DUTY POSITION TASKS.

DUTY POSITION	NUMBER OF TASKS
Platoon Sergeant (TOW)	11
Platoon Sergeant (106-MM RCLR)	12
Platoon Sergeant (Mechanized Units)	19
Assistant Operations Sergeant	16
Scout Platoon Sergeant	5

At Skill Levels 1 and 2, you were concerned with individual tasks. These tasks were aimed at qualifying you as a member of one of the elements of the Light Weapons Team. While you had to be aware of other members' actions, you were only responsible for your own. At Skill Level 3 you were given tasks that tested your ability to lead; your responsibilities became more complex at that level. You not only had to be aware of what others were doing, you had to CONTROL their collective actions. You were expected to master those combat skills, to train others to a high degree and to insure that the skills are applied in combat. At Skill Level 4, your responsibilities are even more complex than at Skill Level 3. You are now responsible for the administration, tactical employment, and training of your platoon to meet or exceed the standards set forth in your unit's ARTEP.

A NOTE TO TRAINERS

Today, we are concerned with training combat leaders who are prepared to win the first battle of the next war. We must seek men who are knowledgeable in their individual jobs and the jobs of their subordinates, and who can lead men; these are the ones who will receive leadership positions. In order to train, platoon sergeants must build clear word pictures and issue specific instructions. NOTHING SHOULD BE LEFT TO CHANCE OR DOUBT.

The job of a platoon sergeant, one of the most difficult on the battlefield, must be simplified as much as possible. This is where cross-training and the team system will relieve the platoon sergeant of many of his problems of battlefield explanation. Through cross-training and the team system, a more efficient organization will be created.

To make a decision while engaged with an enemy -- to locate an enemy -- to attack targets -- to properly use terrain -- to control elements -- to inspire men -- to keep the element's aggressive spirit alive -- these are challenges enough for any man, and they are very real. They must be approached with all the enthusiasm and dedication one can muster. Your unit's training program should be based on how well you, your squad leaders, and fire team leaders can perform the combat tasks contained in the Soldier's Manuals. After you have determined your own proficiency level and that of your squad leaders and fire team leaders, you must train in the areas of poor performance first.

A basis for evaluating your unit training is the ARTEP. It sets forth the missions which the Light Weapons Team must perform in combat and identifies the skills associated with these missions. The ARTEP establishes the MINIMUM STANDARDS that the Light Weapons Team must achieve in training if it is to FIGHT and WIN on the BATTLEFIELD.

HOW TO PREPARE YOURSELF FOR PROMOTION

The Army will only promote men who have proved that they can do the job. In other words, you must show that you can do the tasks required of a First Sergeant before you can be considered for promotion to that grade. Here is how the system works:

1. LEARN THE TASKS IN THIS MANUAL that apply to you. As soon as you have done that, ask for a copy of FM 7-11B5 Soldier's Manual (for Skill Level 5).

2. Then LEARN THE TASKS IN THE SKILL LEVEL 5 MANUAL. Many of the tasks you have learned at preceding skill levels will also apply to you at SKILL LEVEL 5.

3. As an E7, you will TAKE A SKILL QUALIFICATION TEST (SQT). The SQT will test your ability to do the tasks in the Soldier's Manual. If you make a high enough score on the test, you will be given the Skill Level 5 rating which you must have before you are promoted to E8. Since the SQT will use the same conditions and standards used in the Soldier's Manual, you will be able to prepare in advance for the SQT.

4. The SQT has three parts: written, hands-on, and performance certification. Sixty to ninety days before the SQT is given, an SQT notice will be sent to each unit. It will tell which tasks will be tested in each part of the SQT. It will also tell how the task will be tested. There are three different ways to test a task. First, you may be asked to answer a written question about how a task is performed. You will pick the correct answer from a list of answers and mark the correct answer on a machine-scored answer sheet. Second, you may be asked to actually do the task. For example, you may be given an M72A2 LAW and be asked to prepare it for firing. This is called a hands-on test which means you are actually required to do the task as you would on the job. Third, your unit commander may observe your performance of a task and report your ability (performance certification) to perform it as part of your SQT score. Your performance on all three parts of the test will be reported to you sometime soon after you complete the SQT. You will be told which tasks you did not perform well. You can use your Soldier's Manual to improve your performance in those areas.

5. Also while you are an E7, you should start taking subcourses from the Senior Noncommissioned Officer's Non-Resident Course (SNCOC) which pertain to your duty position. These courses will help you develop skills which are required for promotion.

6. In addition to the SQT, you will RECEIVE A SENIOR ENLISTED EVALUATION REPORT (SEER). In the SEER, your supervisor will give his opinion of your performance on the job. Both the SQT and SEER will be used to determine your future.

7. If you don't understand any parts of the manual or want to know more about advancement opportunities, see your first sergeant. Take advantage of his knowledge and experience.

8. At the top of your enlisted chain of command is your sergeant major. He is an expert in helping soldiers learn about training, evaluation, and the system for getting ahead in the Army. As such, he is responsible for insuring that your first sergeant either provides the assistance you need or refers you to him for his guidance and help.

9. The Army wants and needs well-trained soldiers who desire to advance through the ranks. This manual and the willing assistance of senior NCOs are the tools you can use to your advantage and the Army's.

ROAD MAP
FOR
LIGHT WEAPONS INFANTRYMAN SKILL LEVEL 4
COMMON TASKS FOR ALL SKILL LEVEL 4 INFANTRYMEN

NOTE:

1. TASKS MARKED (SL 1, 2, and 3) WERE SKILL LEVEL 1, 2, AND 3 SOLDIERS' TASKS AND ARE NOW YOUR RESPONSIBILITY.

2. ■■■■■ TASKS MARKED IN THIS MANNER ARE YOUR NEW SKILL LEVEL 4 TASKS.

BATTLEFIELD SURVIVAL

FIRST AID

TASK NUMBER		SL	PAGE
	Introduction to first aid.	1	2-I-A-1.1
081-831-1004	Perform mouth-to-mouth resuscitation and external heart massage.	1	2-I-A-2.1
081-831-1005	Stop bleeding (arm or leg).	1	2-I-A-3.1
081-831-1006	Identify signs of and treat for shock.	1	2-I-A-4.1
081-831-1007	Splint a fracture.	1	2-I-A-5.1
081-831-1008	Apply first aid measures for burns.	1	2-I-A-6.1
081-831-1010	Apply first aid for sun or heat injuries.	1	2-I-A-7.1
081-831-1011	Apply first aid for wet or cold injuries.	1	2-I-A-8.1

NUCLEAR, BIOLOGICAL, AND CHEMICAL

092-503-1001	Perform operator's maintenance on an M17 series protective mask.	1	2-I-B-1.1
092-503-1010	Exchange filters on an M17 series protective mask.	1	2-I-B-2.1
092-503-1002	Put on and wear a protective mask.	1	2-I-B-3.1
092-503-1015	Put on and wear protective clothing.	1	2-I-B-4.1
092-503-1007	Decontaminate self.	1	2-I-B-5.1
092-503-1008	Decontaminate individual equipment.	1	2-I-B-6.1

ALL TASKS MARKED WITH (RC) APPLY ONLY TO THE US ARMY RESERVE AND NATIONAL GUARD.

(NUCLEAR, BIOLOGICAL, AND CHEMICAL, CONTINUED)

(NUCLEAR, BIOLOGICAL, AND CHEMICAL, CONTINUED)

TASK NUMBER		SL	PAGE
092-503-4116	Supervise use of unit radiac equipment.	4	2-I-B-28.1
092-503-4004	Prepare and submit NBC-4 Report.	4	2-I-B-29.1
092-503-4002	Emplace the automatic chemical agent alarm.	4	2-I-B-30.1
092-503-4115	Employ smoke pots.	4	2-I-B-31.1
092-503-4117	Plan for unit decontamination of equipment.	4	2-I-B-32.1
	INDIVIDUAL FITNESS		
071-327-0201	Maintain an appropriate level of physical fitness (male only).	1	2-I-C-1.1
071-327-0202	Lead physical conditioning activities.	3	2-I-C-2.1
	COMBAT TECHNIQUES		
	BASIC INDIVIDUAL TECHNIQUES		
071-326-0501	Move as a member of a fire team.	1	2-II-A-1.1
071-326-0502	Move under direct fire.	1	2-II-A-2.1
071-326-0510	React to indirect fire.	1	2-II-A-3.1
071-326-0511	React to flares.	1	2-II-A-4.1
071-326-0503	Move over, through, or around obstacles.	1	2-II-A-5.1
071-326-0512	Estimate range.	1	2-II-A-6.1
071-326-0513	Select temporary battlefield positions.	1	2-II-A-7.1
071-326-5703	Construct individual fighting position.	1	2-II-A-8.1
071-326-0600	Use visual signals to control movement (dismounted).	1	2-II-A-9.1
071-329-1021	Determine an enemy target location using grid coordinates.	2	2-II-A-10.1
061-283-6002	Locate a target by shift from a known point.	1	2-II-A-11.1
061-283-6003	Call for/adjust indirect fire.	1	2-II-A-12.1
071-326-5704	Supervise/evaluate construction of a fighting position.	2	2-II-A-13.1
081-889-0001	Request/control medical air evacuation of casualty/casualties.	4	2-II-A-14.1
071-326-0515	Select a movement route using a map.	4	2-II-A-15.1

CAMOUFLAGE, COVER, AND CONCEALMENT

(COMMUNICATIONS, CONTINUED)

LAND NAVIGATION

(LAND NAVIGATION, CONTINUED)

(M16A1 RIFLE, CONTINUED)

TASK NUMBER		SL	PAGE
071-311-2303	Mount/dismount AN/PVS-2 on M16A1 rifle.	1	2-III-A-6.1
071-311-2304	Zero AN/PVS-2 when mounted on M16A1 rifle.	1	2-III-A-7.1
071-311-2305	Engage a target with a rifle using AN/PVS-2.	1	2-III-A-8.1

M203 GRENADE LAUNCHER

071-311-2101	Perform operator maintenance on M203 grenade launcher and ammunition.	1	2-III-B-1.1
071-311-2102	Load, unload, and clear the M203 grenade launcher.	1	2-III-B-2.1
071-311-2103	Zero an M203 grenade launcher.	1	2-III-B-3.1
071-311-2104	Engage targets with an M203 grenade launcher and apply immediate action to reduce a stoppage.	1	2-III-B-4.1
071-311-2105	Use limited visibility firing techniques with the M203 grenade launcher.	1	2-III-B-5.1

LIGHT ANTITANK WEAPON (LAW)

071-318-2201	Prepare an M72A2 LAW for firing; restore M72A2 LAW to carrying configuration.	1	2-III-C-1.1
071-318-2202	Engage targets with an M72A2 LAW.	1	2-III-C-2.1
071-318-2203	Apply immediate action to correct a malfunction on an M72A2 LAW.	1	2-III-C-3.1
071-318-2206	Supervise the preparation of practice rocket launcher, M190, for firing.	3	2-III-C-4.1
071-318-2205	Control the employment of a squad's M72A2 LAWs.	3	2-III-C-5.1

CALIBER .45 PISTOL

191-376-0105	Maintain a caliber .45 pistol.	1	2-III-D-1.1
191-376-0104	Engage targets with a caliber .45 pistol.	1	2-III-D-2.1

M60 MACHINEGUN

TASK NUMBER		SL	PAGE
071-312-3005	Perform operator maintenance on an M60 machinegun and ammunition.	1	2-III-E-1.1
071-312-3001	Operate an M60 machinegun.	1	2-III-E-2.1
071-312-3002	Fire the M60 machinegun for familiarization.	1	2-III-E-3.1
071-312-3004	Construct an M60 machinegun position.	1	2-III-E-4.1
071-312-3003	Lay M60 machinegun using field expedients.	1	2-III-E-5.1
071-312-3006	Field zero an M60 machinegun.	1	2-III-E-6.1
071-312-3007	Prepare a range card for an M60 machinegun.	1	2-III-E-7.1
071-312-2310	Mount/dismount an AN/PVS-2 on an M60 machinegun.	1	2-III-E-10.1
071-312-2311	Zero an AN/PVS-2 to an M60 machinegun.	1	2-III-E-11.1

90-MM RECOILLESS RIFLE (RC)

071-319-3151 (RC)	Perform operator maintenance on a 90-mm RCLR.	1	2-III-G-1.1
071-319-3152 (RC)	Boresight the 90-mm RCLR.	1	2-III-G-2.1
071-319-3153 (RC)	Load, unload, and clear a 90-mm RCLR.	1	2-III-G-3.1
071-317-0000	Prepare an antiarmor range card (90-mm RCLR).	1	2-III-H-5.1
071-319-3155 (RC)	Engage targets with 90-mm RCLR.	1	2-III-G-4.1
071-317-3307	Construct a fighting position (Dragon/ 90-mm RCLR).	1	2-III-H-7.1

DRAGON

071-317-3301	Conduct a preoperational inspection of the Dragon tracker and round.	1	2-III-H-1.1
071-317-3302	Prepare the Dragon for firing.	1	2-III-H-2.1
071-317-3304	Demonstrate correct Dragon firing positions.	1	2-III-H-3.1
071-317-3303	Determine if a target is engageable.	1	2-III-H-4.1
071-317-0000	Prepare an antiarmor range card (Dragon).	1	2-III-H-5.1
071-317-3306	Perform immediate action procedures for a Dragon misfire.	1	2-III-H-6.1

(DRAGON, CONTINUED)

TASK NUMBER		SL	PAGE
071-317-3307	Construct a fighting position (Dragon/ 90-mm RCLR).	1	2-III-H-7.1
071-317-3308	Perform emergency destruction procedures.	1	2-III-H-8.1

HAND GRENADES, MINES, AND DEMOLITIONS

HAND GRENADES

071-325-4401	Perform safety checks on hand grenades.	1	2-IV-A-1.1
071-325-4402	Engage enemy targets with hand grenades.	1	2-IV-A-2.1
071-325-4405	Identify and employ hand grenades.	1	2-IV-A-3.1

MINES

051-192-1502	Install and fire/recover an M18A1 claymore mine.	1	2-IV-B-1.1
051-192-1505	Install the M18A1 claymore with tripwires.	1	2-IV-B-2.1
051-192-1506	Disarm the M18A1 claymore with tripwires.	1	2-IV-B-3.1
051-192-1008	Install the M21 metallic antitank (AT) mine.	1	2-IV-B-4.1
051-192-1018	Disarm the M21 metallic antitank (AT) mine.	1	2-IV-B-5.1
051-192-1002	Install the M16A1 bounding antipersonnel mine (with/without tripwires).	1	2-IV-B-6.1
051-192-1012	Disarm the M16A1 bounding antipersonnel mine equipped with and without tripwires.	1	2-IV-B-7.1
051-192-1021	Locate mines by visual means.	1	2-IV-B-8.1
051-192-1022	Locate mines by probing.	1	2-IV-B-9.1
051-192-1501	Neutralize enemy mines.	1	2-IV-B-10.1
071-325-4406	Install/recover a mechanical ambush.	2	2-IV-B-11.1
051-192-2026	Direct a minefield marking party.	2	2-IV-B-12.1
051-192-3029	Direct a minefield siting party.	3	2-IV-B-13.1
051-192-3030	Direct a minefield laying party.	3	2-IV-B-14.1
051-192-3503	Direct a minefield recording party.	4	2-IV-B-15.1

(MINES, CONTINUED)

TRACKED VEHICLES (MECHANIZED UNITS ONLY)

LEADERSHIP AND TRAINING

LEADERSHIP

TRAINING

(TRAINING, CONTINUED)

(OFFENSE, CONTINUED)

TASK NUMBER		SL	PAGE
071-326-5610	Implement infantry squad movement techniques when not in contact with the enemy.	3	2-VII-C-3.1
071-326-5611	Direct the fire and maneuver of an infantry squad against an enemy position.	3	2-VII-C-4.1
071-326-5625	Prepare and issue an oral platoon offensive operation order.	4	2-VII-C-5.1
071-326-5630	Implement platoon movement technique when not in contact with the enemy.	4	2-VII-C-6.1
071-326-5635	Direct fire and maneuver of platoon against an enemy position.	4	2-VII-C-7.1

DEFENSE

071-326-5701	Supervise the preparation of a squad defensive position.	3	2-VII-D-1.1
071-326-5705	Establish an observation post (OP).	3	2-VII-D-2.1
071-326-5710	Designate fighting positions for squad members (less crew-served weapons).	3	2-VII-D-3.1
071-326-5711	Designate alternate and supplementary positions for squad members	3	2-VII-D-4.1
071-326-5720	Prepare a squad defensive sector sketch.	3	2-VII-D-5.1
071-326-5725	Direct squad fires in the defense.	3	2-VII-D-6.1
071-326-5750	Prepare and issue an oral platoon defensive operation order.	4	2-VII-D-7.1
071-326-5761	Designate primary, alternate, and supplementary fighting positions for key weapons.	4	2-VII-D-8.1
071-326-5770	Prepare a platoon defensive fire plan.	4	2-VII-D-9.1
071-326-5775	Coordinate with adjacent platoons.	4	2-VII-D-10.1
071-326-5780	Direct platoon fires in the defense.	4	2-VII-D-11.1

TASKS FOR SELECTED DUTY POSITIONS - SKILL LEVEL 4

TOW PLATOON SERGEANT (HAW)

TASK NUMBER		SL	PAGE
071-316-2500	Assemble the TOW launcher.	1	2-III-J-1.1
071-316-2501	Perform operator maintenance on TOW weapons system.	1	2-III-J-2.1
071-316-2502	Conduct a system self-test and preoperational inspection.	1	2-III-J-3.1
071-316-2503	Load, arm, and unload an encased missile.	1	2-III-J-4.1
071-316-2504	Perform immediate action procedures for a misfire.	1	2-III-J-5.1
071-316-2505	Determine if a target can be engaged.	1	2-III-J-6.1
071-316-2506	Camouflage/conceal TOW position.	1	2-III-J-7.1
071-317-0000	Prepare an antiarmor range card (TOW).	1	2-III-H-5.1
071-316-2551	Supervise preparation of a TOW fighting position.	2	2-III-J-8.1
071-316-2552	Control TOW squad fires.	2	2-III-J-9.1
071-316-2601	Plan and control TOW section fires.	3	2-III-J-10.1
071-316-2651	Recommend/coordinate methods of employment for TOW.	4	2-III-J-11.1

106-MM RCLR PLATOON SERGEANT (HAW) (RC)

071-319-3601 (RC)	Perform operator maintenance on a caliber .50 spotting rifle, M8C.	1	2-III-I-1.1
071-319-3602 (RC)	Load, reduce a stoppage, unload, and clear the caliber .50 spotting rifle, M8C.	1	2-III-I-2.1
071-319-3603 (RC)	Perform operator maintenance on a 106-mm RCLR.	1	2-III-I-3.1
071-319-3604 (RC)	Load, reduce a stoppage, unload, and clear 106-mm RCLR.	1	2-III-I-4.1
071-319-3605 (RC)	Engage targets with the 106-mm RCLR.	1	2-III-I-5.1
071-319-3606 (RC)	Conduct 106-mm RCLR weapon system alinement.	1	2-III-I-6.1
071-317-0000	Prepare an antiarmor range card (106-mm RCLR).	1	2-III-H-5.1

(106-MM RCLR PLATOON SERGEANT (HAW) (RC), CONTINUED)

TASK NUMBER		SL	PAGE
071-319-3608 (RC)	Construct 106-mm RCLR position (mounted).	1	2-III-I-7.1
071-319-3609 (RC)	Construct 106-mm RCLR position (dismounted).	1	2-III-I-8.1
071-319-3610 (RC)	Camouflage/conceal 106-mm RCLr position.	1	2-III-I-9.1
071-319-3611 (RC)	Control 106-mm RCLR squad fires.	2	2-III-I-10.1
071-319-3612 (RC)	Plan and control 106-mm RCLR section fires.	3	2-III-I-11.1
071-319-3613 (RC)	Recommend/coordinate methods of employment for 106-mm RCLR.	4	2-III-I-12.1

PLATOON SERGEANT (MECHANIZED UNITS ONLY)

071-313-3451	Perform operator maintenance on a caliber .50 M2 HB machinegun and ammunition.	1	2-III-F-1.1
071-313-3452	Target/zero a caliber .50 machinegun.	1	2-III-F-2.1
071-313-3453	Load, reduce a stoppage, unload, and clear a caliber .50 machinegun.	1	2-III-F-3.1
071-313-3454	Engage targets with a caliber .50 machinegun.	1	2-III-F-4.1
071-313-3455	Set headspace and timing on a caliber .50 machinegun.	1	2-III-F-5.1
071-313-2314	Mount/dismount AN/TVS-2 sight on caliber .50 machinegun.	1	2-III-F-6.1
071-313-2315	Boresight AN/TVS-2 to caliber .50 machinegun.	1	2-III-F-7.1
113-587-2002	Prepare radio set AN/VRC-64 for operation.	1	2-II-D-5.1
113-587-3004	Perform operator maintenance on radio set AN/VRC-46 or AN/VRC-47.	1	2-II-D-6.1
113-587-2020	Prepare tactical FM radios (AN/VRC-46 or AN/VRC-47) for operation.	1	2-II-D-7.1
071-326-3000	Supervise combat loading of personnel and equipment in APC.	3	2-VII-E-1.1

(PLATOON SERGEANT (MECHANIZED UNITS ONLY), CONTINUED)

TASK NUMBER		SL	PAGE
071-326-3001	Select exact terrain route for an APC, and direct the driver over the route.	3	2-VII-E-2.1
071-326-3002	React to indirect fire while mounted.	3	2-VII-E-3.1
071-326-3003	React to direct fire while mounted.	3	2-VII-E-4.1
071-326-3004	Control occupation of a bounding position.	3	2-VII-E-5.1
071-326-0601	Use visual signals to control movement (mounted).	3	2-VII-E-6.1
071-326-3006	Direct the fire and maneuver of a mechanized squad against an enemy position.	3	2-VII-E-7.1
071-326-3007	Determine techniques of movement for mechanized infantry platoon.	4	2-VII-E-8.1
071-326-3008	Control platoon APCs in the defense.	4	2-VII-E-9.1

SCOUT

071-326-5805	Plan and conduct a route reconnaissance mission.	4	2-VII-B-3.1
051-196-3009	Prepare a route reconnaissance report.	4	2-VII-B-4.1
051-196-3008	Conduct a bridge reconnaissance.	4	2-VII-B-5.1
071-326-5807	Plan and conduct a screening mission.	4	2-VII-B-7.1
071-326-5808	Plan and conduct a zone reconnaissance mission.	4	2-VII-B-8.1

ASSISTANT OPERATIONS SERGEANT

ORDERS AND PLANS

071-332-5000	Prepare an operation overlay.	4	2-VIII-A-1.1
071-332-5001	Prepare, assemble, and distribute an operation plan/operation order/annex.	4	2-VIII-A-2.1
071-332-5002	Prepare a fragmentary order (FRAGO).	4	2-VIII-A-3.1

REPORTS AND RECORDS

071-332-5020	Establish and maintain S3 workbook.	4	2-VIII-B-1.1
071-332-5021	Prepare/update enemy/friendly situation map.	4	2-VIII-B-2.1
071-332-5022	Prepare situation report (SITREP).	4	2-VIII-B-3.1

TACTICAL MARCH PLANNING

071-332-5030	Prepare road movement graph.	4	2-VIII-C-1.1

TACTICAL AIR SUPPORT PLANNING

071-332-5040	Prepare air movement plan.	4	2-VIII-D-1.1
071-332-5041	Plan/request close air support.	4	2-VIII-D-2.1
071-332-5042	Relay request for immediate close air support.	4	2-VIII-D-3.1

TRAINING

071-328-5307	Screen training schedules.	4	2-VI-B-4.1
071-328-5308	Evaluate (inspect) training.	4	2-VI-B-5.1

TACTICAL OPERATIONS CENTER (TOC) FUNCTIONS (Common to Operation and Intelligence Duty Positions.)

COMMON TASKS FOR S2/S3

071-332-5050	Monitor operations/movements of subordinate units.	4	2-VIII-E-1.1
071-332-5051	Prepare/post daily staff journal.	4	2-VIII-E-2.1
071-332-5052	Supervise establishment/displacement of tactical operations center (TOC).	4	2-VIII-E-3.1

TASK NUMBER: 092-503-4116

SUPERVISE USE OF UNIT RADIAC EQUIPMENT

CONDITIONS:

In a simulated NBC environment, given radiacmeters, AN/PDR-27, IM-174 or IM-174A/PD, IM-93 or IM-93A/UD, unit survey and monitoring team, and a requirement to begin radiological monitoring.

STANDARDS:

1. Insure the selection of the correct radiacmeter for the mission.
2. Conduct a ground survey IAW performance measures below.

PERFORMANCE MEASURES:

1. Instruments (figure 1):

a. The IM-174/PD and IM-174A/PD are used for area monitoring and survey. They measure gamma radiation in units from 1 to 500 rad/hr. They are dose-rate instruments.

b. The AN/PDR-27 ( ) is used to monitor personnel, food and equipment. It will measure gamma radiation and detect beta. It is a dose-rate instrument.

c. The IM-93 ( )/UD is used to measure total radiation dosages received. It measures gamma radiation up to a total dose of 600 rads. It is a total dose instrument.

2. Missions:

a. Monitoring (does not divert personnel from regular duties).

(1) Periodic - Routinely conducted during nuclear warfare at a designated point at least once each hour.

(2) Continuous - Initiated when periodic monitoring indicates above 1 rad/hr; when a fallout warning is received; when moving; when a nuclear burst is observed; on order.

b. Survey - A directed effort to determine the degree and extent of nuclear radiation. Takes personnel away from their basic mission.

3. Tactical dosimetry: The tactical dosimeters are read at least once daily. The difference between the previous reading and the current reading is obtained for each dosimeter. These values are averaged, rounded off to the nearest 10 rad, and reported.

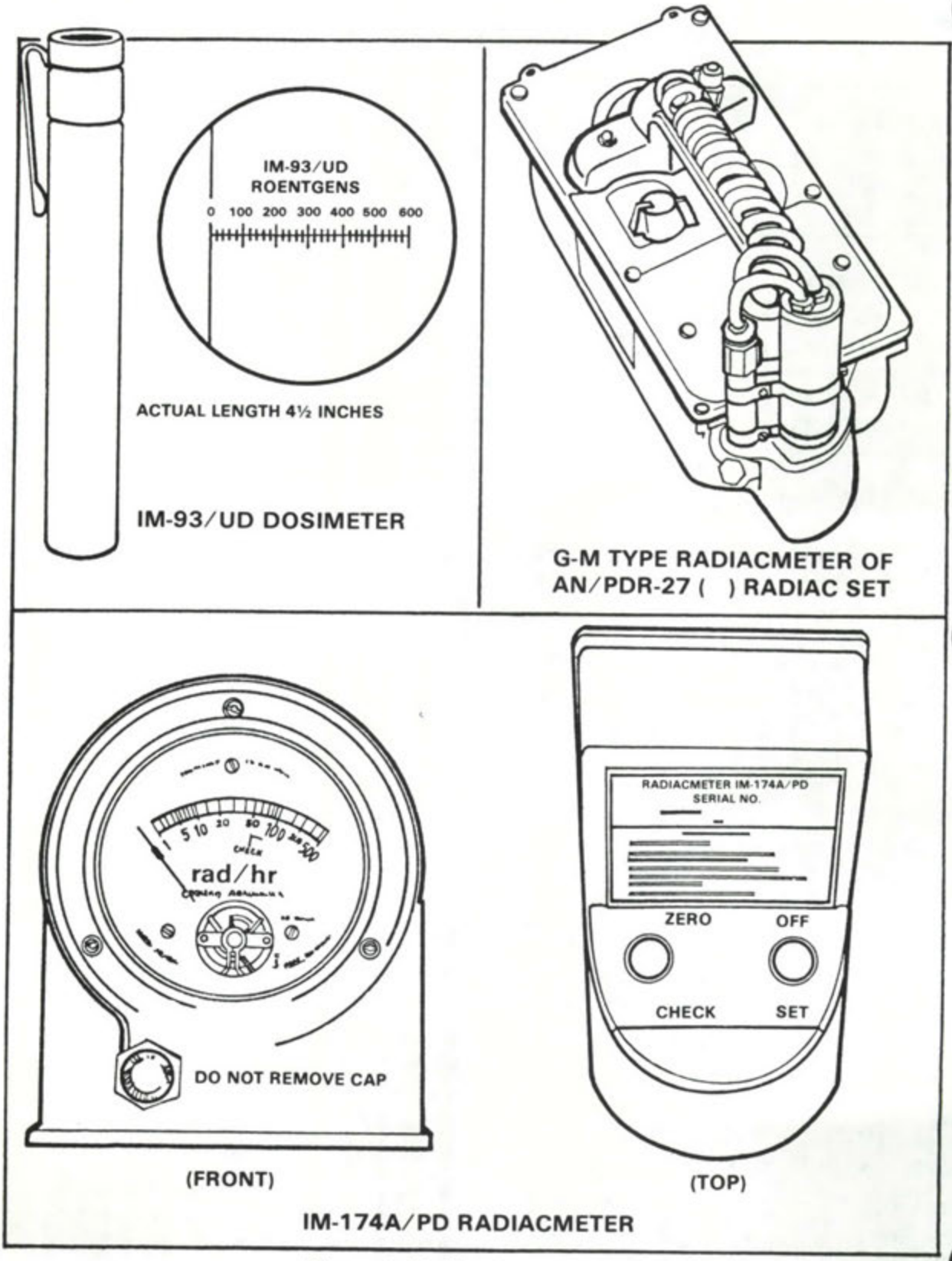


Figure 1. Radiac instruments.

4. Radiological surveys: Radiological survey is the directed effort to determine the extent and dose rates of radiation in a specified area. There are two types of survey:

a. Air - which provides the most rapid means of collecting data, and exposes the least number of personnel to the least amount of radiation.

b. Ground - which takes longer, exposes more personnel to more radiation, but is independent of weather conditions, can be conducted at night, and provides more accurate data.

c. There are three types of ground surveys:

(1) Point - measurements are taken only at preselected points in a given area.

(2) Route - measurements are taken at regular intervals over a predetermined route through a given area.

(3) Preselected dose-rate - a predetermined route is followed and locations are plotted where a given preselected dose rate is observed. Of these, the route method will be the one most often used.

d. Surveys are performed by one or more radiological survey parties and a control party. A ground survey party includes a monitor, who operates a dose-rate meter and records all survey data, and an assistant, who may be a driver or radio operator or both. Additional personnel may be included in a survey party for security or other reasons. The control party directs the survey, collects the data reported, and assembles the data into a usable form. The control party and survey parties are usually organized and equipped with unit resources.

e. As a rule, company-size units organize and train at least two survey parties (primary and alternate) for each dose-rate survey meter; only one party will be equipped with a survey meter. Survey parties are organized to use organic vehicles that provide maximum protection against nuclear radiation; for example, armored vehicles for mechanized units. Air-ground correlation factors, and correlation factors for vehicles and structures are given in FM 3-12.

5. Operation exposure guidance (OEG): OEG is normally determined by a higher level command and gives a unit the means to determine how much radiation it can be exposed to with little or no risk. It is calculated from the unit's radiation history. That is, it is based upon how much total radiation the unit has been exposed to so far. For example, the total dose a unit may receive might be 150 rads. If the unit radiation history says that the unit has already been exposed to 75 rads, then it can be exposed to only 75 rads more. It is very difficult to predict whether the personnel on a survey will receive no more than 75 rads. But they must have a way to determine whether they are receiving too much radiation. They can if they know the TURN BACK DOSE RATE (Rtb) and the TURN BACK DOSE (Dtb).

a. The TURN BACK DOSE RATE (^{R}tb) is figured from the following formula:

$$R_{tb} = \frac{2 \text{ x OEG x speed}}{\text{distance}}$$

The commander has informed you that, due to the previous radiation exposure of the unit, the operation exposure guidance (OEG) is set at 20 rads. The survey is to be conducted at a speed of 10 mph. The distance to be covered by the survey is 5 miles. Using the formula:

$$R_{tb} = \frac{2 \times 20 \text{ rads (OEG)} \times 10 \text{ mph}}{5 \text{ miles}} = 80 \text{ rads/hr}$$

The TURN BACK DOSE RATE then is 80 rads/hr.

When a survey party encounters the TURN BACK DOSE RATE, unless instructed otherwise, it will leave the survey area immediately by the same route it came.

b. TURN BACK DOSE (^{D}tb) is figured from the following formula:

$$D_{tb} = \frac{OEG}{2}$$

Using the OEG (20 rads) given by the commander, we find that the TURN BACK DOSE (^{D}tb) = $\frac{20 \text{ rads (OEG)}}{2}$ = 10 rads.

When the survey party encounters this dose, and the dose rate is increasing as they progress, unless otherwise instructed they will immediately leave the survey area by the route on which they came.

6. To supervise the conduct of a survey mission:

a. Determine the area to be surveyed.

b. Organize the survey and control as required.

c. Plan for the type of survey to be conducted, i.e., point, route, or predetermined dose rate.

NOTE: Planning the details of the survey should be accomplished with the NBC NCO.

d. Obtain OEG and calculate TURN BACK DOSE RATE (^{R}tb) and TURN BACK DOSE (^{D}tb).

e. Secure adequate transportation. Armored personnel carriers are best suited for ground survey since they afford the best protection for survey personnel.

f. Coordinate with all adjacent and subordinate units in the area of operation.

g. Become familiar with the individual exposure history of all survey personnel.

h. Brief the survey and control parties.

i. Conduct the mission.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 11, pages 11-2 thru 11-3, para 11-4 thru 11-6)

TASK NUMBER: 092-503-4004

PREPARE AND SUBMIT NBC-4 REPORT

CONDITIONS:

Following a simulated or actual nuclear attack, given a unit monitor, a dose-rate instrument, correct format for NBC-4 report, FM tactical radio, paper and pencil.

SITUATION: Having received, from the unit monitor, a dose-rate reading(s), location(s) where reading(s) was taken, and time(s) of reading(s).

STANDARDS:

Within 5 minutes, prepare information for an NBC-4 report (using correct format) for transmission to your next higher headquarters.

PERFORMANCE MEASURES:

1. **The initial detection of 1 rad/hr will be reported to the company with an IMMEDIATE precedence on the company command net.**

a. The report will be made in the clear (unless otherwise specified), giving location, dose-rate reading, and time detected. The company will submit an NBC-4 report (figure 1) to battalion with an immediate precedence.

b. Purpose. The NBC-4 report is used for radiation dose-rate measurements.

c. Format.

(1) Letter items Q, R, and S may be repeated as often as necessary.

(2) Radiation dose-rate is measured in the open, 1 meter above the ground. Other conditions (such as measurement from within a track or bunker, etc.) will be specified in the message. See task: **Supervise use of unit radiac equipment.**

d. Users of NBC-4 are not confined solely to the use of the letter items shown in figure 1.

LETTER	*MEANING*	*EXAMPLE*
	Precedence	_____
	Date/time (local or ZULU time, state which)	_____
	Security Classification	_____
	From	_____
	To	_____
	Type of Report	**NBC 4 (NUCLEAR)**
Q.	**Location of reading (UTM).**	**Q. LB 123987**
R.	**Dose rate (rad/hr).** The words "initial," "increasing," "peak," or "decreasing" may be added.	**R. 35 INITIAL**
S.	**Date/time of reading (local or ZULU, state which).**	**S. 201735 (local)** **Q. LB 129965** **R. 60** **S. 201650 (local)** **Q. LB 146808** **R. 27 INCREASING** **S. 201710 (local)**

Figure 1. Example of an NBC-4 Report.

2. **Company reporting procedure.**

a. The company will maintain a monitor at the CP. When appropriate, the monitor will make routine checks of the company area and CP per unit SOP.

b. Subsequent reports will be screened and consolidated by the company. Reports will be submitted as the dose rate in the area is rising; at the first indication that the dose-rate is beginning to decline; and after that as the battalion directs. These reports will be assigned an IMMEDIATE precedence.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 14, page 14-5, para 14-9; app E, pages 8 thru 9, para E-11 and E-12)

TASK NUMBER: 092-503-4002

EMPLACE THE AUTOMATIC CHEMICAL AGENT ALARM

CONDITIONS:

In a simulated or actual NBC environment, in the defense, given a complete chemical agent alarm system with at least three M42 alarm units, and WD-1/TT wire, as required.

STANDARDS:

Emplace the alarm system IAW the performance measures below.

PERFORMANCE MEASURES:

1. Tactical use of the automatic chemical agent alarm system. The automatic chemical agent alarm system will provide a unit with two essential elements of survival in case of a chemical attack:

- Detection of a toxic agent cloud.
- Early warning to troops in the monitored position.

The system cannot work by itself. A basic knowledge of how chemical agents act once they're released, and good judgment in emplacing the detector unit and the alarm(s) in relation to the troop position and the surrounding terrain, can mean the difference between timely detection and warning, or taking unnecessary chemical casualties.

Remember, the automatic chemical agent alarm is used for the detection and warning of off-target attacks and it must be placed upwind of the area to be protected.

The M43 detector unit can be placed up to 400 meters from the M42 alarm unit. The greater the distance, the greater the warning time. However, there are practical limits to the distance between the detector unit and the alarm unit. If it is too great, the agent clouds that have no chance of hitting the position will be detected. Also if the detectors are too far out, there is a chance of an agent cloud slipping behind them. The best positioning of the system is with the detector unit 150 meters upwind of the nearest alarm unit. Choice of the actual location of detectors must consider the chemical agent delivery threat, the terrain, and the state of preparedness of friendly troops.

2. Positioning is a command decision.

Figure 1 shows a company in a defensive position with six detectors deployed. The actual number of alarm systems per unit will vary depending

upon the TOE. The 300-meter distance between the M43 detectors reduces the probability that agent clouds might drift through holes in the array. This array provides a high probability of detecting an off-target attack within a reasonable warning time.

Figure 2 shows an array using four detectors with the wind direction coming from the right flank of the unit. A significant difference between a four-detector array and a six-detector array is that with only four detectors the array must be shifted when the wind direction shifts greater than 20 degrees. Also shown in figure 2 is another point which is often overlooked in chemical warfare defenses and that is an orientation toward the wind direction, more so than toward the enemy's direction.

Figure 3 shows a situation where four detectors are emplaced with three platoons on line. Note the orientation on the wind direction. When the automatic chemical agent alarms are mounted on vehicles, consideration must be given to wind direction for the protection of the main body.

In the case of a maneuvering unit, the alarm systems are positioned with the advance, rear and upwind flank security elements. These security elements must assume an increased protective posture and might even continuously wear their masks as their warning times from the alarms are quite short.

The single most important factor in employing the system is to make sure that the detector is upwind of the position or formation to be protected.

Figures 1 through 3 show methods of positioning the system:

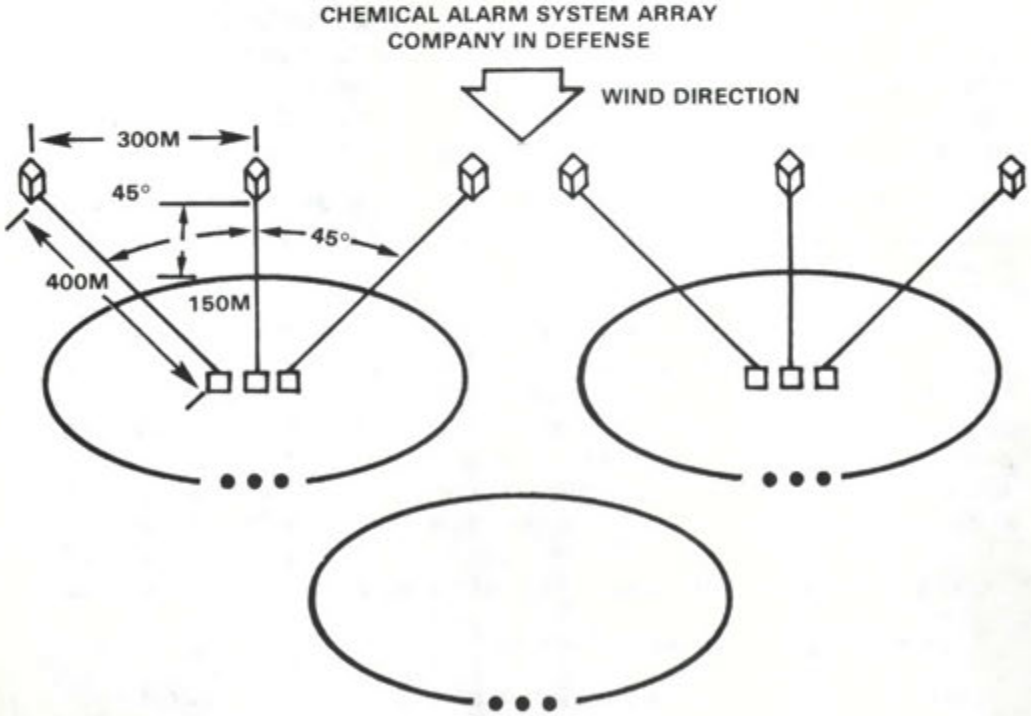


Figure 1. Six-detector array.

CHEMICAL ALARM SYSTEM ARRAY
COMPANY IN DEFENSE

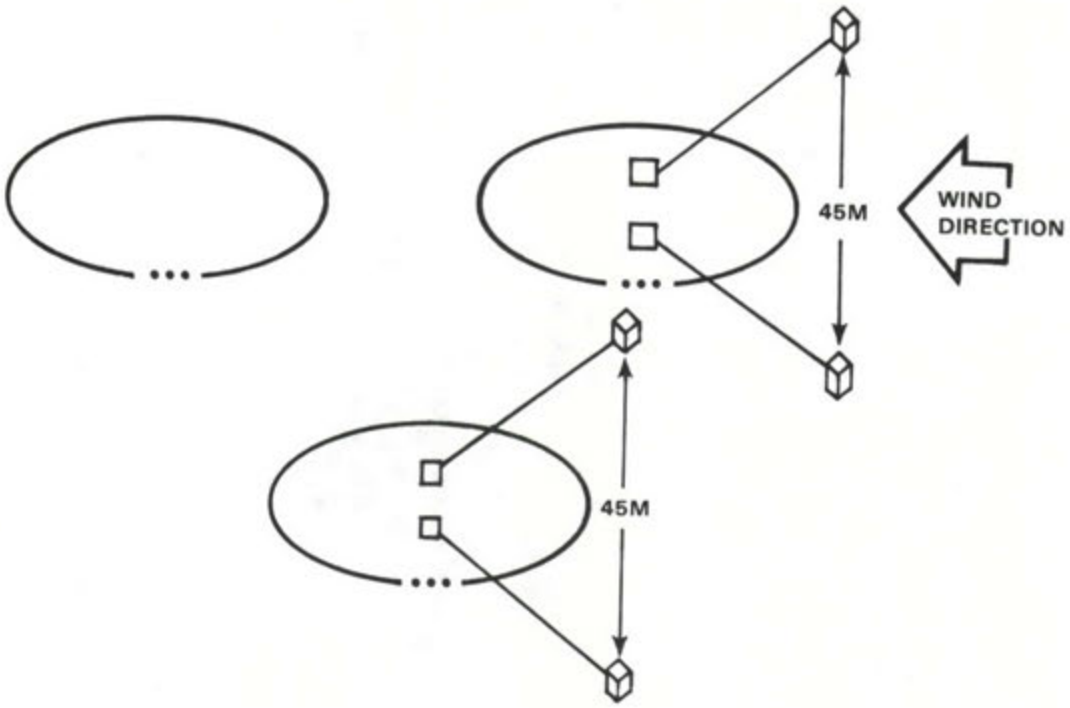


Figure 2. Four-detector array.

CHEMICAL ALARM SYSTEM ARRAY
THREE PLATOONS ON LINE

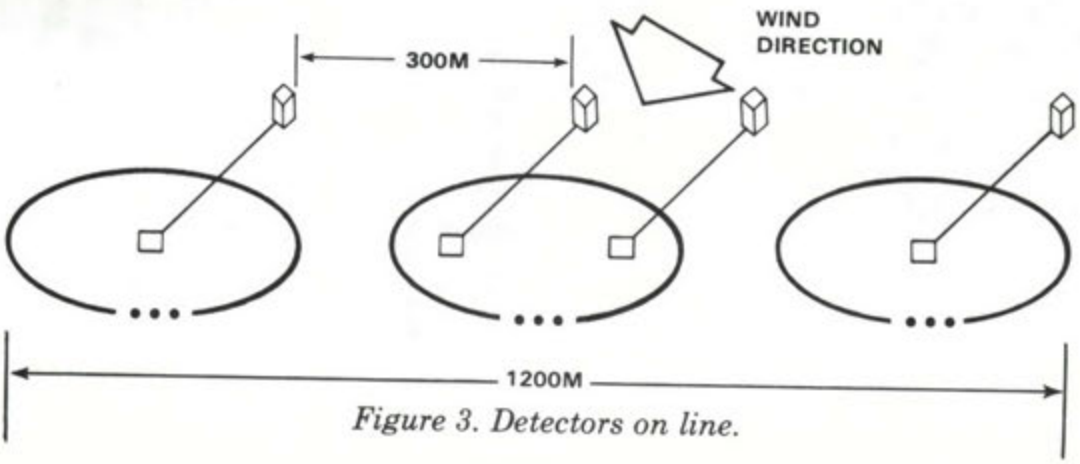
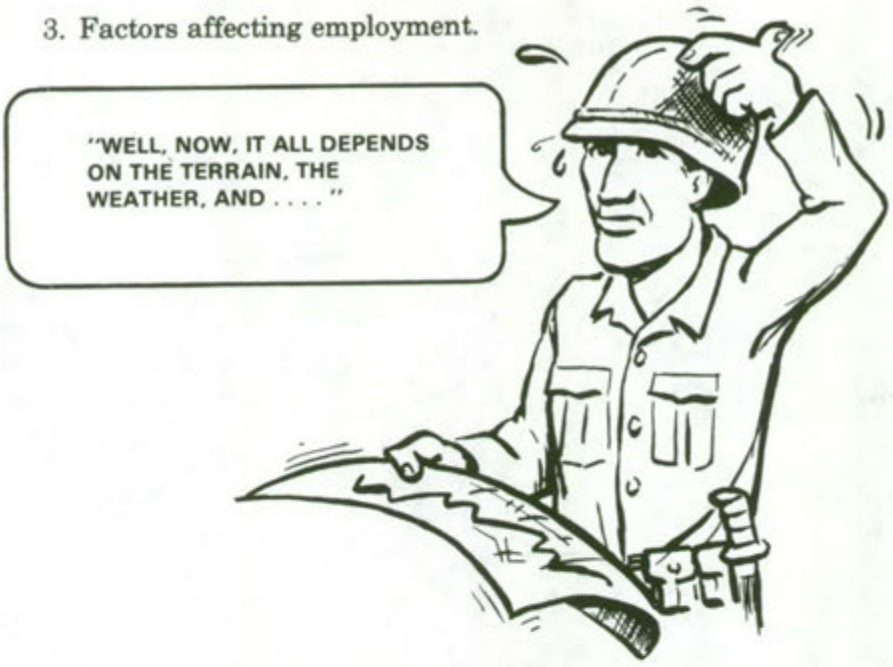


Figure 3. Detectors on line.

3. Factors affecting employment.

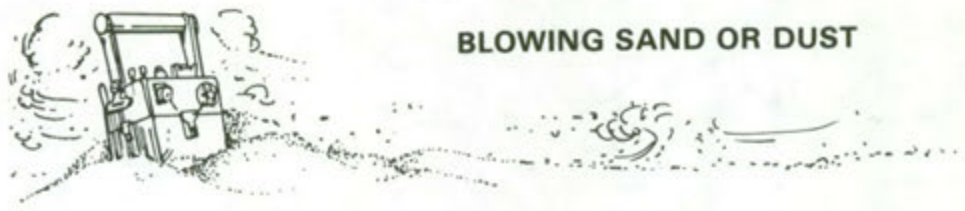


The way chemical agents act after they are released on the battlefield depends on:

- The characteristics of the agent
- The weather in the target area
- The terrain in the target area

a. There are two major types of chemical agents - nonpersistent (agents designed to form a toxic cloud in the target area and remain in the air), and persistent (agents which settle out of the air quickly as liquid agents and contaminate the ground and everything on it). Weather and terrain affect nonpersistent agents much more than they do persistent agents. Wind has the greatest effect on the chemical agent cloud. Light wind allows the cloud to hang together and travel slowly over the ground until the natural mixing action in the air dilutes the cloud to a point where it can no longer produce casualties.

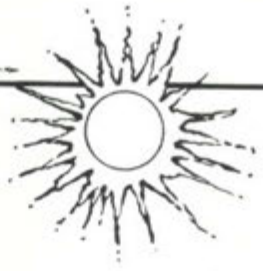
b. Five weather conditions that affect operation . . .



BLOWING SAND OR DUST

RAIN, SLEET, OR SNOW

TEMPERATURE BELOW 4.5°C (40°F)



TROPICAL CONDITIONS

NORMAL CONDITIONS

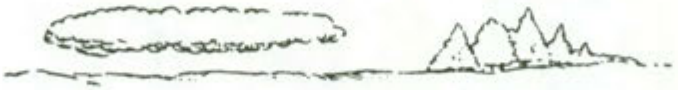
(WHEN NONE OF THE ABOVE EXIST)

c. Moderate wind tends to break up a cloud, move it over the ground at a faster rate, and cause it to cover more territory before it's gone.

Heavy wind breaks up a cloud and greatly reduces the effect of the chemical agent in the target area.

Rain and snow tend to wash the cloud out of the air. The heavier the precipitation, the faster this happens.

Flat or rolling terrain is ideal for chemical attack. The cloud moves across the ground freely, tending to stay together longer.



Rough terrain causes a cloud to tear and break up. The rougher the terrain, the faster this occurs.

Obstacles on the terrain, such as trees and buildings, also cause an agent cloud to tear and break.

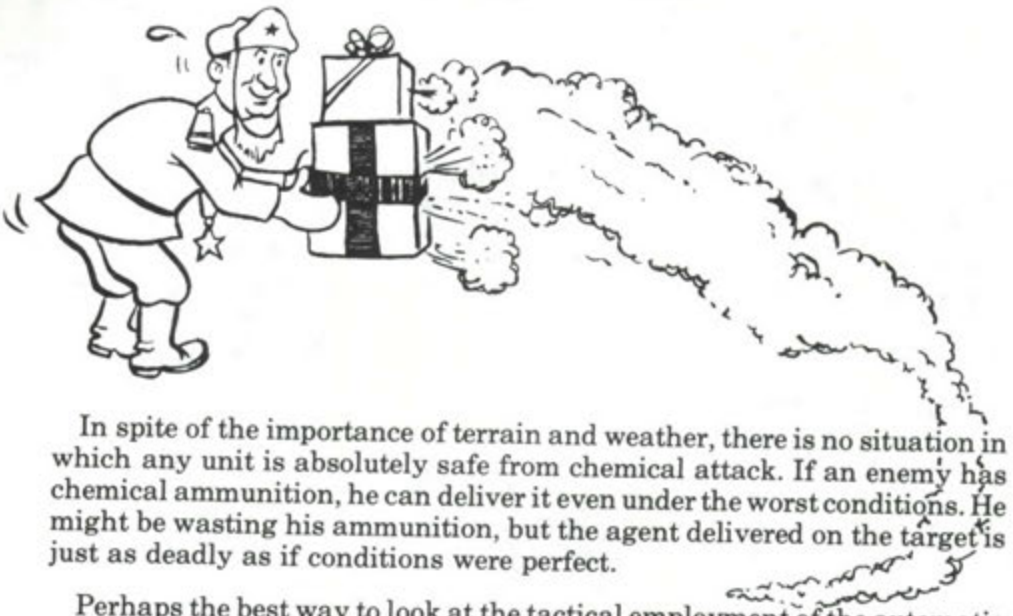
Considering the factors of terrain and weather, it can be seen that there are two "ideal" situations —— one for the chemical attacker:

Flat and rolling terrain — no precipitation.

—and one for the chemical defender:

Broken terrain — precipitation.

4. Enemy chemical agent employment.



In spite of the importance of terrain and weather, there is no situation in which any unit is absolutely safe from chemical attack. If an enemy has chemical ammunition, he can deliver it even under the worst conditions. He might be wasting his ammunition, but the agent delivered on the target is just as deadly as if conditions were perfect.

Perhaps the best way to look at the tactical employment of the automatic alarm system is to see what the enemy will probably do in response to our actions. It must be remembered that the enemy may not follow his own doctrine sometimes, and that a chemical attack against any target is a possibility at any time.

b. The Defense.

When we are defending, the enemy is most likely to use chemical strikes to:

- Attack our first-echelon defending forces with nonpersistent or persistent agent. In doing this, the enemy hopes to cause casualties and force our defending troops into protective gear, thereby degrading their capability to fight effectively. This type of attack will frequently be followed by enemy assault forces trained and equipped to fight through their own contamination if necessary. In a sense, then, the automatic alarm system can alert first-echelon troops not only to a chemical attack, but to the possibility of an immediate ground attack.

- Attack our reserves with persistent and nonpersistent agents. The attack on our reserves is designed to destroy or slow the movement of our counterattack forces.

- Protect the flanks of his (the enemy's) axis of advance with persistent agent. When the enemy uses chemical agents in this manner, he hopes to make the counterattack force hesitate or stall in any attempt to attack his flank. The automatic alarm system will be of use only while such an attack is being delivered.

- Attack our command and control facilities and our fire support units with persistent or nonpersistent agents. As in the previous example, these attacks are designed to disrupt command and control of the conduct of the defense, and to suppress our fire support capabilities.

5. Placement considerations.

Four ways to get a false alarm:

The system is sensitive also to certain other factors on the battlefield . . . factors that will cause it to give a false alarm.

- Heavy concentrations of rocket propellant smoke.
- Heavy concentration of screening or signaling smoke.
- Heavy concentrations of engine exhaust.
- A nuclear explosion.

Whenever the alarm system sounds the alert, the presence of a chemical agent is assumed. The actual presence or absence of a chemical agent, after an alarm, is confirmed using a chemical agent detector kit.

a. The Offense.

When we are attacking, the enemy is most likely to use chemical strikes to:

- Contaminate our probable avenues of approach with persistent agents. If the contamination is already on the ground, the automatic alarm system will not be of much help in detecting it. Units will have to depend on their chemical agent detecting kits and papers in this situation. If the attack is made near a working automatic alarm system, the system will detect it if the agent is a nerve, blood, or choking agent.

- Attack our assault elements with nonpersistent agents to force them into full NBC protection (mask on, protective clothing fully closed) or accept casualties. By engaging our assault forces, the enemy hopes to disorganize the assault or slow it down.

- Attack our tactical reserves and follow-in-support forces with both persistent and nonpersistent agents. By engaging these forces, the enemy hopes to cause our attack to become shallow and to lose momentum. The

automatic alarm system can provide warning to troops on the move or in assembly areas, except in the case of a persistent agent which is already on the ground. Keep in mind that when used on the move, the detector must be kept upwind of the formation in order to provide the necessary warning.

- Attack our command and control facilities, our fire support units, and our logistics system with both persistent and nonpersistent agents. In general, we can expect the enemy to use nonpersistent agents on targets wherein casualties would have the most effect on operations (e.g., command posts, signal centers, replacement companies). We can expect him to use persistent agents on fire support, supply, and maintenance units, where the need to decontaminate equipment and supplies would cause a strain on operations.

6. Summing up.

The automatic chemical agent alarm system must be properly sited, operated, and maintained in order to provide early detection and warning of a chemical attack.

THE SINGLE MOST IMPORTANT FACTOR IN EMPLOYING THE SYSTEM IS TO MAKE SURE THAT THE DETECTOR IS UPWIND OF THE POSITION OR FORMATION TO BE PROTECTED.

REFERENCES:

FM 21-40, Chemical, Biological, Radiological, and Nuclear Defense, C1, May 71 (chap 8, pages 8-9 thru 8-11, para 8-14 thru 8-15)

TM 3-6665-225-12, Alarm, Chemical Agent, Automatic: Portable, C1, Aug 75 (chap 3, page 3-3)

TASK NUMBER: 092-503-4115

EMPLOY SMOKE POTS

CONDITIONS:

Given at least three M5 smoke pots, and a requirement to conceal a platoon defensive position with a smoke blanket or smoke haze. Temperature gradient (lapse, neutral, inversion) and wind speed and direction are known.

STANDARDS:

Select positions and emplace smoke pots IAW performance measures below. Defensive position must be concealed from frontal view as long as wind direction and speed remain constant.

PERFORMANCE MEASURES:

1. To employ any smoke pot, the following factors must be taken into account.

a. Temperature Gradient (figure 1). This refers to the difference in air temperature ½ meter above the ground and 4 meters above the ground. Depending on how these temperatures differ, one of the following conditions will exist:

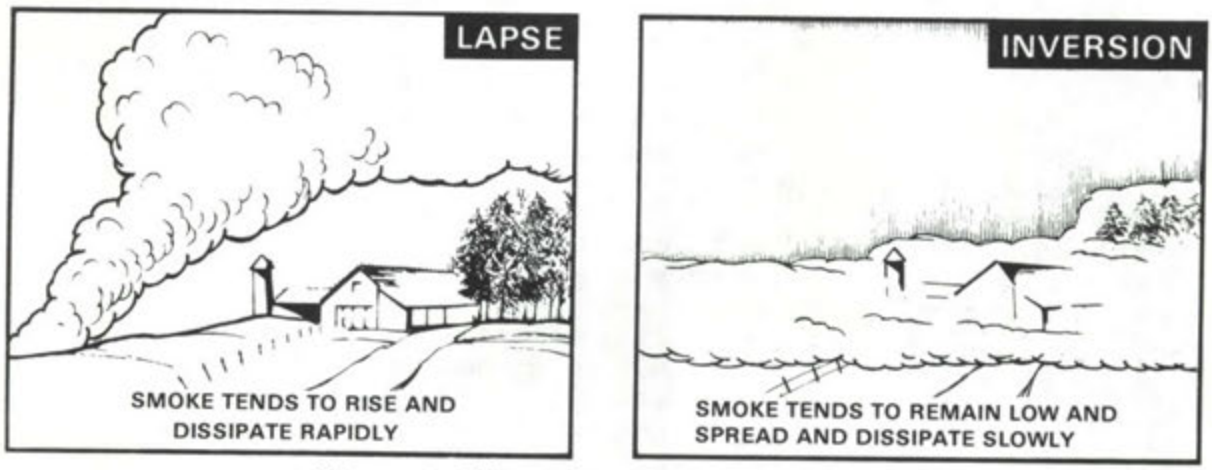


Figure 1. Effect of temperature gradient.

(1) LAPSE - This occurs when the air becomes colder as you get higher above the ground. Because warm air rises, the air will tend to move around more. This means the smoke will rise faster and not remain as long.

(2) INVERSION - This occurs when the air gets warmer as you get higher above the ground. This will make the smoke last longer and stay closer to the ground. But, it also means it will take a little longer for the smoke to spread out along the ground.

(3) NEUTRAL - This occurs when the conditions are between lapse and inversion. It is usually favorable for the use of smoke.

NOTE: You should be able to find out what condition exists from your battalion S2, but if you're unable to get the information, you can follow these general guidelines. When there is a good cloud cover, the air is usually stable and an inversion exists. As clouds disappear or when there are no clouds, usually a lapse condition occurs. At night when clouds are few or disappear, air becomes stable and an inversion exists.

b. Wind Speed. This will affect how many smoke pots you use and how far from your position you must place them. The best wind speed for smoke use is 4 - 10 knots/hour (roughly 7 - 18 miles/hours). For any wind speed faster than this, more smoke pots than normal must be used.

c. Wind Direction. This is the direction from which the wind blows. Smoke pots are set up in a line between the wind direction and the area to be concealed. If wind blows from the flank or side of your position, it will require fewer smoke pots. If it blows from the front or rear of your position, it will require more smoke pots.

d. Terrain. Smoke will normally follow the contour of the earth, if other conditions allow it. If the terrain is flat and unbroken, the smoke will move slowly along the ground, taking longer to become an effective smoke screen. If the contour of the earth is flat, but broken with buildings or clumps of trees and bushes, the smoke will tend to break up and mix together again, allowing for a more rapid screen being set up. If the terrain is rugged with hill masses, the smoke will not spread out evenly due to cross air currents.

2. Actual emplacement of the smoke pot is a simple operation. Smoke pots should be dug in whenever possible and they should be placed in position upside down. This will allow you to conceal the glare from the burning smoke pot. If placed in this manner, set the smoke pots on bricks or stones to allow the smoke to escape freely. Otherwise, construct a makeshift flame shield from an old oil drum, or scrap metal. The burning time of the M5 smoke pot is 12 - 22 minutes. If you wish the smoke screen to last longer, the smoke pots can be stacked or laid end to end. The heat from one burning pot will ignite the next. Finally, smoke pots can be ignited electrically using WD-1. See TB CML 100, Apr 64, for instructions.

3. To conceal any location using smoke pots, follow this sequence of actions.

a. Determine how large an area you wish to conceal.

b. Determine wind speed and temperature gradient (lapse, neutral, inversion).

c. Observe the terrain to be concealed and determine wind direction.

d. Choose a spot between your position and the wind direction for the smoke line. This line should be located at a distance from the target, 10 times greater than the spacing between smoke pots.

e. See figure 2 for proper spacing between smoke pots.

Type of terrain	Smoke pot[1] spacing (in meters) at wind speeds of: [2 3 4]		
	1-7 knots (1-13 kmph)	8-13 knots (15-24 kmph)	14-17 knots (26-32 kmph)
UNDER LAPSE CONDITIONS			
Over Water	25	20	15
Open Terrain	25	20	15
Woods	30	25	20
UNDER INVERSION AND NEUTRAL CONDITIONS			
Over Water	25	20	15
Open Terrain	25	20	15
Woods	35	25	20

[1]Type smoke pots are: AN-M7 and AN-M7A1 SGF2 floating smoke pots, M4A2 HC floating smoke pots, and ABC-M5 HC smoke pots.
[2]Spacings given are for a line of smoke pots normal (perpendicular) to the wind direction.
[3]The distance between the near edge of the target and the smoke pots should be at least ten times the spacing between smoke pots.
[4]Spacings given are for producing smoke blankets. For establishing smoke hazes, spacings twice those indicated in the table can be used, and smoke pots should be placed five times the distance between generators from the near edge of the target.

Note. Spacings for M1 HC smoke pots must be determined by trial in the field.

Figure 2. Spacing guide for smoke pots.

f. Emplace smoke pots.

g. Ignite as required.

REFERENCES:

FM 3-50, Chemical Smoke Generator Units and Smoke Operations, C2, Apr 67 (chap 4, pages 15-23, para 32-47)

TASK NUMBER: 092-503-4117

PLAN FOR UNIT DECONTAMINATION OF EQUIPMENT

CONDITIONS:

Given a mission to decontaminate items of unit equipment exposed to fallout or chemical contamination, a suitable location to accomplish the mission, sufficient personnel, and unit survey/monitoring team.

STANDARDS:

Develop a plan to decontaminate unit equipment which provides for:

1. Early identification of the contaminant.

2. Minimum exposure to personnel in surrounding areas and personnel involved in decontamination.

3. Sufficient supplies of decontaminants, protective and detection equipment.

4. A work schedule for decon personnel based upon MOPP.

5. A priority of equipment decontamination.

6. Continuous monitoring of contamination of the site and adjacent areas.

7. Site security and camouflage.

8. Adequate disposal of contaminants.

PERFORMANCE MEASURES:

1. Once you are given the mission to plan the decontamination of unit equipment, you must insure that the decontamination site:

a. Has an adequate supply of water. The best solution to this would locate the site near a natural water supply. It should be remembered though, that population centers are also located near natural sources of water. The site should be located far enough from the water source to prevent the contaminants from reaching it.

b. Is located downwind of friendly personnel and populated areas, whenever possible. This may be difficult, but at least the friendly unit locations and populated areas should be far enough downwind so as to be exposed to a minimum hazard. Coordination with friendly unit commanders and civil authorities may be necessary.

c. Provides a location for disposal of contaminated wastes (usually by burial or burning). See TM 3-220, Chemical, Biological, and Radiological Decontamination, Nov 67 C1, 2, and assigned chemical personnel for disposal of contaminated water.

d. Provides some degree of natural cover and concealment or allows easy camouflaging.

2. Trained survey/monitoring personnel must be on site at all times. Their job will be to determine the nature and extent of contamination of the equipment. They must monitor the site area to insure contamination does not spread. Additionally, they must monitor site personnel, to prevent them from being overexposed to contaminants.

3. Support for an equipment decontamination site requires thorough planning. Once an estimate of the amount of contaminated equipment is made, adequate decontaminants must be secured. Whenever possible, readily available natural decontaminants (aging, weathering, earth, and water) should be used. Miscellaneous decontaminants (soaps, detergents, solvents, and absorbants) are also readily available. Standard decontaminants (STB, DS2, BPL, and M13 and M258 decon kits) must be requested through supply channels. Supply personnel must be advised so that adequate amounts can be planned for. In addition, standard protective clothing, decontamination apparatus, filters, protective masks, toxic agent antidotes, medical supplies, detection equipment expendables, batteries and monitoring equipment must be secured. For planning data, see FM 3-8, Chemical Reference handbook, Jan 67, C1-4, chap 4, 5, 6, and 7.

4. Decontamination of toxic agents is hard, dangerous work and must be performed in the highest level of MOPP. This will place considerable stress and strain upon site personnel. Frequent rest breaks and rotation of personnel must be planned for. Refer to task: **Implement mission-oriented protective posture.**

5. A priority of equipment decontamination must be established based upon situation and mission. For example, in armor and mechanized units, vehicles will probably be decontaminated first; in signal units, radio transmitter will be first; and in infantry units, crew-served and AT weapons.

6. Site security will be necessary not only for possible defense of the area, but also to prevent friendly personnel and civilians from accidentally coming too close to the area. A route to the site from the location of NBC attack must be marked and patrolled until it can be decontaminated.

7. If the scale of decontamination is small, some of the planning factors may not be observed and, based upon the situation, there may not be time to plan or put into effect all the above-mentioned measures. But whenever possible, consideration should be given to all measures which will insure rapid, effective accomplishment of the mission without sacrificing the safety and well being of all personnel involved.

REFERENCES:

FM 3-8, Chemical Reference Handbook, C1-4, Jan 67
TM 3-220, Chemical, Biological, and Radiological Decontamination, C1, 2, Nov 67 (chap 1, 2, 3, and 4; app B, C, F)

TASK NUMBER: 081-889-0001

REQUEST/CONTROL MEDICAL AIR EVACUATION OF CASUALTY/CASUALTIES

CONDITIONS:

During daylight, in a field environment, given a standard 1:50,000 scale military map, grid coordinate location, FM tactical radio, frequency and callsign, medic (optional), marking material (engineer tape, panels, rocks, etc.), and a casualty/casualties with an injury/injuries that cannot be treated on the site or an injury/injuries that has been treated and still requires medical air evacuation.

STANDARDS:

1. Select and mark an appropriate landing site for medevac aircraft (minimum requirement for light helicopter is a cleared area 100 feet in diameter with an approach and departure zone clear of obstructions) or insure that medevac personnel are aware of lack of a landing site.

2. Call for and request air medevac using the following elements in sequence:

a. **Location** - Two-letter 100,000 grid identification and 6-digit grid coordinate.

b. **Radio Frequency/Callsign** - Radio frequencies and callsign of unit requesting the air medevac.

c. **Precedence** - Urgent, priority, or routine, as recommended by medical personnel present or by ranking individual on the site.

d. **Special Equipment** - Hoist, jungle/forest penetrator (for dense tree growth), or equipment deemed necessary by medical personnel.

3. Prior to arrival of medevac aircraft, obtain the following information concerning the casualty/casualties:

a. **U.S. Personnel** - Name, rank, social security number, and organization (if applicable).

b. **Other Personnel** - Name and nationality.

4. Load and aid in positioning of casualties aboard medevac aircraft. If there is more than one casualty, load the most serious litter casualties last. Insure that weapon(s) accompanies casualty/casualties.

PERFORMANCE MEASURES:

1. **Selection and Marking of Helicopter Landing Sites.** The unit requesting air ambulance service is responsible for selecting and properly marking the helicopter landing site(s).

a. The helicopter landing site and approach zones to the areas should be free of obstructions. Inclosed areas of restricted space, such as small clearings, should be avoided. The approach zones should permit the helicopter to land and take off into the prevailing wind.

b. Definite measurements for landing sites cannot be prescribed, since they must vary with temperature, altitude, wind, terrain, loading conditions, and individual helicopter characteristics. The minimum requirement for a light helicopter is a cleared area 100 feet in diameter with an approach and departure zone clear of obstruction.

c. The landing site should be outlined with material, such as engineer tape or rocks, of a color contrasting with the background. Where the tactical situation permits, a landing site may be marked using identification panels or other appropriate marking material.

2. **Requests.** Army medical air evacuation requests will include the following elements in the sequence listed:

a. **Location.** Grid coordinates will contain the 6-digit grid location and be preceded by the 100,000-meter grid identification.

b. **Radio Frequency/Callsign.** The frequency and callsign should be that of the radio at the site of the unit requesting the medical evacuation.

c. **Patient Category of Precedence.** This is the movement (pickup) precedence as recommended by the medical personnel or ranking individual if no medical personnel are present at the casualty location.

(1) **Urgent.** Emergency cases which must be evacuated immediately to save life or limb. It is used when evacuation is required within two hours.

(2) **Priority.** Casualties requiring prompt medical care not locally available. This is used when it is anticipated that the casualty must be evacuated within 4 hours or his medical condition will deteriorate and become an urgent case.

(3) **Routine.** Casualties requiring evacuation, but whose condition is not expected to deteriorate the first several hours or longer. **NOTE: Psychiatric cases are considered in this category.**

d. **Special Equipment/Emergency Medical Supplies.** These may include, but are not limited to, a hoist or jungle/forest penetrator (used to evacuate a casualty from a dense growth of trees and vegetation which prevents a medevac aircraft from landing) or other medical supplies, as deemed necessary by the medical personnel present at the casualty site.

NOTE: The location, callsign and radio frequency, category of precedence, and special equipment should always be transmitted

first because they are essential for an air ambulance mission to be conducted. The following items should also be sent when the time and situation permit.

e. Number and Type of Casualties. Example: 2 litter and 1 ambulatory patient.

f. Type of Injury, Wound, or Illness. Example: Penetrating gunshot wound (FSW) of abdomen, first and second degree burns over 30 percent of body, etc.

g. Patient Nationality. Self-explanatory, e.g., U.S. military, civilian, third-country national.

h. Security of Pickup Site. Information on the enemy. Example: Enemy forces located approximately 300 meters south of this location; presently receiving incoming indirect enemy fire. (If there is no enemy activity, so state.)

i. Site Marking. This is the method of marking the site. It may be smoke, panels, flares, etc., or other means as directed by the pilot.

j. Weather at Pickup Site. Cloudy, windy, rainy, sunny or clear, etc.

k. Terrain Description. Self-explanatory, e.g., flat and open, slope, pinnacle, etc.

3. **Information Concerning Casualties.** Prior to the arrival of medevac aircraft, obtain the following information from the casualty/ casualties.

a. U.S. Personnel - Name, rank, social security number, and organization.

b. Other Personnel - Name and nationality. This information is used for locating the casualty after he is evacuated and hospitalized.

4. **Responsibility for Loading and Security.** The pilot of the aircraft is responsible for insuring that prescribed methods of loading and securing litters and related equipment are followed by the personnel loading patients in the helicopter. The final decision as to how many patients may be safely loaded lies with the pilot in command of the aircraft. If there is more than one casualty, the most serious litter casualties should be loaded last so they can be unloaded first upon arrival at the field hospital.

REFERENCES:

FM 8-15, Medical Support in Divisions, Separate Brigades, and the Armored Cavalry Regiment, Sep 72 (chap 6, page 6-2)

FM 8-35, Evacuation of the Sick and Wounded, Dec 70 (chap 5, pages 5-10 to 5-18)

TASK NUMBER: 071-326-0515

SELECT A MOVEMENT ROUTE USING A MAP

CONDITIONS:

Given an operation order (or frag order), a 1:50,000 map, a compass, and a tactical situation in which you have been given a mission which requires a movement between two given points in an area where the likelihood of enemy contact is unknown.

STANDARDS:

Select the route that exhibits the best blend of the following points:

1. Takes advantage of maximum cover and concealment.

2. Insures the best observation and fields of fire for the overwatch or fire support elements.

3. Allows positive control of all elements.

4. Accomplishes the assigned mission as quickly as possible without unnecessary or prolonged exposure to enemy fire.

PERFORMANCE MEASURES:

1. The infantry has two primary requirements - **to move and to fight.** Your platoon will spend far more time moving than actually fighting. This fact makes it important for you to use the terrain to your best advantage, because a moving unit usually contacts the enemy at a time and place of the enemy's choosing.

2. Proper use of the terrain will give you two main advantages:

   a. Cover and concealment to protect the platoon during movement.

   b. Maximum effectiveness of the platoon's weapons.

3. To exploit these advantages, you must fully understand the military aspects of terrain and be able to apply them to any given situation whether it be an attack, a delay, or a road march behind the FEBA.

   a. The primary requirement for any type of movement on the battlefield is cover and concealment.

(1) Cover is any type of shielding from the effects of weapons fire, especially direct fire. You must take advantage of every ravine or depression in the ground to protect and cover your force, especially if you are forward of the FEBA. You must evaluate the terrain, the capabilities of the enemy's weapons, and the positions of known or suspected enemy emplacements. To determine cover, visualize a cross-section of the terrain and determine where the enemy cannot place effective direct fire on your proposed route.

(2) Concealment is anything that hides or disguises your force. You must consider concealment from both air and ground observation. If you are mechanized, don't forget that exhaust smoke or dust can reveal your unit to the enemy.

b. If you are moving in an area where contact with the enemy is expected, such as in the attack or in a movement to contact, you must insure that your proposed route can be covered by fire from your overwatch or fire support positions. These positions must have good observation and fields of fire.

(1) Direct fire weapons must have good observation to fire at known or suspected enemy positions along your movement route. You must have observation to control the maneuver of your squads if they make contact. Consider the effects of smoke and dust from friendly and enemy fire.

(2) Select a route that provides your unit with the best fields of fire available. Your machineguns and antitank weapons must have good fields of fire to be effective. They must be in a position to provide you with suppressive fires immediately. If you are conducting an attack using your crew-served weapons to overwatch your movement, they must be able to observe your route and fire in your support all the way to the objective. If you are conducting a movement to contact, the overwatch positions that you select must have unobstructed fields of fire to the next overwatch position.

4. No matter what your mission, you must select the route that provides the most favorable tactical advantage and meets the mission requirements. If enemy air is active or enemy ground forces are in the area of the route, you must take maximum advantage of cover and concealment. If speed of movement is a critical factor, the route should be over the most easily negotiable terrain, avoiding obstacles that are difficult to maneuver around. If the chances of getting lost are great, the route should include movement from one easily distinguishable terrain feature to another. If you are given an axis of advance by the company commander in his order, you must evaluate the terrain based on the above considerations and select a route that will get you to the objective on time with the least casualties.

5. Planning a route can be greatly aided by the use of special purpose maps and aerial photographs. If these aids are available, use them to insure that you have the latest possible information.

6. Map reconnaissance, however, is no substitute for ground reconnaissance. If time is available and the tactical situation permits, reconnoiter the ground that you have to move over.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, 30 Sep 77 (chap 3, sec II, pages 3-3 to 3-24)
FM 7-8, The Infantry Platoon and Squads (TBP)

RESERVE COMPONENT

TASK NUMBER: 071-319-3613

RECOMMEND/COORDINATE METHODS OF EMPLOYMENT FOR THE 106-MM RCLR

CONDITIONS:

Given a map and a tactical situation, you are an antitank platoon sergeant (106-mm RCLR) with a requirement to recommend/coordinate methods for employment of your AT sections.

STANDARDS:

Employ the 106-mm RCLR sections to best cover enemy avenues of approach IAW the employment considerations outlined in the performance measures below.

PERFORMANCE MEASURES:

1. Conduct a thorough map reconnaissance and develop an understanding of the mission, friendly and enemy situations, and the five elements of military aspects of terrain.

2. Recommend methods for employment of your AT sections based on the following fundamental considerations.

a. Employ the 106-mm RCLR in pairs (by section). To insure continuous antiarmor coverage of an assigned sector of fire, employ the 106-mm RCLR so that one weapon can fire while the other is being reloaded or displaced. Employ squads separately only when necessary to accomplish the mission (figure 1).

b. Integrate the 106-mm RCLR with nearby infantry for security. The 106-mm RCLR crews by themselves are vulnerable to not only armor but also to dismounted infantry attacks against their position; therefore, they should be integrated with nearby infantry whenever possible.

c. Employ 106-mm RCLRs so they are mutually supporting. Mutual support provides a degree of protection for the crew by insuring complete, continuous coverage of enemy armor vehicles (figure 1). It consists of two parts:

(1) Employ the section so that its fires interlock with and support each other and other antiarmor weapons. Both RCLRs within the section should be able to cover as much of the sector of fire assigned to the section as possible.

(2) Position each 106-mm RCLR within the section so that it can engage enemy armored vehicles assaulting the other AT position.

EMPLOY 106-MM RCLR IN PAIRS (MUTUAL SUPPORT)

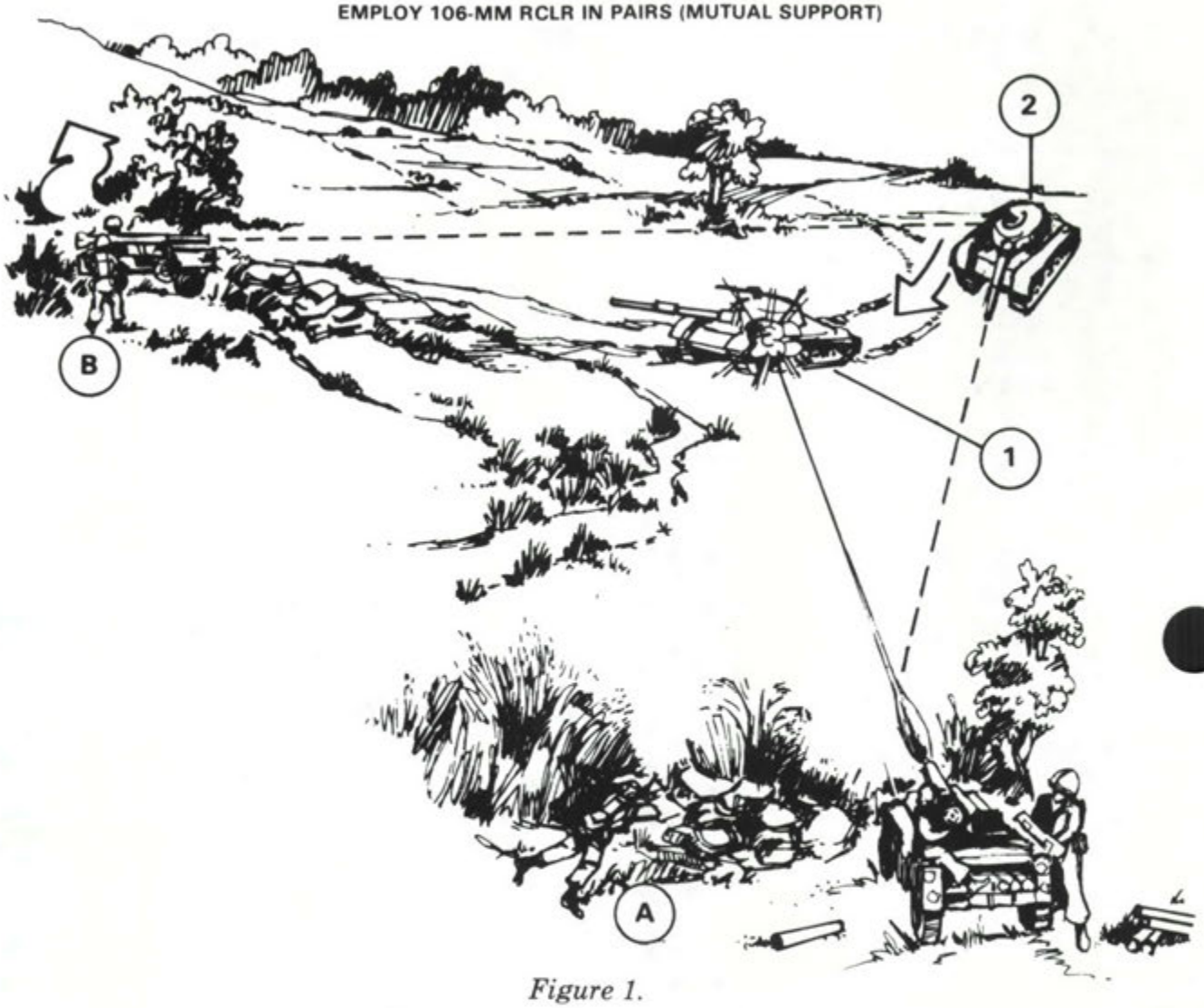
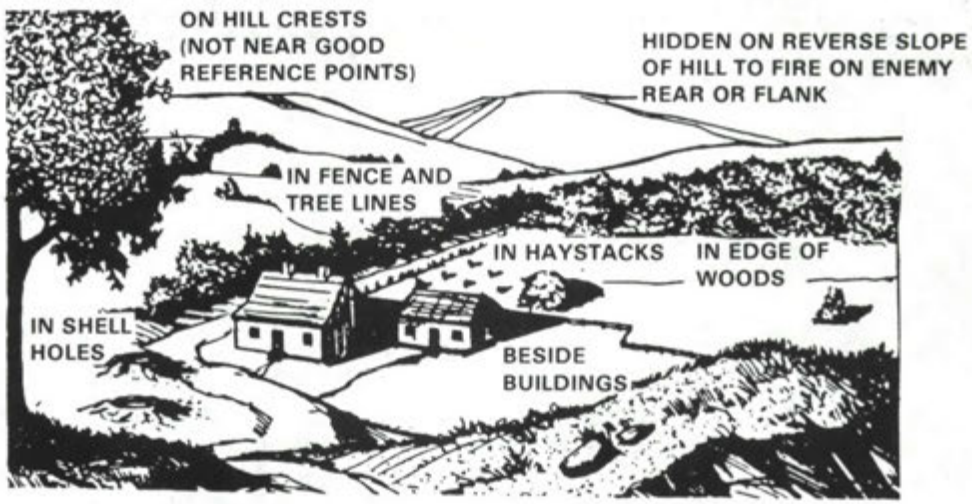


Figure 1.

106-mm RCLR (A) fires first shot at lead tank (1). Tank (2) in overwatch observes flash and engages 106-mm RCLR (A). 106-mm RCLR (B) observes flash of tank gun and engages tank (2).

d. Position weapons to engage enemy at maximum effective range. The 106-mm RCLR fires accurately out to a range of 1100 meters. Exploit this advantage. It makes it more difficult for the enemy to detect and accurately engage 106-mm RCLR positions and reduces the threat from enemy small-arms fire. It may also force the enemy to deploy earlier than he had intended.

e. Select positions using available cover and concealment. Providing for crew protection against automatic weapons and artillery suppressive fires is critical. Take maximum advantage of every fold in the ground and other types of natural cover for protection against enemy fires. When time permits, construct overhead cover. Additionally, avoid conspicuous terrain features. Always use terrain to your maximum advantage. Virtually every piece of terrain has features that can enhance or degrade mission accomplishment for the 106-mm RCLR. Conspicuous terrain features, such as road junctions, hilltops, lone buildings, or trees, will attract the enemy's attention, and he will probably have registered on them (figure 2). As a leader, you must be able to recognize those terrain features that will serve to maximize its vulnerability to detection. Examples:



Conspicuous terrain features.

Figure 2.

f. Position the 106-mm RCLR to engage the enemy from the flank. Frontal fire must be avoided as a general rule. The crew in a position so sited will seldom live very long. When enemy tanks are advancing, their firepower and observation are oriented to the front, making it difficult to detect and track a round fired from its flank (figure 3).

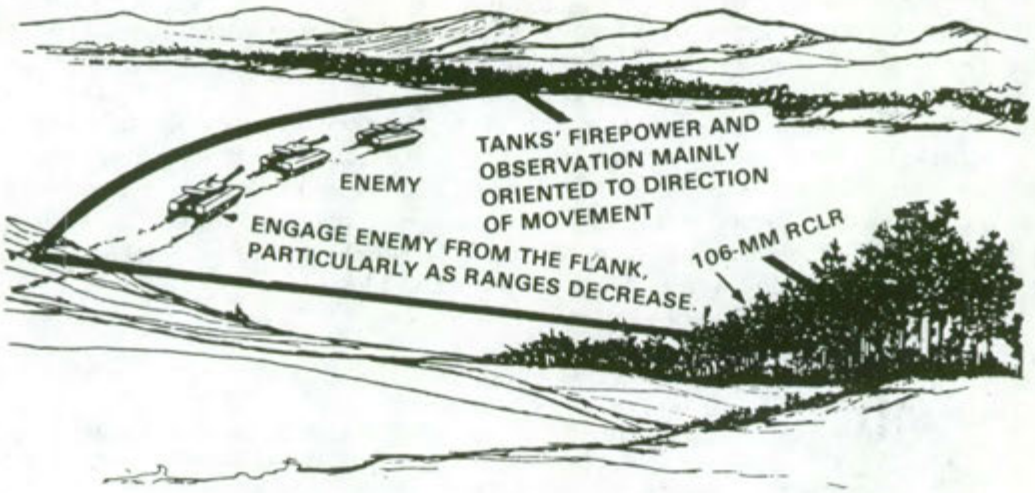


Figure 3.

However, a trailing enemy tank may see the weapon's signature, or crew movement, and knock the weapon out at once or stalk it from the rear. Therefore, in addition to firing from the flank, the weapon must be sited so that it is defiladed from the direction of the enemy. This means there must be something between the weapon and the tanks not being fired at - a parapet or wall, or natural cover. Flank concealment is necessary, but flank defilade, giving cover from fire, is preferable. Concealment of flash is essential, not only from the following tanks, but from the enemy's OP as well; a weapon seen is a weapon lost.

g. Maximize dispersion. If the section leader can control the fires of both squads, the weapons should be separated approximately 300 meters (either laterally or in depth) so no two squads can be suppressed at the same time by the fires of a single volley of artillery from one battery. This separation, of course, is dependent upon terrain and the section leader's capability to control the fire and movement of the squads.

REFERENCES:

FM 71-1, The Tank and Mechanized Infantry Company Team, Jun 77 (app C, pages 1 thru 5)

TASK NUMBER: 071-316-2651

RECOMMEND/COORDINATE METHODS OF EMPLOYMENT FOR TOW

CONDITIONS:

As an antitank platoon sergeant, given the requirement to employ the antitank platoon in a defensive role, a 1:50,000 scale military map of the area of operations, and the commander's concept of the operation.

STANDARDS:

Recommendation must, as a minimum:

1. Provide for mutual support.
2. Exploit TOW range.
3. Avoid conspicious terrain features.
4. Provide for flank engagement (when possible).
5. Provide for dispersion.

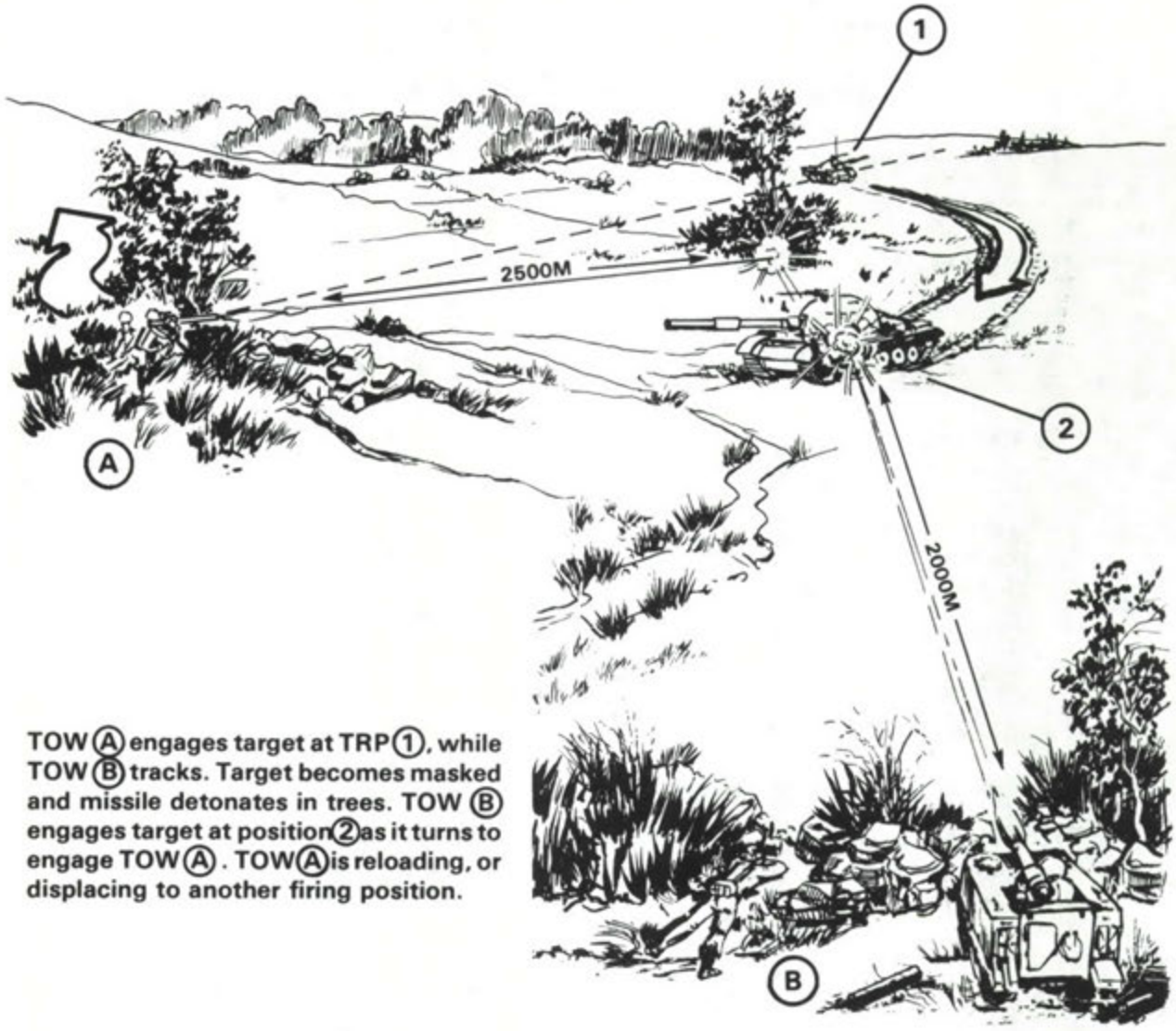
PERFORMANCE MEASURES:

1. **General.** As with all weapons systems, the TOW has advantages and limitations. Certain basic considerations can be followed in employing TOW to best advantage.

2. **Basic Employment Considerations.**

a. Provide for Mutual Support. Mutual support is the help that weapons/units give to each other to make the most of their capabilities and to overcome their limitations.

(1) Employ TOW in pairs (by section). To insure continuous antiarmor coverage of an assigned sector of fire, TOWs should be employed in pairs with overlapping sectors of fire so they can support each other whenever possible. By doing this, one system can fire while the other is reloading or moving to an alternate position. TOWs should be employed separately only when there is no other way to cover the armor avenues of approach or to overwatch the attacking company zone (figure 1).



TOW (A) engages target at TRP (1), while TOW (B) tracks. Target becomes masked and missile detonates in trees. TOW (B) engages target at position (2) as it turns to engage TOW (A). TOW (A) is reloading, or displacing to another firing position.

Figure 1.

(2) Integrate TOW fires with other antiarmor weapons. Position TOWs within range of other antiarmor weapons so they can support each other by fire when under mounted attack. TOWs and tanks should be positioned to provide long-range coverage along the high-speed avenues of armor approach to insure that continuous antiarmor fires are delivered on attacking enemy forces. Dragons and LAWs should be positioned along the armor approaches with more restricted fields of fire to allow TOWs to engage the long-range targets and to add depth to the defensive area.

(3) Integrate TOWs with nearby infantry for security. TOW crews by themselves are extremely vulnerable to attacks by mounted as well as dismounted infantry. To provide security against such attacks, TOWs should be positioned to take advantage of infantry blocking dismounted and concealed mounted approaches leading to TOW positions (figure 2).

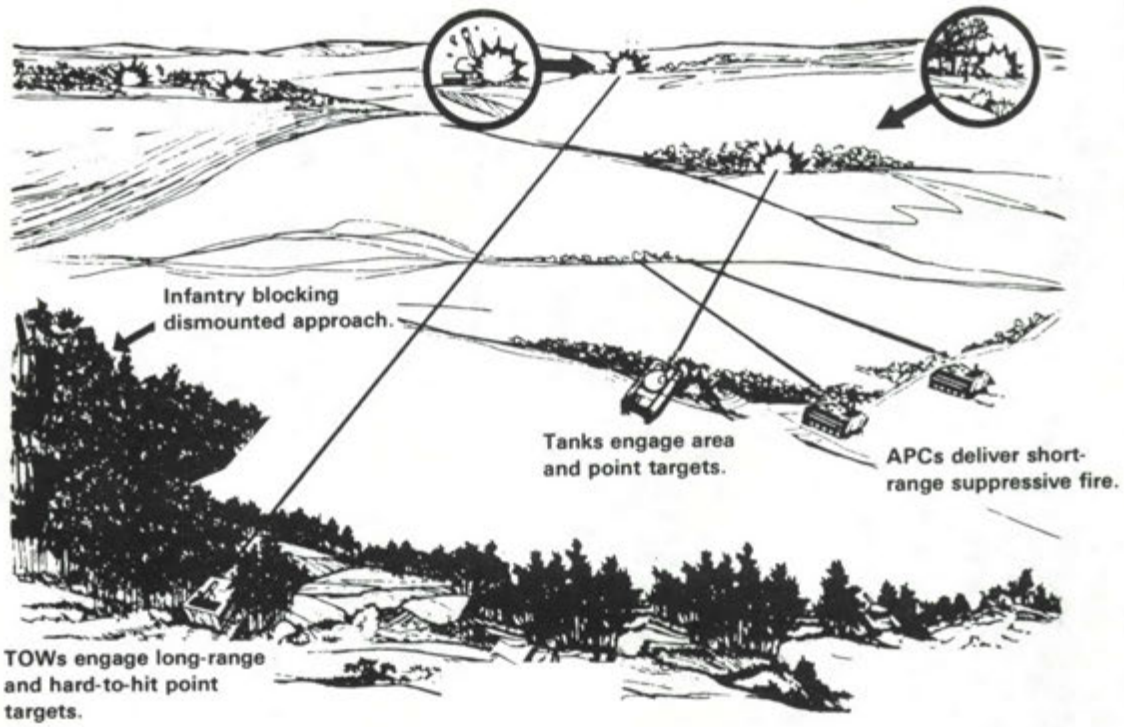


Figure 2.

b. Exploit TOW Range. The most significant advantage of TOW is that it is more accurate than most tanks at ranges beyond 1500 meters. The major limitation is that the TOW crew is exposed to enemy suppressive fires while firing. Therefore, the principal factors to consider when positioning TOW for employment are twofold: EXPLOIT THE CAPABILITIES OF THE WEAPON AND PROTECT THE CREW FROM COUNTER-MEASURES SUCH AS ARTILLERY AND TANK FIRE. (See figure 3.)

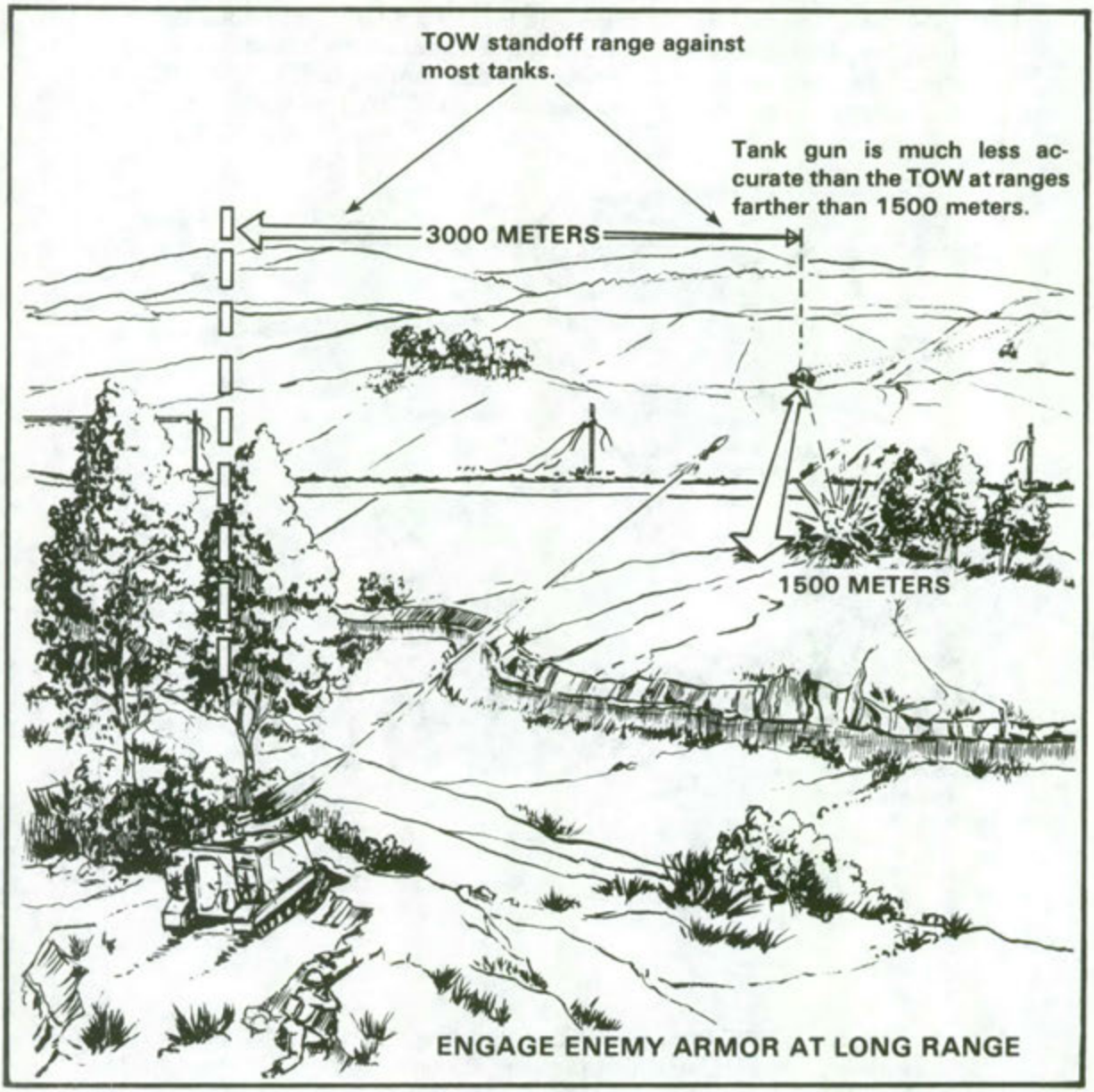

TOW standoff range against most tanks.
Tank gun is much less accurate than the TOW at ranges farther than 1500 meters.
3000 METERS
1500 METERS
ENGAGE ENEMY ARMOR AT LONG RANGE

Figure 3.

c. Avoid Conspicuous Terrain Features. Always use terrain to your best advantage. Virtually every piece of terrain has features that can enhance or degrade mission accomplishment with the TOW. Conspicuous terrain features, such as road junctions, hilltops, lone buildings or trees, will attract the enemy's attention, and he will probably have registered on them. As a leader, you must be able to recognize those terrain features that will serve the chances for success with the TOW, and lessen its vulnerability to detection. See figure 4 for examples.

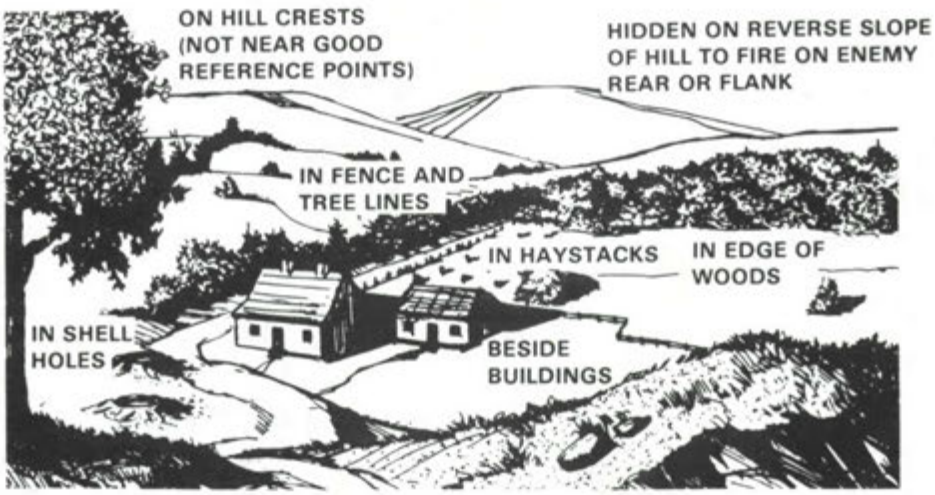


Figure 4.

d. Provide for Flank Engagement. TOW frontal fire against tanks must be avoided, as a general rule. The crew of a launcher so sited is extremely vulnerable, particularly at shorter ranges. When enemy tanks are advancing, their firepower and observation are oriented to the front, and it is difficult for them to detect and trace a missile launched from a flank (figure 5).

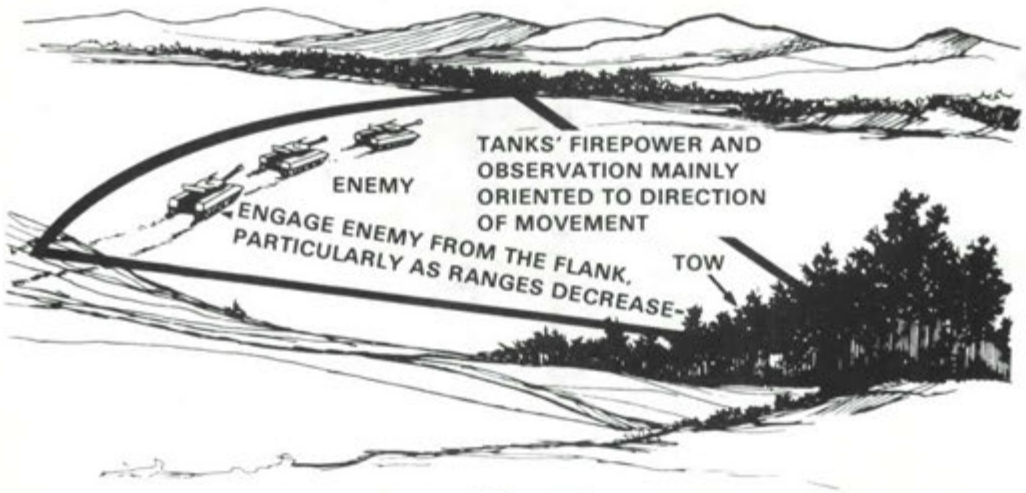
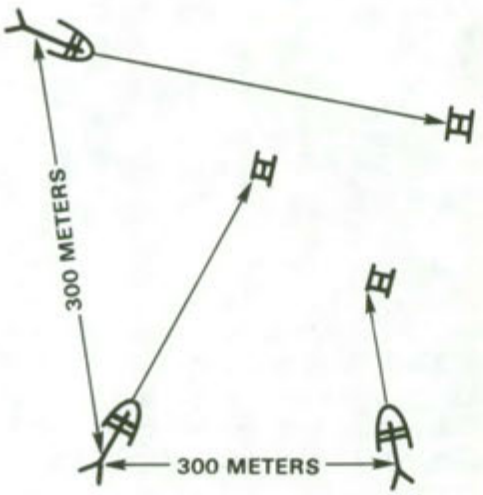


Figure 5.

However, a trailing enemy tank may see the launch signature, or crew movement, and knock the weapon out at once or stalk it from the rear. Therefore, in addition to firing from the flank, the weapon must be sited so that it is in defilade from the direction of the enemy. This means there must be something between the weapon and the tanks not being fired at — a parapet or wall, or natural cover. Flank concealment is necessary, but flank defilade, giving cover from fire, is preferable. Concealment of flash is also essential, not only from the following tanks, but from the enemy's OP as well; a weapon seen is a weapon lost.

e. Provide for Dispersion. If the section leader can control the fires of both squads, TOW squads should be separated a minimum of 300 meters (either laterally or in depth) so no two squads can be suppressed at the same time by the fires of a single volley of artillery from one battery. This separation, of course, is dependent upon terrain and the section leader's capability to control the fire and movement of the squads (figure 6).



In this sketch, the size of a 152-mm howitzer battery open sheaf, drawn to scale would be only this large: ▭ . From this, one can see that it would take large volumes of artillery to effectively suppress such dispersed ATGMs.

Figure 6.

REFERENCES:

FM 71-1, The Tank and Mechanized Infantry Company Team, Jun 77 (app C, page C-1 thru C-5)

TASK NUMBER: 051-192-3503

DIRECT A MINEFIELD RECORDING PARTY

CONDITIONS:

Under any environmental conditions, with sketching equipment, lensatic compass, DA Form 1355 (Minefield Record), map, metric tape, U-shaped pickets, barbed wire, standard pattern minefield, and two men.

STANDARDS:

The standard pattern minefield will be recorded on DA Form 1355 in detail as specified by the commander so that a recovery team can locate each mine in the minefield. Information will be recorded in the appropriate blocks on the form and will include as a minimum:

1. The recording of important distances in meters (distance from lane and strip markers to landmarks, distances between strip markers and extent of field) (may be expressed in paces).

2. Sketch of minefield.

3. Tabular data on reverse of DA Form 1355.

4. Intermediate markers installed, as required.

PERFORMANCE MEASURES:

CAUTION: NO ANTIHANDLING DEVICES ARE AUTHORIZED FOR USE WHEN INSTALLING A DELIBERATE PROTECTIVE MINEFIELD. ALL PERFORMANCE MEASURES REFERRING TO ANTIHANDLING DEVICES WILL BE OMITTED WHEN THIS TASK IS APPLIED TO DELIBERATE PROTECTIVE MINEFIELDS.

1. **Obtaining reference data for preparation of the DA Form 1355.**

a. While the IOE (irregular outer edge) is being taped, the recording party begins obtaining reference data to prepare the DA Form 1355, starting from the landmark designated by the OIC, and working behind the siting party.

NOTE: Aerial photos taken of the field before the tracing tape is removed become a valuable supplement to the minefield record.

b. Information will be obtained from the OIC, the NCOs in charge of the siting party, each laying party, and the minefield marking party.

2. **Recording standard pattern minefields.**

a. When the tactical situation and time permit, the standard detailed minefield record will normally be prepared; however, in each instance of minefield installation, either the standard detailed minefield record or the minimum record (c, below) will be prepared. Figure 3 shows the DA Form 1355 completed as a standard detailed minefield record.

b. DA Form 1355 consists of a single printed sheet. The front consists of an upper half for tabular data and a lower half for a scale sketch of the field (figure 2). On the reverse side are instructions for completing the DA Form 1355 and a form for computing the number of mines. The recommended scale for plotting minefields on the form is 1 centimeter equals 10 meters. Maximum length of the field to be recorded on one form when the above recommended scale is used is 400 meters. The effective minefield depth that can be recorded is 240 meters. The commander authorizing the minefield specifies the degree of detail to be placed on the DA Form 1355.

c. A minimum record includes the least amount of information needed to locate and describe a minefield satisfactorily (figure 3). Minimum minefield records are allowed only when enemy action prevents the use of standard procedures.

d. The instructions below are located on the reverse side of DA Form 1355 and are keyed to the circled numbers that appear on the front of DA Form 1355 (figure 2).

INSTRUCTIONS

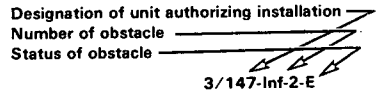
TABULAR DATA

1. Enter complete data on authority for laying and on the laying unit. Officer in Charge and Recorder blanks should include name, rank, and serial number.

2. Enter date-time groups for starting and completion time.

3. Enter copy and sheet numbers. Number of copies prepared will depend upon unit SOP and the classification of the minefield. The number of sheets will depend upon the width of the minefield. The maximum length of minefield that should be recorded on one form is 400 meters.

4. Enter minefield number as follows:



5. Enter type of minefield (Protective, Defensive, Barrier, Nuisance, Phony).

6. Enter map data as stated on map(s) used.

7. Enter complete data on at least two landmarks. Cross out unused blocks.

8. Enter description(s) of any intermediate markers used. When a landmark is more the 200 meters from the minefield or the strip/group reference stake cannot be seen from the landmark, an intermediate marker must be used. If possible, the intermediate marker should not be closer than 75 meters to the strip/group reference stake. Cross out unused blocks.

9. Enter the word "Standard" when the standard marking fence is used; describe the boundary markings if other than the standard marking fence is used.

10. Enter the number of strips/groups laid, other than the IOE. Describe the strip/group markers (line out words not applicable).

11. Enter the width, marking, and closing provisions for each lane; when appropriate, give the type and number of mines for closing. The location of these mines is described in the notes (13). Patrol lanes are 2 meters (3 paces) wide, one-way vehicular lanes are 8 meters (11 paces) and two-way vehicular lanes are 16 meters (21 paces). Cross out unused blocks.

12. Indicate method of laying by marking out incorrect descriptions. Enter type of mines (enter chemical mines under AP mines). For each type enter the number of mines and antihandling devices installed in the IOE and in each strip or group. Strips or groups of mines will be lettered serially, starting with the first one laid. Enter totals. Cross out unused blocks.

13. Enter under Notes any information which would be useful to personnel clearing the minefield. Appropriate items include entrance and exit markings, location of chemical mines, location of AT mines with antihandling devices, location of Apers mines with tripwires, length of tripwire, clusters in IOE which contain mines, where safety devices are buried, speed and altitude of aircraft mine dispensers, intervalometer settings on aircraft and ground vehicle dispensers, ground temperature and weather conditions if gravel type mines are laid, depth of water in which underwater mines are laid.

Figure 1. DA Form 1355 (reverse).

SKETCH

14. Enter arrows for the directions of the enemy and magnetic north. The enemy arrow should always point within the top 180° of the paper; the north arrow should follow one of the lines of the graph.

15. Enter the scale of sketch. For standard pattern minefields the sketch should be drawn to a scale of about 1 cm = 10 meters (1 inch = approximately 25 meters). Note that the squares are 1 cm square.

16. Sketch in following, as applicable:
   a. Show directional arrows as follows:
   (1) Landmarks (or intermediate markers) to strip markers at starting and finishing points of the last strip laid or to the nearest and farthest mine in a group.
   (2) From landmarks (or intermediate markers) to lane entrance(s).
   (3) From landmarks (or intermediate markers) to fence or boundary markers.
   (4) From landmarks to intermediate markers, if used.
   (5) For each straight line section of a lane centerline.
   (6) Between markers of starting points of adjacent strips, including IOE, and between finishing points of adjacent strips, including the IOE.
   (7) For each segment of a strip or of the IOE.
   (Label all directional arrows with magnetic azimuth in degrees and distance in meters, if possible (distances may be expressed in paces, however). Express as a fraction (247°/90m or 247°/90p.) Record from friendly to enemy side and from right to left.)

   b. Show approximate location of protective fence or boundary markers.
   c. Show length and depth of minefield in meters. These dimensions indicate the extremities of the minefield.
   d. Show a grid intersection and give grid coordinates.
   e. Show trace of shoreline and direction and approximate rate in feet per second of water current, for mines laid underwater.

17. Mark out "(when completed"' after "SECRET." Record must be treated as a classified document as soon as recording has begun.

18. OIC enters signature and rank.

STANDARD PATTERN MINEFIELD REQUIREMENTS COMPUTATION FORM

Desired Density	AT a _____	Apers Frag b _____	Apers Blast c _____
IOE Representative Cluster	AT a _____	Apers Frag b _____	Apers Blast c _____
Paces of Trace	_____		

1. Paces of trace/9 or number of IOE cluster.			_____
2. Number of IOE clusters (line 1) X IOE representative cluster	a _____	b _____	c _____
3. Paces of trace X desired density = mines in minefield.	a _____	b _____	c _____
4. Add line 2 and line 3 (subtotal of mines).	a _____	b _____	c _____
5. 10% of line 4, for mine rejections, strip length variances.	a _____	b _____	c _____
6. Add lines 4 and 5 = total mines needed.	a _____	b _____	c _____
7. Add a + b + c of desired density.			_____
8. 3/5 X line 7*			_____
9. 3 X AT density			_____
10. Number of strips (highest number of 8 and 9).			_____
11. Desired density X 3	a _____	b _____	c _____

*In minefield calculation, fractions will always be rounded up to the next whole number.

	Strip	a	b	c	Total Across
CLUSTER COMPOSITION TABLE	A	_____	_____	_____	_____
	B	_____	_____	_____	_____
	C	_____	_____	_____	_____
	D	_____	_____	_____	_____
	E	_____	_____	_____	_____
	F	_____	_____	_____	_____
	G	_____	_____	_____	_____
	H	_____	_____	_____	_____
	J	_____	_____	_____	_____
	K	_____	_____	_____	_____
TOTAL DOWN		_____	_____	_____	_____

Figure 1. Continued.

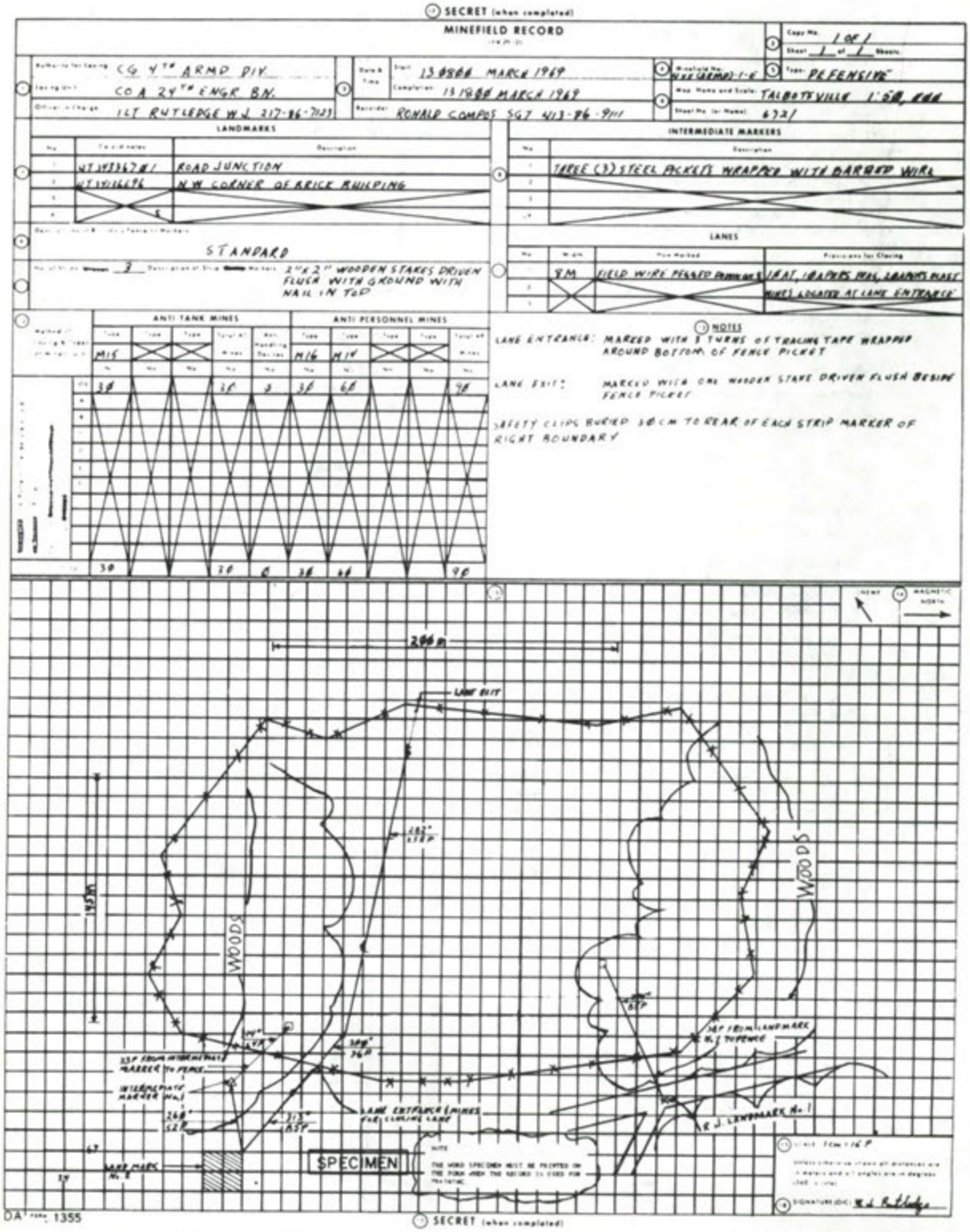


Figure 2. Standard detailed minefield record (upper half).

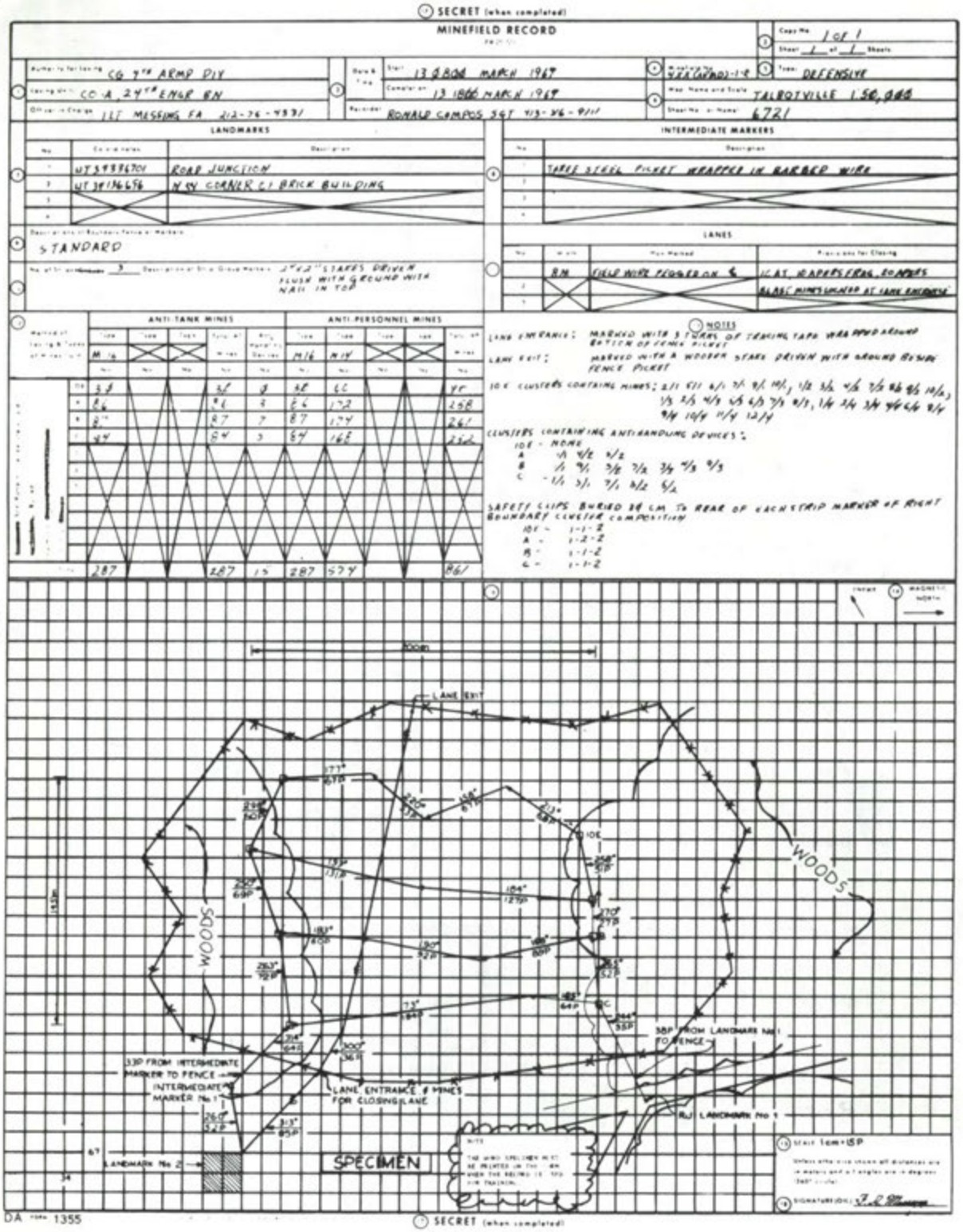


Figure 3. Minefield record with minimum information.

3. **Recording significant clusters.**

a. When making a detailed record, certain clusters must be recorded in the NOTES section of the DA Form 1355. Each cluster is identified by the strip identifier and by the cluster number. The following clusters must be identified.

(1) Clusters containing antilifting devices.

(2) Clusters which contain a tripwire-activated mine.

(3) Clusters in the IOE which contain mines.

(4) All numbered omitted clusters.

b. The IOE cluster table superimposed on the grid lines of the DA Form 1355 shows the position of all the clusters (live and omitted) in the IOE in relation to the IOE base line.

4. **Recording large fields.**

a. When the length of the field exceeds the space provided by the DA Form 1355, additional forms may be used as required.

b. The lower right corner of the minefield as oriented toward the enemy is the point at which the first DA Form 1355 is begun.

c. Successive sheets are numbered from right to left from the first sheet.

d. The ending of the first section will be tied into a landmark, which will be clearly identified on the sketch of the minefield record.

e. The record of the second section will clearly locate the left landmark of the first section as the beginning of the recorded second section.

f. A minimum of two landmarks are required to locate and record a minefield laid out in the standard pattern.

(1) The recording party will install intermediate markers when a landmark is more than 200 meters from the minefield or the strip/group reference stake cannot be seen from the landmark.

(2) If possible, the intermediate marker should not be closer than 75 meters to the strip/group reference stake.

(3) An intermediate marker can be natural or manmade, as long as it serves as a point of reference between a landmark and the minefield.

REFERENCES:

FM 20-32, Mine/Countermine Operations at the Company Level, Nov 76 (app H, para H-3, H-4; fig H-6, H-7; table H-1)

TASK NUMBER: 051-192-3032

INSTALL A HASTY PROTECTIVE MINEFIELD

CONDITIONS:

In daylight or darkness, given platoon leader's mission directive, platoon personnel with TOE tools and equipment, lensatic compass, necessary mines and material, and DA Form 1355-1-R (Hasty Protective Minefield Record). You have been placed into a situation in which a minefield is to be used to supplement a defensive position. Engineer assistance is not available or needed. You will use the allocated antitank mines (M21), anitpersonnel mines (M16A1) with tripwires, and claymores (M18A1) from the company basic load.

STANDARDS:

Assist the platoon leader or, as an acting platoon leader, accomplish the following, in order:

1. Report intention to lay a hasty protective minefield and obtain authorization to lay.

2. Make a reconnaissance. Determine the best locations for mines based on likely enemy avenues of approach, and your platoon's ability to keep the mines under observation.

3. Report initiation of the minefield.

4. Emplace the mines on the avenues of approach. Do not arm the mines at this time.

   a. Use only metallic mines.

   b. Don't use boobytrap devices.

5. Record the minefield on DA Form 1355-1-R.

6. Arm the mines, working from the enemy side to the friendly side.

7. Report completion of the minefield.

PERFORMANCE MEASURES:

1. **USE ONLY METALLIC MINES.** If the mines cannot be found when the field is removed by hand, a metallic mine detector (AN/PSS-11) can be employed to help locate the lost mines.

2. **DO NOT USE BOOBYTRAP DEVICES.** These devices will seriously delay removal of the minefield.

3. **INTENTION REPORT.** You must get permission from your company commander to install a hasty protective minefield. Request permission in person or by radio.

4. **MAKE A GROUND RECONNAISSANCE.** A reconnaissance is conducted to determine:

a. Armor approaches into the platoon area and the points on these approaches most restrictive to armor movement (e.g., bridges or fords, areas which canalize movement, etc.).

b. Dismounted avenues of approach into the platoon area.

c. Likely areas of movement which would be used by enemy infantry to neutralize your antitank mines.

d. Exact locations (within a through c above) which provide natural camouflage for your mines and permit coverage by fire from your positions. (See figure 1.)

A layout of your minefield might look like this.

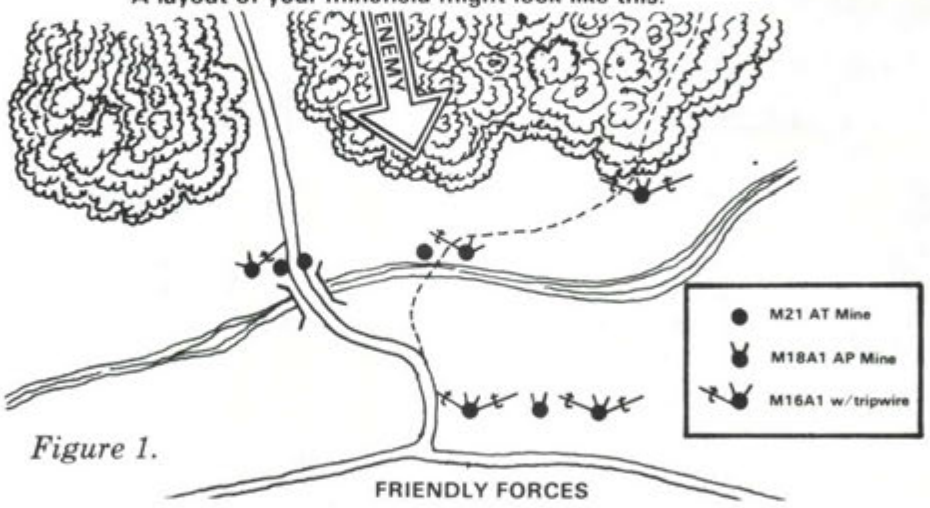


Figure 1.

5. **SUBMIT INITIATION REPORT.** Once you have completed your reconnaissance, you must inform the company commander. After this, you are ready to begin laying the minefield.

6. **EMPLACE AND RECORD MINEFIELD.**

a. After you have selected the exact locations for your mines, effectively use your manpower to install them. Weigh all of your tasks in choosing the number of men to be used. Once emplacement has begun, insure that your men are following the procedures outlined in the tasks:

Install (fire), recover an M18A1 claymore mine.

Install the M21 metallic antitank (AT) mine.

Install the M16A1 bounding antipersonnel mine (with/without tripwires).

HASTY PROTECTIVE MINEFIELD RECORD

(FM 20-32 AND TC 20-32-1)

INSTRUCTIONS

1. DESIGNATE AN EASILY IDENTIFIABLE REFERENCE POINT ON THE GROUND (A TREE, A STUMP, A STAKE, OR THE LIKE). ORIENT THE FORM (THE BLANK FORM ON THE REVERSE) BY TYING IN THE CENTER POINT OF CIRCLES TO THE DESIGNATED REFERENCE POINT ON THE GROUND.

2. TIE IN REFERENCE POINT TO A LANDMARK SUCH AS A ROAD JUNCTION, HOUSE, CORNER, ETC. THAT CAN BE FOUND ON A STANDARD MILITARY MAP.

3. COMPLETE THE AZIMUTH BLOCK.

4. COMPLETE THE FOLLOWING INFORMATION IN THE IDENTIFICATION BLOCK: UNIT; REF PT; REMARKS; MAP AND SHEET NO; OIC; NAME; SSAN.

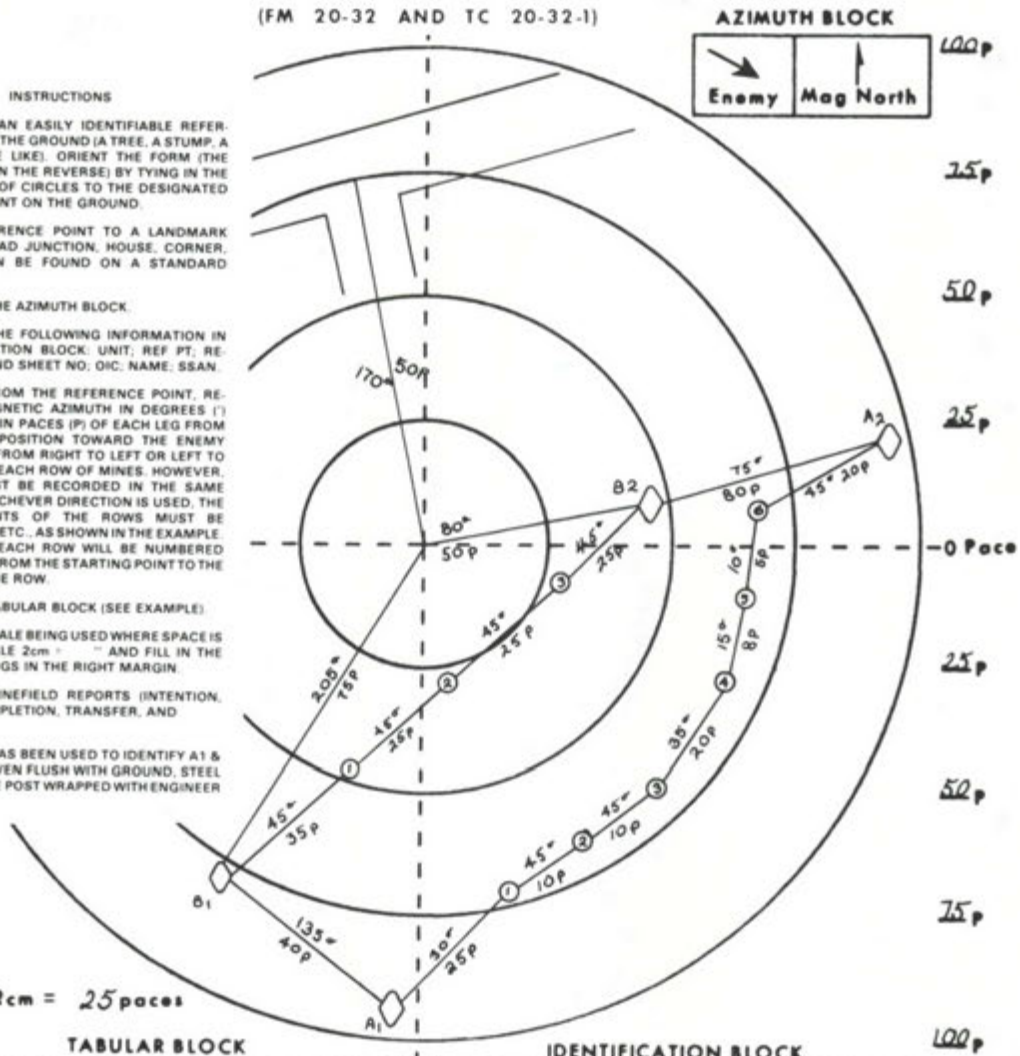
5. STARTING FROM THE REFERENCE POINT, RECORD THE MAGNETIC AZIMUTH IN DEGREES (°) AND DISTANCE IN PACES (P) OF EACH LEG FROM THE FRIENDLY POSITION TOWARD THE ENEMY POSITION AND FROM RIGHT TO LEFT OR LEFT TO RIGHT ACROSS EACH ROW OF MINES. HOWEVER, ALL ROWS MUST BE RECORDED IN THE SAME DIRECTION. WHICHEVER DIRECTION IS USED, THE STARTING POINTS OF THE ROWS MUST BE MARKED A1, B1, ETC., AS SHOWN IN THE EXAMPLE. EACH MINE IN EACH ROW WILL BE NUMBERED SEQUENTIALLY FROM THE STARTING POINT TO THE LAST MINE IN THE ROW.

6. FILL IN THE TABULAR BLOCK (SEE EXAMPLE).

7. FILL IN THE SCALE BEING USED WHERE SPACE IS PROVIDED "SCALE 2cm = ___" AND FILL IN THE PACE (P) READINGS IN THE RIGHT MARGIN.

8. MAKE ALL MINEFIELD REPORTS (INTENTION, INITIATION, COMPLETION, TRANSFER, AND CHANGE).

9. NOTE WHAT HAS BEEN USED TO IDENTIFY A1 & B1, i.e., 2 x 4 DRIVEN FLUSH WITH GROUND, STEEL PICKET OR FENCE POST WRAPPED WITH ENGINEER TAPE, ETC.



TABULAR BLOCK

Row	Type	Actuation	Mine number
A	M16A1	TRIPWIRE	1, 2, 6
	M21	PRESSURE	3, 4, 5
B	M16A1	TRIPWIRE	1, 3
	M18A1	CONTROLLED	2

Remarks: LANDMARK IS ROAD JUNCTION AT NA123345409

IDENTIFICATION BLOCK

Unit: 2ND PLT, A Co 1-4th 2 BDE, 1 CAV DIV	
Ref Pt: TREE STUMP SIDE OF ROAD	
Remarks: POINTS A1 & A2, B1 & B2 ARE MARKED WITH 2"x2" STAKES.	
Map & Sheet No: TALBOT 5568	
Name of OIC: LT. ALLEN	
Signature: J. G Allen	TIME & DATE: 1700 10 JAN '75
Mines removed	
Mines transferred	

DA FORM 1355-1-R, 1 July 75 REPLACES DA FORM 1355-1, 1 Mar 68 WHICH IS OBSOLETE

Figure 2. Hasty protective minefield record form (reverse).

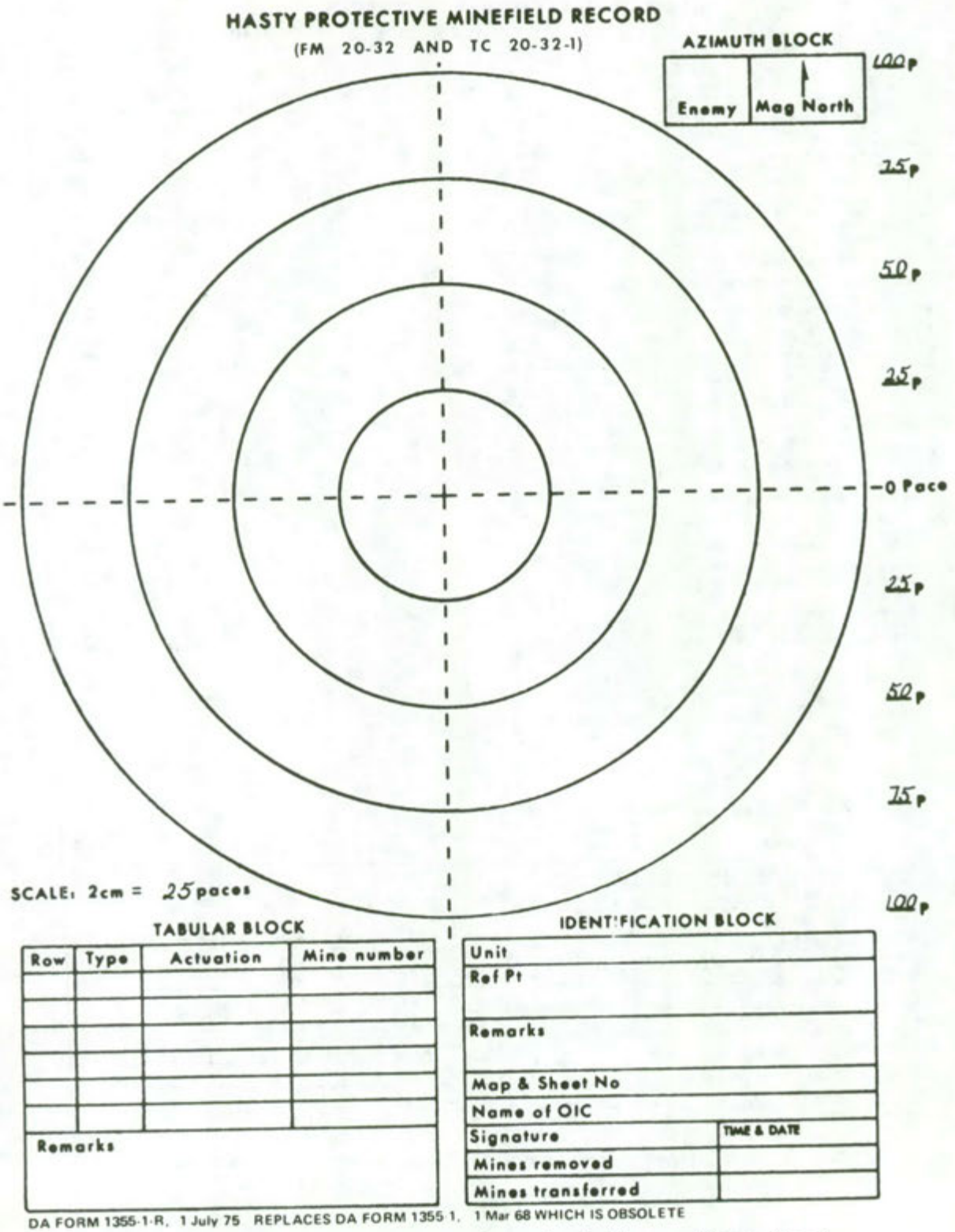


Figure 2 (continued). Hasty protective minefield record form (face).

NOTE: DO NOT ALLOW MINES TO BE ARMED AT THIS TIME.

b. While the mines are being placed, find an easily identifiable reference point in front of your position. At the reference point, mentally visualize your minefield, running in rows, parallel to your position. Designate the row closest to the enemy as row A, with succeeding rows B, C, etc. The ends of each row will be designated with row markers (which may be wooden stakes, steel pickets, etc.).

7. **RECORD THE MINEFIELD ON DA FORM 1355-1-R.**

a. You will need a lensatic compass to measure azimuths. Use the instructions and example shown on the back of the DA Form 1355-1-R, as shown in figure 2.

b. Tie in the reference point with a permanent landmark that can be found on your map. Measure and record the distance and azimuth from this landmark to the reference point.

Specific Reference: TC 20-32-1, pages 10 thru 18.

c. Have your men arm and camouflage the mines, working from the mine nearest the enemy back to the platoon position.

8. **REPORT COMPLETION OF MINEFIELD.** After the field is laid and the paperwork is done, call your commander and report that you have completed the field.

Specific Reference: TC 20-32-1, pages 1 thru 20.

REMEMBER

Use the hasty protective minefield often enough so that it becomes a comfortable part of your operation.

Always integrate these mines with your other defensive plans.

REFERENCES:

FM 20-32, Mine/Countermine Operations at the Company Level, Nov 76 (chap 4, sec II, page 22)
TC 20-32-1, Hasty Protective Mining, Aug 75 (pages 1 thru 20)

TASK NUMBER: 051-192-3033

REMOVE A HASTY PROTECTIVE MINEFIELD

CONDITIONS:

During daylight, given squad personnel, TOE equipment, a hasty protective minefield laid previously by your platoon, the DA Form 1355-1-R (Hasty Protective Minefield Record) for the minefield, and instructions to remove the minefield.

STANDARDS:

All mines will be removed without detonation. The mines will be cleaned and repacked for future use.

PERFORMANCE MEASURES:

1. When your unit moves, the minefield must be transferred to another unit or removed.

2. The preferred method for removing the minefield is to have each soldier who laid a mine pick up that same mine, provided the field was laid out a day or two before and kept under observation during that time.

3. If the field has not been kept under observation, the DA Form 1355-1-R will be used to locate the mines. If it is possible that the mines could have been tampered with, each one must be uncovered and pulled out with rope or wire.

4. All removed mines will be disarmed, cleaned, and repacked for further use.

5. Keep the platoon leader informed of your progress. He must submit a report of change to the commander.

REFERENCES:

FM 20-32, Mine/Countermine Operations at the Company Level, Nov 76 (chap 5, para 5-6 and 5-7, page 39)

TASK NUMBER: 121-030-4501

PREPARE THE RATER'S SECTION OF A SENIOR ENLISTED EVALUATION REPORT (SEER)

CONDITIONS:

Given DA Pamphlet 623-1, one blank DA Form 2166-5A, and a No. 2 lead pencil.

STANDARDS:

Complete parts II and III of the Senior Enlisted Evaluation Report, DA Form 2166-5A, as outlined in DA Pamphlet 623-1 (Preparation of Enlisted Evaluation Reports).

PERFORMANCE MEASURES:

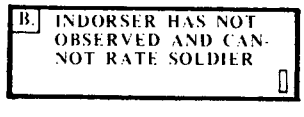
1. **Parts I through VII.** Parts I and VII of the report will be completed by the Military Personnel Officer (MILPO). Parts II and III are completed by you (the rater) and the indorser. Part IV is completed by the indorser and part V is completed by the individual being rated. Part VI is completed by the reviewer only after parts I through V have been completed.

NOTE: Part I should be checked by the rater and rated individual for possible discrepancies.

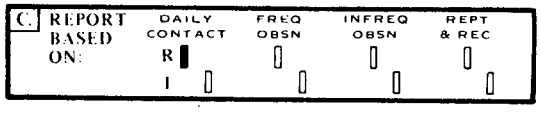
2. **Part II.**

a. **Block A.** You will enter the actual duties performed by the rated soldier including additional duties.

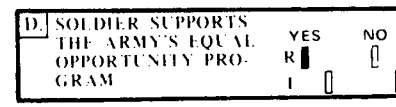
b. **Block B.** This block is not applicable to the rater. Will be completed by the indorser.

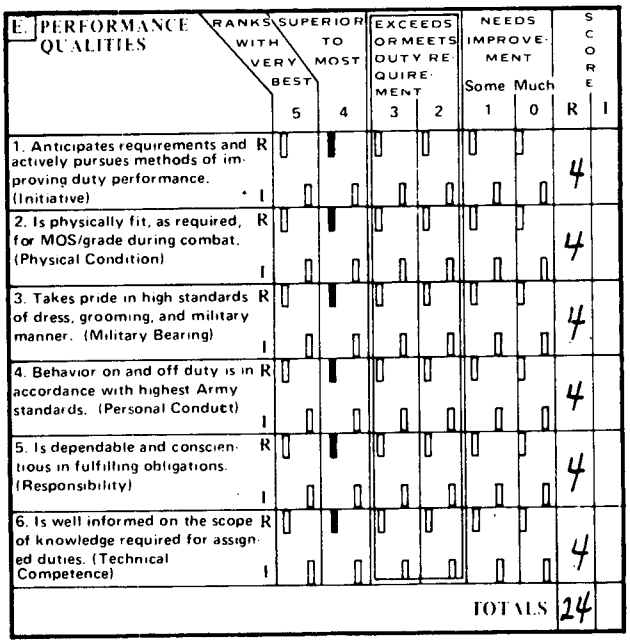


c. **Block C.** Two selections are possible. Check the appropriate box to indicate frequency of contact, and, if applicable, also check "reports and records."



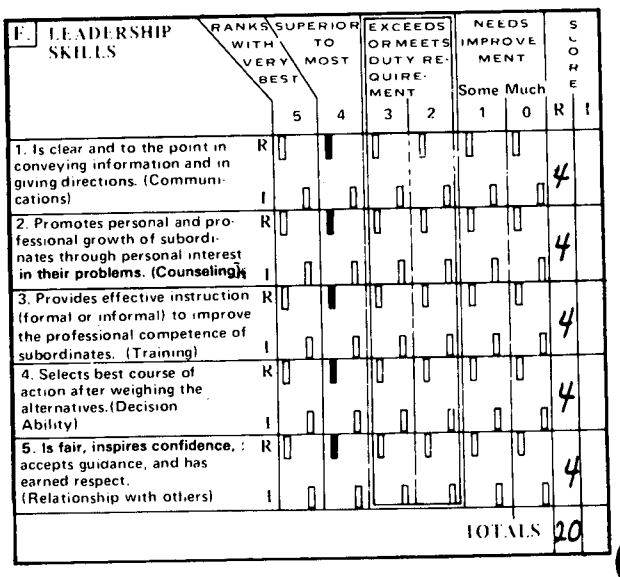
d. **Block D.** Mark the "yes" or "no" block as appropriate. A "no" response here requires explanation in Block K.



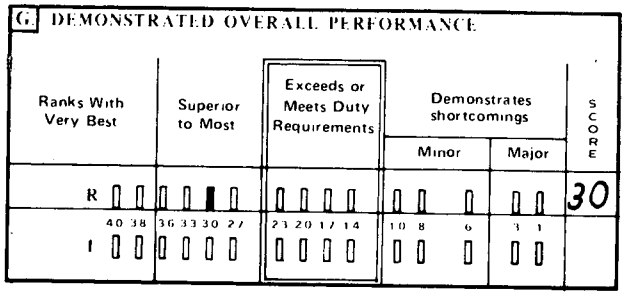


e. **Block E.** Performance Qualities. Rate the individual carefully on each of the six performance qualities by marking the appropriate box for each quality. Mark ratings in soft pencil on the basis of the given rating scale. Enter the score for each quality in black ink in the score box at the righthand column. Total these scores and enter in the totals box at the bottom of the righthand column, and in the appropriate location in Block I. The same marking procedure will be used for Blocks, F, G, and H, using the appropriate boxes in Block I. If the score for Block E exceeds 24 or is less than 6, justify in Block K.

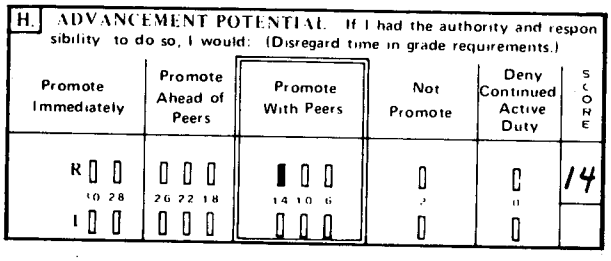
f. **Block F.** Leadership Skills. These skills are critical to senior enlisted soldiers. The soldier's performance as a leader depends on mastering them. If the score exceeds 20 or is below 5, justify in Block K.



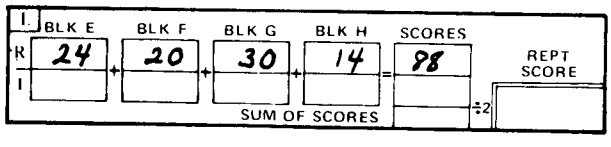
g. **Block G.** Demonstrated Overall Performance. In this section, consider all of the rated soldier's strengths and weaknesses, using the yardstick of overall performance. If the score exceeds 36 or is below 6, justify in Block K.



h. **Block H.** Advancement Potential. Rate the soldier on ability to perform in the next higher grade by considering total capacity in comparison with other individuals of the same grade and length of service. If score exceeds 14 or is below 6, justify in Block K.



i. **Block I.** Scores. The rater enters the scores from the appropriate boxes from Blocks E, F, G, and H and totals them. This total score from the rater's section cannot exceed 125 points. If there is no indorser, the rater's total will be the report score.



j. **Block J.** Career Development. Recommendation for logical career development, such as advanced schooling and special assignments, is appropriate here. If the soldier has potential to be a First Sergeant or Command Sergeant Major, check the appropriate block according to grade.

RATED SOLDIER'S LAST NAME AND SSN		
PART II CONTINUED		
J. CAREER DEVELOPMENT (RECOMMENDATIONS ON SCHOOLING AND ASSIGNMENTS)	RECOMMENDED FOR: CSM (E-8 & E-9)	SG (E-7)
RECOMMEND SERGEANT ATTEND ANCOC AS SOON AS POSSIBLE. SHOULD BE ASSIGNED DUTIES AS A PSG.	R ☐ I ☐	R ☐ I ☐

k. **Block K.** Comments. Scores requiring mandatory comments are listed in the heading of this block. Comments may be made in this block regardless of the score. Comments must be either typed or neatly printed.

K. 1. COMMENTS ARE MANDATORY TO JUSTIFY RATINGS IN PART II AS FOLLOWS: a. BLOCK E SCORE BELOW 6 OR OVER 24, BLOCK F SCORE BELOW 5 OR OVER 20, BLOCK G SCORE BELOW 6 OR OVER 36, BLOCK H SCORE BELOW 6 OR OVER 14, OR BLOCK D IF SOLDIER DOES NOT SUPPORT ARMY'S EQUAL OPPORTUNITY PROGRAM. b. INDORSER WHO CHECKS BLOCK II B. 2. REMARKS OTHERWISE OPTIONAL.
RATER
INDORSER

3. **Part III.** This entry, except for signature, must be typed or printed in black ink. Use black ink for signature.

PART III RATER AUTHENTICATION			
A. ORGANIZATION AND DUTY ASSIGNMENT		B. NAME AND GRADE	C. DATE
Co C, 1ST BN, 26th INF APO NY 09039	PLT SGT	WILLIAM COLEMAN E-7	5 JAN 76
		D. SIGNATURE William Coleman	

4. **Counseling.** After signing the report, you, the rater, should discuss the report with the rated soldier and counsel him concerning the report. After counseling, you will forward the report to the indorser.

5. **See figure 1a and 1b** for a completed example (rater's section only) of a Senior Enlisted Evaluation Report, DA Form 2166-5A.

REFERENCE:

DA Pamphlet 623-1, Preparation of Enlisted Evaluation Reports, May 75 (pages 2-4)

SENIOR ENLISTED EVALUATION REPORT (AR 600-200)

For preparation, see DA Pamphlet 623-1.

C. SSN

PART I PERSONAL DATA

A. GRADE (ABBR) NAME (LAST) (FIRST) (MI) SSN: E-6 RENN, ALFRED N. 000-00-0000

B. TYPE OF REPORT: INIT [ ] ANL [X] CR [ ] SP [ ] OTHER [ ] SPECIFY

D. ORGANIZATION AND STATION: Co C, 1ST BN, 26th INF APO NY 09039

E. PMOSC	F. DMOSC	G. SMOSC
11B30	11B30	95B30

H. PERIOD OF REPORT: BEGIN MO [ ] YR 75; END MO [ ] YR 76

I. NONRATED PERIOD: NO. OF MONTHS _____ REASON CODES _____

J. DUTY POSITION TITLE: SQUAD LEADER

AUTH PAY GR

PART II. RATINGS

A. BRIEF DESCRIPTION OF DUTIES: Individual performs duties as a leader of a rifle squad composed of two fire support teams

B. INDORSER HAS NOT OBSERVED AND CANNOT RATE SOLDIER [ ]

C. REPORT BASED ON: DAILY CONTACT R [X] I [ ]; FREQ OBSN [ ]; INFREQ OBSN [ ]; REPT & REC [ ]

D. SOLDIER SUPPORTS THE ARMY'S EQUAL OPPORTUNITY PROGRAM: YES R [X] I [ ]; NO [ ]

E. PERFORMANCE QUALITIES	RANKS WITH VERY BEST 5	SUPERIOR TO MOST 4	EXCEEDS OR MEETS DUTY REQUIREMENT 3	2	NEEDS IMPROVEMENT Some 1	Much 0	SCORE R	I
1. Anticipates requirements and actively pursues methods of improving duty performance. (Initiative)							4	
2. Is physically fit, as required, for MOS/grade during combat. (Physical Condition)							4	
3. Takes pride in high standards of dress, grooming, and military manner. (Military Bearing)							4	
4. Behavior on and off duty is in accordance with highest Army standards. (Personal Conduct)							4	
5. Is dependable and conscientious in fulfilling obligations. (Responsibility)							4	
6. Is well informed on the scope of knowledge required for assigned duties. (Technical Competence)							4	
TOTALS							24	

F. LEADERSHIP SKILLS	RANKS WITH VERY BEST 5	SUPERIOR TO MOST 4	EXCEEDS OR MEETS DUTY REQUIREMENT 3	2	NEEDS IMPROVEMENT Some 1	Much 0	SCORE R	I
1. Is clear and to the point in conveying information and in giving directions. (Communications)							4	
2. Promotes personal and professional growth of subordinates through personal interest in the ir problems. (Counseling)							4	
3. Provides effective instruction (formal or informal) to improve the professional competence of subordinates. (Training)							4	
4. Selects best course of action after weighing the alternatives. (Decision Ability)							4	
5. Is fair, inspires confidence, accepts guidance, and has earned respect. (Relationship with others)							4	
TOTALS							20	

G. DEMONSTRATED OVERALL PERFORMANCE

	Ranks With Very Best	Superior to Most	Exceeds or Meets Duty Requirements	Demonstrates shortcomings: Minor	Major	SCORE
R	[ ]	[X]	[ ]	[ ]	[ ]	30
I	40 38	36 33 30 27	23 20 17 14	10 8 6	3 1	

H. ADVANCEMENT POTENTIAL. If I had the authority and responsibility to do so, I would: (Disregard time in grade requirements.)

	Promote Immediately	Promote Ahead of Peers	Promote With Peers	Not Promote	Deny Continued Active Duty	SCORE
R	[ ] 10 [ ] 28	[ ] [ ] [ ] 26 22 18	[X] [ ] [ ] 14 10 6	[ ] 2	[ ] 0	14
I	[ ] [ ] [ ]	[ ] [ ] [ ]	[ ] [ ] [ ]	[ ]	[ ]	

I.

	BLK E	BLK F	BLK G	BLK H	SCORES
R	24	20	30	14	88
I					

SUM OF SCORES ÷2 = REPT SCORE

Figure 1a.

2-VI-A-7.5

RATED SOLDIER'S LAST NAME AND SSN

PART II CONTINUED

J. CAREER DEVELOPMENT (RECOMMENDATIONS ON SCHOOLING AND ASSIGNMENTS)

RECOMMENDED FOR:

	CSM (E-8 & E-9)	ISG (E-7)
	R ☐	R ☐
	I ☐	I ☐

RECOMMEND SERGEANT ATTEND ANCOC AS SOON AS POSSIBLE. SHOULD BE ASSIGNED DUTIES AS A PSG.

K. 1. COMMENTS ARE MANDATORY TO JUSTIFY RATINGS IN PART II AS FOLLOWS:
a. BLOCK E SCORE BELOW 6 OR OVER 24, BLOCK F SCORE BELOW 5 OR OVER 20, BLOCK G SCORE BELOW 6 OR OVER 36, BLOCK H SCORE BELOW 6 OR OVER 14, OR BLOCK D IF SOLDIER DOES NOT SUPPORT ARMY'S EQUAL OPPORTUNITY PROGRAM.
b. INDORSER WHO CHECKS BLOCK II B.
2. REMARKS OTHERWISE OPTIONAL.

RATER

INDORSER

PART III RATER AUTHENTICATION

A. ORGANIZATION AND DUTY ASSIGNMENT: Co C, 1ST BN, 26th INF PLT SGT
APO NY 09039

B. NAME AND GRADE: WILLIAM COLEMAN E7

C. DATE: 5 JAN 7[illegible]

D. SIGNATURE: William Coleman

PART IV INDORSER AUTHENTICATION

A. ORGANIZATION AND DUTY ASSIGNMENT

B. NAME AND GRADE

C. DATE

D. SIGNATURE

PART V SOLDIER AUTHENTICATION

A. I HAVE SEEN A COPY OF THIS REPORT COMPLETE THROUGH ACTION BY THE INDORSER. I HAVE BEEN COUNSELED CONCERNING THE REPORT.

B. NAME AND GRADE

C. DATE

D. SIGNATURE

PART VI REVIEWER AUTHENTICATION

A. SOLDIER WAS RATED BY CORRECT RATER AND INDORSER. NO FURTHER ACTION REQUIRED. ☐
MY REVIEW RESULTS IN ACTION INDICATED BY INCLOSURES. ☐

B. ORGANIZATION AND DUTY ASSIGNMENT

C. NAME AND GRADE

D. DATE

E. SIGNATURE

PART VII MILPO CERTIFICATION

A. DATE REPORT ENTERED ON DA FM 2-1:

B. SOLDIER'S COPY: GIVEN TO SOLDIER ☐ FORWARDED TO SOLDIER ☐
MAILED TO SOLDIER ☐ CERTIFIED MAIL NO. _____

C. _____ MILPO SIGNATURE

D. _____ UIC

Figure 1b.

TASK NUMBER: 874-896-4001

MONITOR AND EVALUATE TRAINING

CONDITIONS:

As a senior NCO, given guidance to monitor and evaluate a specific training session (individual or collective); training schedule applicable to your unit; Soldier's Manuals for the MOSs of your subordinates; FM 21-6; parent unit Training Evaluation Report Form; status report and lesson plan.

STANDARDS:

Within the time available, monitor and evaluate the training session and determine, as a minimum:

1. Whether complete performance-oriented training objectives have been developed.

2. Whether, as a result of the training, the soldiers undergoing training can perform the objective(s) and meet or exceed the established training standard(s).

PERFORMANCE MEASURES:

1. **General.** Monitoring and evaluation is a never-ending first and last step in the commander/training manager's efforts to plan and conduct efficient and effective training. Proper conduct of these activities provides the commander/training manager with information and data he needs to prepare or revise his plans for future training. With respect to monitoring and evaluation of training, the commander/training manager is concerned with two issues: efficiency and effectiveness.

TRAINING EVALUATION REPORT

Unit _____ Date _____

Subject/Mission _____ Principal Trainer _____

Time Training Began _____ Soldiers Present for Training _____

Ended _____ Time Evaluator Arrived _____

Location _____ Departed _____

	YES	NO	N/A	Not Observed
1. Did the trainer have specific training objectives to accomplish (i.e., did all objectives (commander's and intermediate) specify the task(s) to be performed, the conditions of performance, and the training standard of acceptable performance)?	☐	☐	☐	☐
Comments:				
2. As a result of the training, did the soldiers perform successfully (i.e., meet or exceed the training standards) the commander's training objective(s)?	☐	☐	☐	☐
Comments:				
3. Were the resources adequate to accomplish the training?				
Time	☐	☐	☐	☐
Equipment	☐	☐	☐	☐
Training Area(s)/Classroom	☐	☐	☐	☐
Ammunition	☐	☐	☐	☐
Training Aids/Devices	☐	☐	☐	☐

Figure 1. Training Evaluation Report.

	YES	NO	N/A	Not Observed
Trainers (principal & assistants)	☐	☐	☐	☐
Comments:				
4. Did the training progress in a logical sequence toward meeting the commander's training objective(s)?	☐	☐	☐	☐
Comments:				
5. Did the soldiers undergoing training appear to be motivated?	☐	☐	☐	☐
Comments:				
6. Did the trainer:				
a. Inform the soldiers of the training objective(s) to be accomplished and give reason(s) for the training?	☐	☐	☐	☐
b. Arrange training area so all could see and hear well?	☐	☐	☐	☐
c. Use understandable words?	☐	☐	☐	☐
d. Demonstrate how to perform the objective(s) (when appropriate)?	☐	☐	☐	☐
e. Give all necessary information?	☐	☐	☐	☐
f. Avoid giving unnecessary information?	☐	☐	☐	☐
g. Require "walk through" performances of the objective (if appropriate).	☐	☐	☐	☐
h. Encourage questions?	☐	☐	☐	☐
i. Exhibit adequate knowledge of subject matter?	☐	☐	☐	☐
j. Show interest in helping the soldiers learn?	☐	☐	☐	☐
k. Make acceptable use of training aids?	☐	☐	☐	☐
l. Use assistant trainers to best advantage?	☐	☐	☐	☐
m. Require practice until the training standards were achieved?	☐	☐	☐	☐
n. Test soldier's ability to perform the commander's training objective?	☐	☐	☐	☐
Comments:				
7. Would you consider this training adequate?	☐	☐	☐	☐
Specific recommendations:				

Figure 1. Training Evaluation Report (cont).

a. Training efficiency is determined by how well the trainer (and indirectly, the training manager) used what was available (i.e., the training resources — time, personnel, facilities, equipment, funds, etc.) to train the soldiers.

b. Training effectiveness is determined by how well personnel undergoing training can meet or exceed established performance standards specified in the commander's training objective(s).

2. **Training Evaluation.** There are many items in the preparation and conduct of training that can be evaluated. However, only two items are critical:

a. Have training objectives (the commander's and intermediate, if needed) been developed that specify task, conditions, and training standards?

b. As a result of the training, can soldiers perform the training objectives and meet or exceed training standards?

If the answer to both questions is yes, everything else is largely secondary (e.g., the appearance of training, the presentation techniques used by the trainer(s), the format of the lesson plans, etc.).

3. **How to Evaluate (Inspect) Training.** A good evaluator is concerned with the conduct of training. His evaluation should concentrate on:

a. Whether complete performance-oriented training objectives have been developed.

b. Whether, as a result of the training, the soldiers undergoing training can perform the objective(s) and meet or exceed the established training standard(s).

All other items are secondary, but by evaluating them, future training may be made more efficient. In performance-oriented training, the goal is for all the soldiers to successfully perform all the training objectives. The Training Evaluation Report (see figure 1) is provided as a guide for developing one for a unit.

REFERENCES:

FM 21-6, How to Prepare and Conduct Military Training (app D, pages 117-124)
TEC Lesson 901-071-0097-F, Evaluating Training, Nov 75

TASK NUMBER: 071-328-5307

SCREEN TRAINING SCHEDULES

CONDITIONS:

As a battalion assistant operations sergeant, given guidance to screen subordinate unit's training schedules; parent unit command letter for weekly training schedules; FM 21-6; and subordinate unit's weekly training schedules.

STANDARDS:

Within the time available, screen training schedules and insure as a minimum that:

1. The training schedules are complete and accurate.

2. The training resources (human, physical, financial, and time) are used efficiently.

PERFORMANCE MEASURES:

1. **GENERAL.** The principal documents which reflect the results of a unit's programming and scheduling of training include training calendars, training forecasts, training circulars, and weekly training schedules.

2. **TRAINING SCHEDULES.** In general, the content of a unit training schedule includes two types of information:

a. That which trainers need to prepare and present the prescribed training.

b. That which the personnel to be trained need to enable them to be present at the designated place of training at the proper time and with the proper equipment. This information is broken down as follows:

(1) Date, time, and place of training.

(2) Personnel to be trained.

(3) Activity (subject/mission).

(4) Trainers for each activity (principal trainer and assistant trainer[s]).

(5) References.

(6) Uniform and equipment.

(7) Resources.

(8) Administrative instructions or remarks that will help the trainer and personnel to be trained.

3. **PRINCIPLES OF SCHEDULING.** The principles of scheduling are:

a. Facilitate Preparation of Training.

(1) Training schedules are published well in advance.

(2) Trainers' names, rather than job title, are shown on the training schedule. This establishes a personal responsibility for preparation of training.

(3) Advance references are provided the trainer to furnish him sufficient training material (Soldier's Manaul, training extension courses (TEC), and ARTEP).

(4) Sufficient time and resources are allocated during each period for the trainer to conduct training as required.

b. Facilitate Learning.

(1) The amount of training soldiers receive from a period of training is affected by the environment under which the training is conducted. Insure training areas are selected and techniques of training used are suited to the training.

(2) Schedule training progressively. Training must progress in a logical sequence (i.e., from easier to more difficult).

c. Use Training Resources (human, physical, financial, and time) Efficiently.

(1) Schedule concurrent training along with the primary training to get maximum use from training time. Concurrent training tasks may or may not have been conducted previously. This training may be used as makeup training for personnel who miss regularly scheduled training, for training in required tasks of limited scope, for soldiers in which weaknesses have been observed during conduct of training in other required tasks, or for additional training on tasks previously conducted.

(2) Schedule training (when possible) using a multi-echelon training approach to insure selected training sessions use the available time and other resources efficiently. Multi-echelon training is an approach to individual and collective training in units designed to prepare simultaneously different elements of a battalion or company.

(3) When movement between training sites cannot be made during time normally allocated for breaks, the time is reflected on the weekly training schedule. When possible, the movement itself may be used as a training vehicle, on marches, movement to contact, delay operations and similar tasks.

WEEKLY TRAINING AND ACTIVITIES SCHEDULE

A Co 2d Bn, 509th Inf — Dtd 3 Mar 75

Inclusive Dates 7 Apr 75 - 11 Apr 75

DAY & DATE	PERSONNEL TO BE TRAINED	TIME FROM-TO	SUBJECT/MISSION	TRAINING LOCATION	TRAINER	REFERENCE	UNIFORM & EQUIPMENT	REMARKS
MON 7 Apr	1st Plt	0800-1150	Defense	Tng Area B (XT785491)	LT Smith	ARTEP 7-15 F-15	D/Steel Pot/ Wpns	
	3d Plt	0800-1150	Movement to Contact	Tng Area X (XT720581)	LT Johnson	ARTEP 7-15 F-14	Do	Aggressors 1/2/A
	2d Plt (-)	0700-1800	Range Support		SFC Jones		D	Rpt to S1 Bn HQ NLT 0710, Lunch Dinner
	81-mm Mort Sec	0800-1630	Provide indirect fire support crew drill, dry fire	Bn PT Field	SFC Dawson	ARTEP 7-15, F-25	D	
	AT Sec	0800-1630	Provide direct fire support crew drill, tracker training	Bn PT Field	LT Hayes, Cbt Spt Co	ARTEP 7-15, F-27 TM 9-6920-470-12 ASUBJSCD 7-11 HP4	D/Steel Pot/ TOW & carrier	Rpt to LT Hayes NLT 0815
	HQ Sec	1300-1630	Co Admin Spt	Co Area	XO/1SG	Co SOP	D	
	Plt & Sqd Ldrs	1300-1630	Leader TEWT - Company Night Withdrawal	Tng Area B (XT785491)	CO	ARTEP 7-15, F-11	D	
	1st & 3d Plt	1300-1630	Maint of individual & crew-served weapons	Co Area	XO, Plt Sgts	Co SOP	D	
	Company (-)	1630-1700	PT (2-mile run)	Run for Your Life Course	CO		PT	

Figure 1.

4. **SCREENING TRAINING SCHEDULES.** In battalions employing decentralized training, subordinate units prepare draft weekly training schedules. The schedules are then forwarded to the battalion S3 for screening. As an assistant operations sergeant, during the process of screening training schedules, you should insure that:

a. The training schedules are forwarded to battalion in a timely fashion (in accordance with parent unit command letter for weekly training schedules).

NOTE: Late or incomplete distribution and frequent changes or amendments to training schedules are indications a unit has problems in the programming and scheduling of training. Such situations warrant the attention of the S3 or battalion commander.

b. The training schedules progress in a logical sequence from easier to more difficult performance tasks.

c. The training schedules are complete and accurate (includes the two types of information).

NOTE: Figure 1 shows a 1-day portion of a training schedule. The format is the same for each day of training.

d. The training locations listed (ranges or training facilities) that are under battalion control have been coordinated and there is no conflict of use by subordinate units.

e. The training is scheduled using training resources efficiently.

REFERENCES:

FM 21-5, Military Training, Management, C1, Dec 64 (chap 6, page 26 thru 36, para 45 thru 54)

TASK NUMBER: 071-328-5308

EVALUATE (INSPECT) TRAINING

CONDITIONS:

As a unit assistant or operations sergeant, given guidance to report on the conduct of training of subordinate units; the unit training circular; Soldier's Manuals for MOSs of your subordinates; FM 21-6; subordinate unit(s) training objectives and status report(s).

STANDARDS:

Within the time available, evaluate the conduct of subordinate unit(s) training and:

1. Determine whether, as a result of the training, the soldiers and unit(s) undergoing training can perform the objective(s) and meet or exceed the established training standard(s) (training effectiveness).

2. Determine, if available, whether resources were utilized in the best possible manner (training efficiency).

3. Report findings, using the chain of command.

PERFORMANCE MEASURES:

1. **General.** Under the Army policy of decentralized training, the authority and responsibility for the planning, conduct, and internal evaluation of training have been delegated to battalion and separate company commanders. In effect, at the battalion level, decentralized training focuses the training effort at its subordinate unit's level. The S3 section and the job as an assistant/operations sergeant is more demanding under this system.

2. **The S3 Section 'Training Manager' Responsibility.** The battalion commander is responsible for the training of his unit, but the S3 section or you as an assistant/operation sergeant are responsible for briefing the battalion commander periodically on the status of training within the unit. To insure that training is of the highest possible quality, it is most important to accomplish the specified training objectives. Evaluation of training is a continuous process at all levels down to company.

3. **Evaluation.** In evaluating training, the evaluation is governed by the Steps of Supervision:

a. QUALIFY. You must qualify yourself with a general knowledge of the subject and a thorough knowledge of performance-oriented training.

b. INSPECT. To properly inspect and report on the conduct of training, you should plan to stay long enough to see exactly what is going on and if most of the soldiers or units are meeting the established standard for a particular objective. You may use either the formal (see task **Monitor and Evaluate Training**) or informal inspection. Both have their place in inspecting and reporting on the conduct of training.

c. EVALUATE. Evaluate the results of an inspection to determine the effectiveness and efficiency of training and to determine methods of improving future training.

d. CRITIQUE. A critique should include an overall evaluation, specific comments on training, and a summary of points brought out. In conducting a critique, you should use the chain of command. The commander (company, battalion, etc.) is responsible for the training of his unit; therefore, all critiques of his training should come from him.

e. FOLLOWUP ACTIONS. Some of the followup actions you may take are:

(1) Make followup inspections.

(2) Inspect similar activities in other units.

(3) Advise the S3 or the battalion commander periodically on the impact of factors that degrade a unit's capability to train effectively (limited resources human, physical, financial and time).

REFERENCES:

FM 21-6, How to Prepare and Conduct Military Training, Nov 75 (app D, pages 117 thru 124)

TASK NUMBER: 091-504-4001

ESTABLISH PRIORITIES FOR GENERAL MAINTENANCE

CONDITIONS:

As platoon sergeant/acting platoon leader given a scheduled period for maintenance or any available time in which to perform maintenance.

STANDARDS:

Priorities for general maintenance will:

1. Support all foreseeable unit missions in order of their occurrence (or criticality as determined by the commander).

2. Concentrate first on serviceablity of mission-essential equipment, then on all remaining items of equipment.

3. Maximize efficient use of personnel, time, equipment, facilities, and support available.

PERFORMANCE MEASURES:

1. The establishment of maintenance priorities should always be based upon the unit's mission. Study the mission; then decide (or the commander/platoon leader might specify) what equipment is necessary to accomplish your assigned mission. Next, you will evaluate the readiness status of the mission-essential equipment you have on hand. The status of this equipment will serve as an indicator which will tell you in what order your equipment needs to be raised to a readiness status. It will also tell if any possible supply actions will be necessary to remedy equipment problems such as shortages, missing parts, etc.

2. Once it has been determined what equipment is mission essential and what its status is, you will then concentrate your available resources on that equipment. You should ask yourself the following questions:

a. How many personnel do I have?

b. How much time do I have?

c. Do I have the necessary tools on hand?

d. Do I have the necessary parts on hand?

e. Can task be accomplished at my level of maintenance?

To insure that priorities established are based upon the mission, resources, and commander's guidance, you should perform the following steps:

STEP ONE: List critical maintenance requirements.

STEP TWO: Identify the most critical tasks.

STEP THREE: Identify the critical tasks which can be accomplished with available resources.

STEP FOUR: Assign specific personnel to accomplish tasks.

STEP FIVE: Supervise and inspect to insure tasks are performed to prescribed standards.

3. If you follow the guidance as set forth in this training, the priorities that you set will support the accomplishment of your unit's mission by making maximum use of available time, personnel, and other resources.

REFERENCES:

None

TASK NUMBER: 101-521-4051

REQUEST SUPPLIES AND LOGISTICAL SERVICES

CONDITIONS:

You have been given guidance from your unit commander or unit SOP to maintain an accurate status of supplies and to request replacement of shortages and any needed logistical support.

STANDARDS:

1. Maintain an accurate status of all accountable supply items and ammunition (without error); expendable supply items (to within 10%); and rations and water (to within 10%).

2. Report without error on status determined above, as requested or directed by unit SOP.

3. Request resupply of any item, as directed by your unit's SOP, before a shortage occurs which will detract from the operational effectiveness of your platoon.

PERFORMANCE MEASURES:

1. As platoon sergeant, it is your responsibility to perform a periodic check on the status/condition of your platoon's supplies and equipment. You should know that your role in the Army's logistical system is that of an assessor. Once you make an assessment of the supply situation in your platoon, you must immediately pass this information on to your commander/executive officer or supply sergeant.

2. At company level, there is no designated logistics officer. However, the company executive officer usually serves as the commander's prinicpal assistant for planning, organizing, and supervising the logistical operations of the company. He is responsible for supervising the feeding of the company, initiating timely requests to battalion for supplies, supervising the distribution of fuel and ammunition, and organizational maintenance. The company supply sergeant is the commander's principal enlisted assistant for supply matters; he requests and issues ammunition, petroleum-oil-lubricant (POL) supply, and replacement equipment. He maintains supply records, to include usage data.

3. Your status report should identify the status of specified items. Normally, your report will be informally written or oral. However, your report is very important, in that it generates the initiation of the formal methods of requisitioning supplies. Your commander or unit SOP may establish guidance for the reporting of shortages or losses, to facilitate control and minimize the possibility of over/under requisitioning.

4. Normally, your unit's executive officer or supply sergeant will consolidate the individual platoon requests for supplies, rations, ammo, clothing, etc., and requisition supplies/logistical support from the next higher logistics section or support unit (if the item is not available within the company). The executive officer or supply sergeant can request the following items:

CLASS I ITEMS:	RATIONS.
CLASS II ITEMS:	CLOTHING, TOOLS, ADMINISTRATIVE AND HOUSEKEEPING SUPPLIES AND EQUIPMENT.
CLASS III ITEMS:	POL.
CLASS IV ITEMS:	CONSTRUCTION MATERIAL.
CLASS V ITEMS:	AMMUNITION.
CLASS VI ITEMS:	PERSONAL DEMAND ITEMS (CANDY, SOAP, CIGARETTES).
CLASS VII ITEMS:	MEDICAL MATERIEL.
CLASS IX ITEMS:	REPAIR PARTS.
CLASS X ITEMS:	MATERIEL TO SUPPORT NONMILITARY PROGRAMS.
MISCELLANEOUS ITEMS:	WATER, SALVAGE, MAPS.

5. It is your responsibility, however, to insure that members of your platoon are equipped with the supply items necessary for them to effectively perform their jobs and that the platoon is provided the logistical services necessary for their welfare and combat survivability. Your logistical responsibilities are to be aware of the status of supplies within your platoon and to make timely requests (through your supply section) by type and amount. You must also know the status of TOE equipment and request replacement items for equipment that is lost, damaged, or destroyed.

REFERENCES:

FM 100-10, Combat Service Support, Mar 75 (chap 9, pages 9-1 to 9-14)

TASK NUMBER: 121-030-1502

MAINTAIN ACCOUNTABILITY OF PERSONNEL (STATUS REPORT, CASUALTY REPORT)

CONDITIONS:

As platoon sergeant/acting platoon leader in a tactical environment, given a platoon engaged in real or simulated combat and a requirement to accurately report personnel status up the chain of command.

STANDARDS:

IAW the guidance provided in the performance measures:

1. Correctly maintain and submit a personnel daily summary IAW unit SOP.

2. Correctly fill out and submit casualty feeder reports and associated witness statements as required.

PERFORMANCE MEASURES:

1. As a leader, it is your responsibility to know who your men are and where they are at all times. Daily or frequent accounting of personnel helps to effectively control your men and resources, and makes available to the platoon leader/company commander the facts surrounding the status of his platoon/company.

2. Your status report would normally include the following information:

a. Names of soldiers.

b. Service numbers and grades.

c. Status (present, AWOL, sick call, etc.).

d. Total number of personnel assigned.

(1) Number physically present.

(2) Number not present.

Personnel status reporting helps the commander evaluate his readiness posture. More important, when this responsibility is performed daily, it helps to keep a unit organized and mission-oriented.

3. When a soldier becomes a casualty, there are established procedures set by Army regulations which govern the compiling and dissemination of information regarding his condition. These set procedures are referred to as the Casualty Reporting System. The purpose of this reporting system is to gather, check, and promptly transmit complete and accurate information on casualties sustained under normal or hostile conditions. The information collected through this program is used to notify the casualty's family and interested government agencies. It is also used as a basis for payments of benefits and entitlements. These procedures include the designation of reporting responsibilities, evidence needed to substantiate a casualty's physical condition, the channels through which reports pass, responsibilities of inquests and boards of inquiry for missing persons, and rules for notifying the casualty's family, and release of casualty information.

4. AR 600-10 contains, in detail, the information on the following aspects of casualty reporting:

a. Applications and responsibilities.

b. Casualty reporting procedures under normal and hostile conditions.

c. Responsibilities and procedures for notifying the casualty's family and others.

d. Casualty reporting procedures during field exercises and movement of units to and from oversea areas.

e. Inquests and boards of inquiry for missing persons.

f. Prisoners of war in US Army custody.

5. The reporting of casualties is a command responsibility and is passed through command channels. The commander or major commander is responsible for the preparation of the reports. However, the commander must have a reliable source and that source is you. The commander will depend heavily on your account of the circumstances surrounding the casualty's incident. Therefore, your role in the system may be that of a reporter or collector of information — information which would be helpful to the commander in providing the most accurate account of what took place. A method of collecting data within an area of operation is the use of DA Form 1155 (Witness Statement on Individuals).

6. As a leader under either hostile or normal conditions, it is important that you familiarize yourself and your troops with the procedures and categories of the Casualty Reporting System as prescribed in AR 600-10.

REFERENCES:

AR 600-10, Casualty Reporting System, C1, C2, Mar 72 (chap 2, pages 2-1, 2-2; chap 3, pages 3-1 to 3-3; chap 6, pages 6-1 to 6-3; chap 8, pages 8-1 to 8-4)

TASK NUMBER: 071-326-5511

CONSOLIDATE AND REORGANIZE PLATOON FOLLOWING ENEMY CONTACT

CONDITIONS:

You are the platoon sergeant/acting platoon leader of a platoon that is attacking or defending as part of a larger unit. Your platoon has just repelled an enemy assault (defense) or has just seized an objective (offense).

STANDARDS:

Reorganize and consolidate your unit well enough to:

1. Reestablish local security.
2. Reestablish chain of command.
3. Redistribute or resupply ammunition and weapons.
4. Supervise evacuation of dead or seriously wounded.
5. Reorganize platoon to compensate for personnel losses.
6. Consolidate position using either the terrain or clock method (offense).
7. Prepare to continue the attack (offense).
8. Replace obstacles and camouflage (defense).
9. Restore communications (defense).

PERFORMANCE MEASURES:

1. **Consolidation and Reorganization - Offense.** The platoon leader must plan the required reorganization and consolidation of the objective and include the plan in his attack order to the squad leaders. The plan is tentative and flexible and may be changed as the situation requires, but it must be complete and in as much detail as possible.

a. Consolidation is the organizing and strengthening of a newly captured position to secure it against a counterattack. The plan for consolidation includes areas of responsibility for the squads and the positions and mission for any organic or attached crew-served weapons.

(1) Upon seizure of the objective, initial emphasis is on a hasty defensive posture to prevent a successful enemy counterattack. You must immediately send out two-man security elements to observe along the most likely avenues of enemy approach. Their primary purpose is to provide early warning.

(2) The objective may be consolidated using either the terrain or clock method:

(a) With the terrain method, designate a certain section of the objective for each squad to occupy using specific terrain features, e.g., trees, rocks, etc. (May be based upon principal avenues of approach.)

(b) With the clock method, assign each squad a portion of the objective by designating the direction of attack as 12 o'clock. Then assign each squad a portion of the clock, e.g., "1st squad, your area of responsibility is from 9 to 11 o'clock; 2d squad, from 11 to 1 o'clock," etc.

b. Reorganization is the restoration of order in your unit and all actions necessary to prepare your unit for further combat.

(1) Reestablish the chain of command. Insure all key positions are filled by the remaining platoon members and that all members are made aware of the new chain of command.

(2) Evacuate casualties and request replacements.

(3) Redistribute/resupply ammunition and weapons. Insure your squad leaders pass out new ammunition, if available, and equalize that remaining. Take a quick inventory and request a resupply, if required.

(4) Insure all crew-served weapons are manned and positioned on likely enemy avenues of approach.

(5) Insure all PWs, enemy material and information are collected, reported, and evacuated if possible.

(6) Give your company commander a situation report (SITREP) that includes the tactical situation, personnel strength, and ammunition status.

2. **Consolidation and Reogranization - Defense.** When an enemy assault is repelled, you must immediately prepare your platoon to meet a renewed assault. To accomplish this task, you must follow many of the same procedures used for the reorganization after an offensive action:

a. Reestablish the chain of command.

b. Reestablish local security. If the OPs withdrew to the defensive position, send them back out. If they did not get back, check their status and take appropriate action to get another OP(s) established as soon as possible. Implement your sleep/alert plan again, as soon as feasible.

c. Redistribute/resupply ammunition.

d. Reposition fighting positions and weapons positions. If you have just repelled an attack, the enemy may have found some of your positions. Reposition those that have been compromised.

e. Reestablish communication. Check your wire to insure it was not cut during the attack. Change your pyrotechnic signals if you think the enemy may have learned what they mean.

f. Evacuate and replace casualties.

g. Restore camouflage and improve positions. Take caution not to overcamouflage a position. If it was not found during the first assault, chances are it will not be found during the next try.

h. Replace obstacles. If the enemy withdraws far enough and if time permits, replace obstacles, mines, and early warning devices. This is a risky task, especially if the enemy has snipers. Your troops must be careful. Request smoke to cover their movement or wait until darkness.

i. Resupply. After inventories are taken, submit requests for all needed supplies.

j. Use snipers. If you have snipers, this is a good time for them to be active. They may be employed with the OPs or from a vantage point on or behind the defensive positions.

k. When directed, fire team or squad-size patrols may be sent out.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 4, sec I, pages 4-49 and 4-50; chap 5, sec IV, pages 5-39 and 5-40)

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5515

ORGANIZE PLATOON FOR EXTERIOR GUARD MISSION

CONDITIONS:

As platoon sergeant of an infantry rifle platoon, given a mission to establish and maintain an exterior guard (using your personnel) for a specific period of time on predesignated posts/points within the company area. Additionally, you may have any of the following special devices to assist the men in performing their duties: NBC detection devices, electronic detection devices, infrared or other night vision devices, trip flares, antipersonnel mines, noisemaking devices, or any other devices to provide early warning to the guard or unit.

STANDARDS:

1. All designated posts/points are occupied throughout the time specified.

2. Personnel remain at guard post no longer than the time prescribed for each watch period (length of watch periods will depend upon personnel availability), usually 2 hours.

3. The additional equipment is utilized to maximize early warning capabilities.

4. An adequate communications system is established (i.e., wire, radio, etc.).

PERFORMANCE MEASURES:

1. **Responsibility.**

a. A unit must be protected at all times from surprise. Exterior guards are utilized to protect a unit from surprise and to give the unit time to prepare to counter any threat. As a leader, you should insure that your guards are alert for enemy surprise attacks by ground, airborne, and air, and alert to provide early warning of nuclear, biological, and chemical (NBC) attack. Guards should be prepared to protect supplies and installations. If the unit is moving, security may vary from use of observation posts to the use of security patrols. During short halts, guards, small security detachments, and forward patrols are used to provide all-round security for stationary positions in combat or hostile areas. You should use your exterior guards to establish a surveillance system to operate

day and night throughout the platoon area. You may use observation posts and/or patrols, and any other available means.

b. The guards may have any number of special devices to assist them in their duties. These could include NBC detection devices, electronic detection devices, infrared or other night vision devices, trip flares, antipersonnel mines, noisemaking devices, or any other device to provide early warning to the guard and unit.

2. **Patrols.** Patrols may be used to cover an area not otherwise under surveillance, or to cover gaps between units. To avoid establishing a pattern of operation, these patrols operate at irregular intervals over a variety of routes.

3. **Communications.** All exterior guards must have an adequate communications system. Special orders or instructions will govern the type of communications. These may be radio, wire, arm-and-hand signals, sounds, or any method specified by the commander or leaders. A system should be set up to maintain communications checks with platoon headquarters at prescribed intervals.

4. **Area of Operation.** You must supervise and check on the exterior guard and overall security discipline. The routine means of security are altered frequently to prevent OPFOR from obtaining detailed and accurate information about the composition, habits, and location of the exterior guards. In this environment, two or more guards should be placed at each post so that one guard provides security for the other when challenging.

5. **Tour of Duty.** The guards perform their duties and also rest at the same location. When practical, guards operate in pairs or larger groups and rotate the watch and rest periods among themselves to insure that the required number of guards are alert at all times. If means are available, personal contact may be made with the guard at irregular intervals. This contact may be made by other guards, patrols, or unit leaders.

6. **Countersigns.** For use of challenge and password, see task: **Use challenge and password.**

REFERENCES:

FM 22-6, Guard Duty, Sep 71 (chap 8, pages 8-1 thru 8-7, para 77 thru 86)

TASK NUMBER: 071-329-1019

USE A MAP OVERLAY

CONDITIONS:

Given a military map and a map overlay containing any of the graphic symbols shown in figure 2.

STANDARDS:

Without the use of references:

1. Draw all graphic information on the overlay, to within 100 meters on the map, using grid coordinates or terrain features.

2. State the meaning of each graphic symbol.

PERFORMANCE MEASURES:

1. **Map overlays consist of the following:**

a. Orientation. A means by which the overlay is positioned on a map.

b. Plotting of detail. Information pertaining to a specific mission or operation is shown using graphic symbols.

c. Marginal information. The overlay title, date and time of information, map reference, who prepared the overlay, and any nonstandard graphic symbols used or other additional information needed to use the overlay. It is placed in a corner of the overlay, usually the lower right.

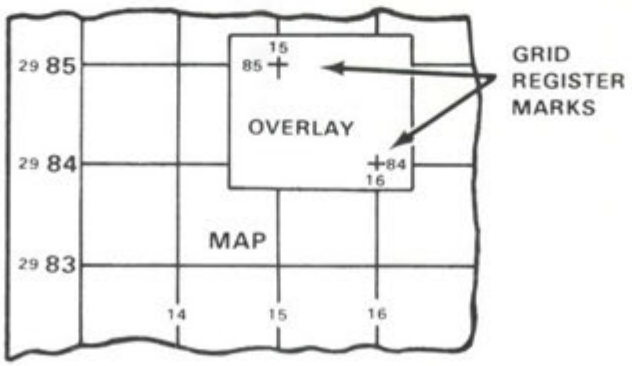


Figure 1. Registering the overlay.

d. Classification. The security classification is entered at the top and bottom of the overlay. Make certain that you handle overlays as you would documents with similar classification.

2. **To use a map overlay:**

a. Obtain the map sheet(s) listed in the marginal information.

b. Locate the grid intersections on the map which correspond to the grid register marks located in opposite corners of the overlay.

c. Place the overlay on the map so that the grid register marks fall exactly on top of the grid intersections (figure 1).

d. Since the overlay material is semi-transparent, you will be able to see the map through it. Therefore, you can identify map locations (by coordinates or terrain features) to which the graphic information pertains.

e. Locate the points and areas identified on the ground.

f. Take action appropriate to the graphic information given.

3. **As a minimum you must be able to recognize the graphics in figure 2 without the aid of any references.**

■ **Basic Symbols:**

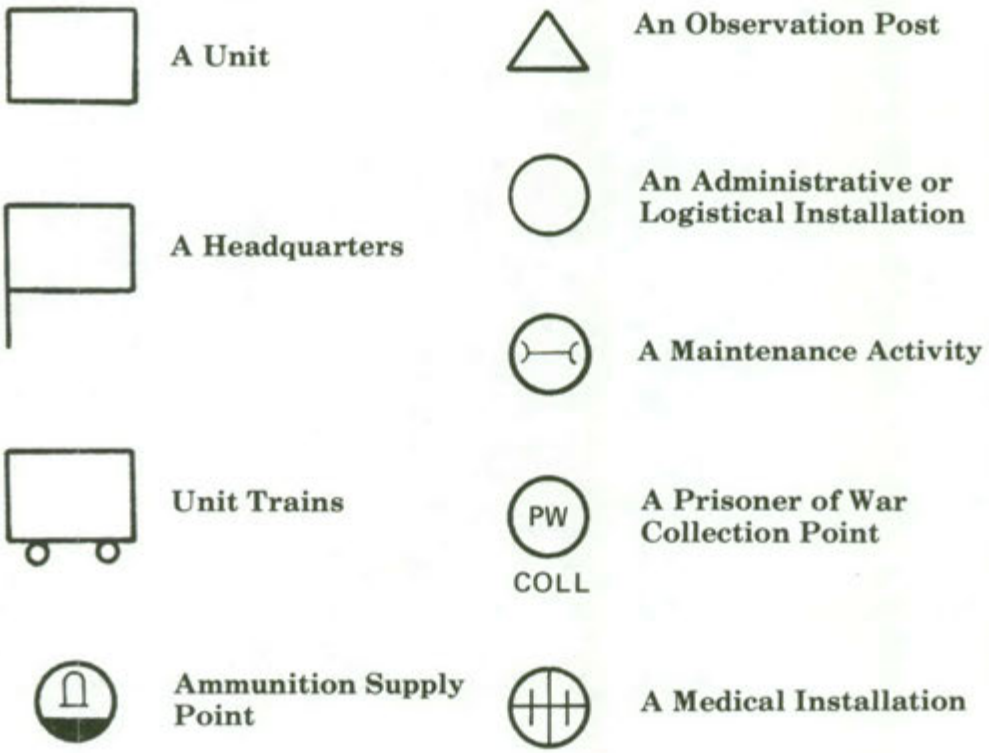
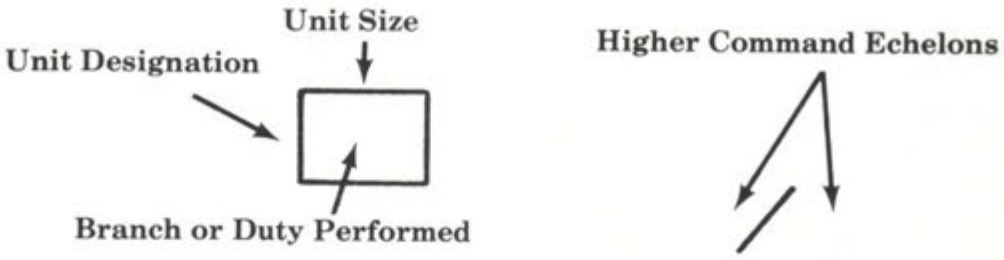
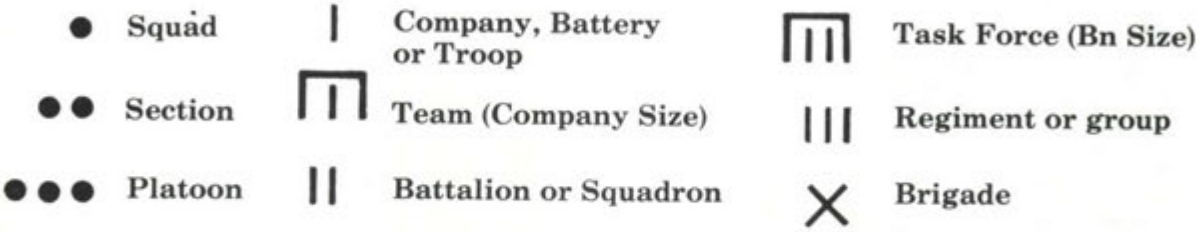


Figure 2.

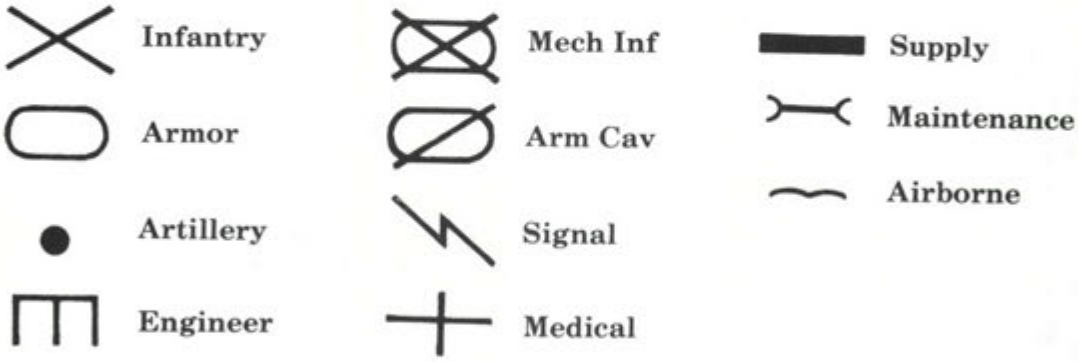
■ Development of a unit symbol:



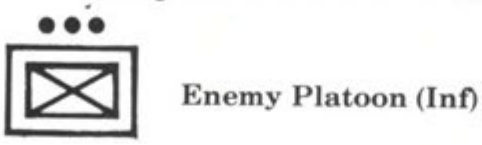
■ Unit Size Symbols:



■ Branch symbols:



■ Enemy units are depicted in red or as double lines:



■ Proposed or future locations are depicted using broken lines:

Figure 2. (Continued)

■ Tactical control measures:

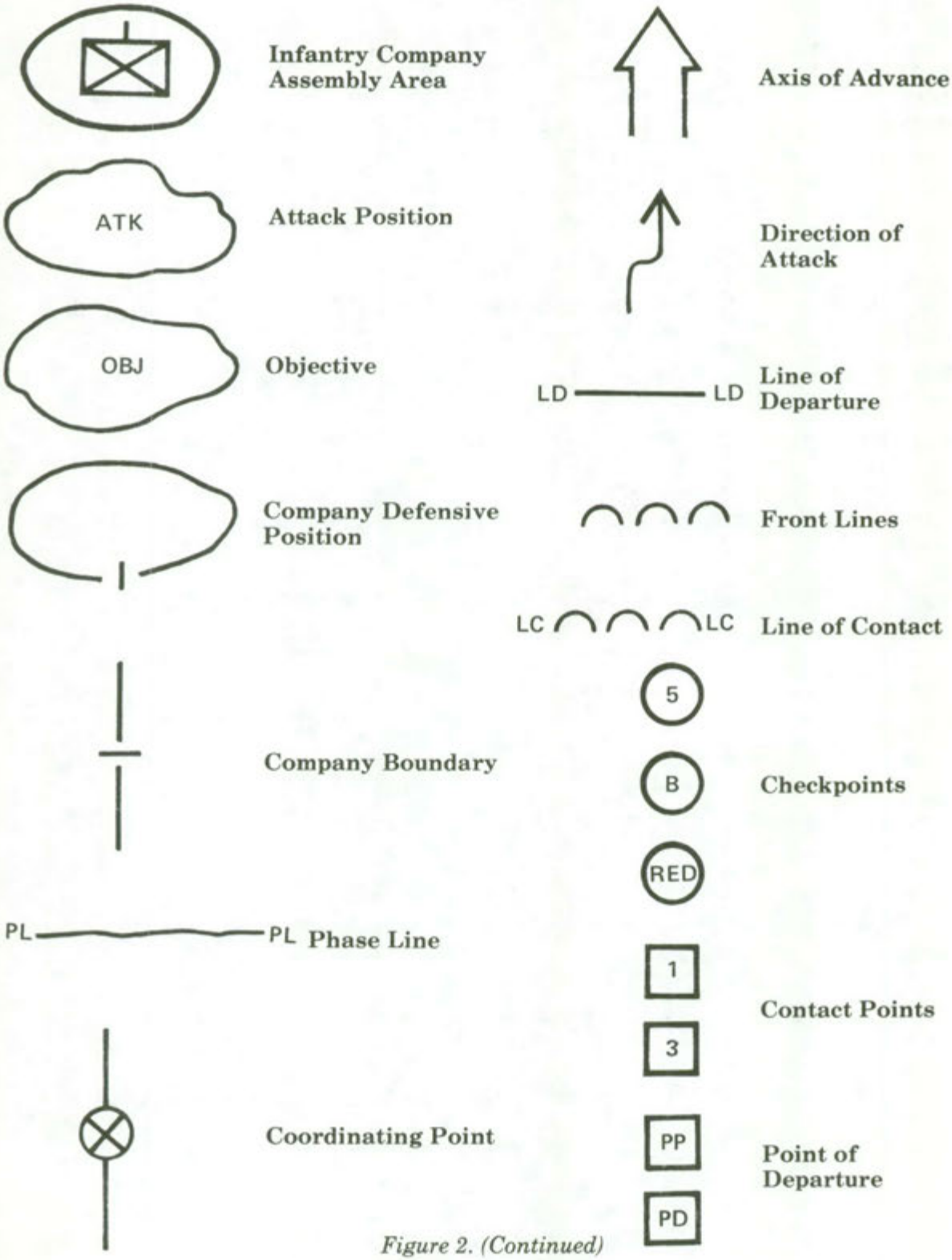
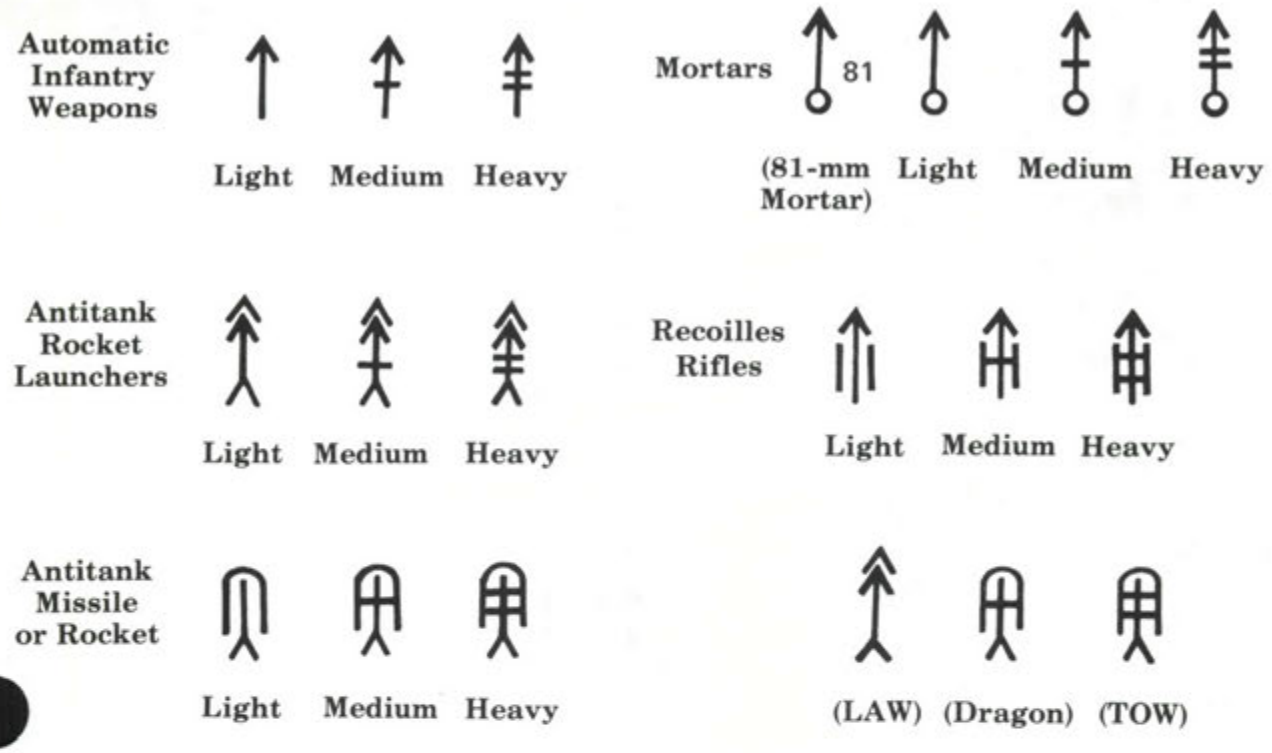


Figure 2. (Continued)

■ Weapons symbols:



■ Armored vehicles:

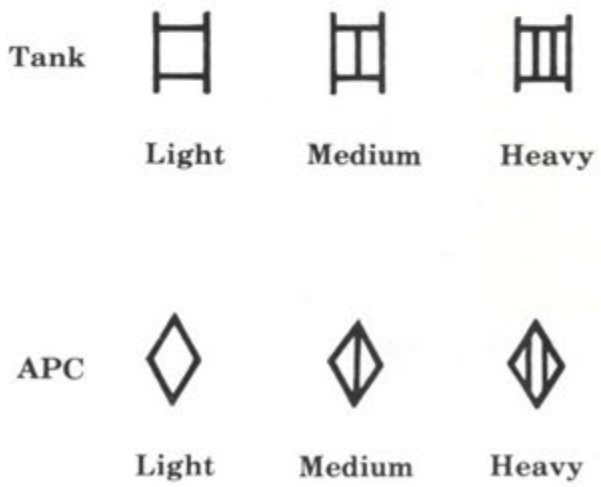
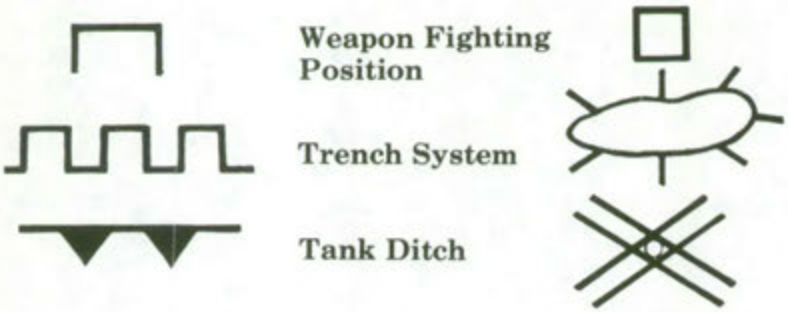
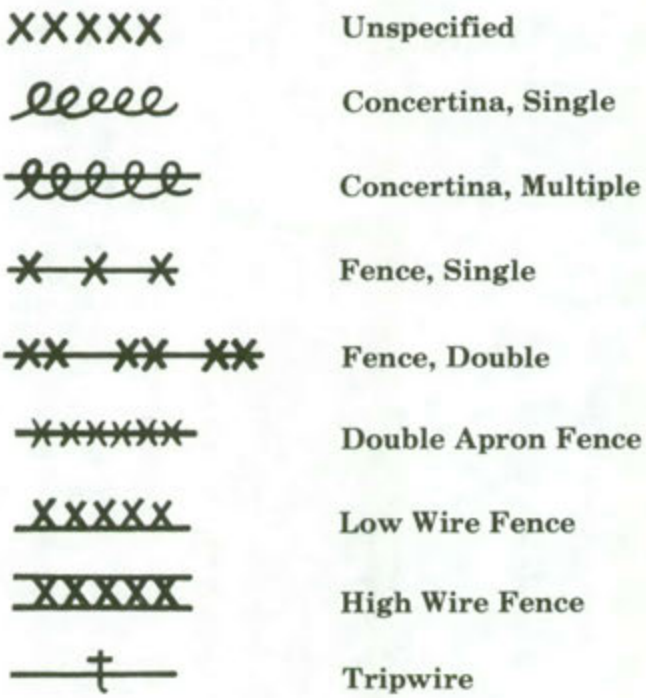


Figure 2. (Continued)

■ Fortifications and obstacles:



■ Wire:



■ Mines:

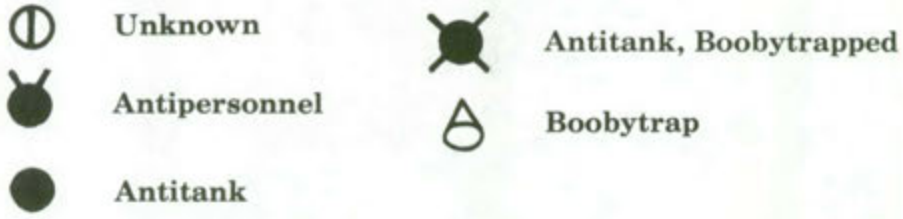


Figure 2. (Continued)

■ **Indirect fire symbols:**

Target (w/number)

Reference Point

Final Protective Fire (FPF)

Figure 2. (Cont'd)

REFERENCES:

FM 21-26, Map Reading, Jan 69 (chap 7, pages 7-1 thru 7-4, para 7-1 thru 7-3)
FM 21-30, Military Symbols, May 70 (chap 2, page 2-2 thru 2-4, app E and F, pages E1 thru F7)

TASK NUMBER: 071-326-5805

PLAN AND CONDUCT A ROUTE RECONNAISSANCE MISSION

CONDITIONS:

In a field environment, given a TOE scout platoon, a 1:50,000 map, and a mission to conduct a route reconnaissance.

STANDARDS:

Plan and conduct a route reconnaissance well enough to:

1. Properly organize the platoon to conduct the reconnaissance mission.

2. Use proper movement techniques appropriate for the likelihood of enemy contact.

3. Obtain necessary information concerning the route conditions, obstacles, critical terrain features, and enemy along the assigned route.

4. Prepare a route reconnaissance checklist prior to the beginning of the mission.

PERFORMANCE MEASURES:

1. **The Fundamentals of Reconnaissance.** Reconnaissance operations vary with the operational environment, the assigned mission, and the size, type, and composition of the reconnaissance element. Ground reconnaissance operations are performed in accordance with the following fundamentals:

a. **Orient on the location or movement of the intelligence objectives.** Units engaged in reconnaissance operations maneuver according to the location or movement of the intelligence objective rather than the location or movement of friendly forces. The objective may be enemy troops, a terrain feature, or a locality. To effectively perform reconnaissance, commanders of reconnaissance elements are allowed maximum freedom of action commensurate with the mission.

b. **Report all information accurately.** Reconnaissance is conducted to obtain information to be used in the production of intelligence. All items of military significance are reported. Moreover, to be of value, reconnaissance reports must be complete, timely, and accurate.

c. **Avoid decisive engagement.** Units performing reconnaissance obtain information by stealth whenever possible; combat is conducted only when necessary to gain the desired information and in self-defense. The

reconnaissance mission must not be jeopardized by unnecessary combat.

d. **Maintain contact with the enemy.** In the performance of a reconnaissance mission to obtain information of an enemy force, visual or electronic contact with the enemy is gained as soon as possible. Once contact has been made, it is maintained and is not voluntarily broken without proper authority. Contact may be maintained either by ground or aerial surveillance.

e. **Develop the situation.** When enemy contact is made or an obstacle is encountered, the situation is developed rapidly. To determine the location, composition, and disposition of the enemy force or obstacle, the following actions are taken on contact:

(1) Deploy and report.

(2) Reconnoiter.

(3) Choose a course of action.

(4) Report.

2. **Route reconnaissance** is directed to obtain information of the enemy, obstacles (including chemical or radiological contamination), route conditions, and critical terrain features along a specific route. The techniques employed and the requirements of route reconnaissance are less time-consuming and are performed more rapidly than other types of reconnaissance.

3. **Reconnaissance of Suspect Areas.**

a. In reconnoitering areas along a route, which are likely to be defended by enemy detachments, such as bridge approaches, defiles, or built-up areas, reconnaissance should commence from the flanks or rear. Detailed observation precedes actual reconnaissance; and approach routes are checked for mines, boobytraps, and signs of ambush.

b. When time is available, dismounted personnel are first sent forward, covered by the remaining elements of the unit. The number of dismounted personnel depends upon the size of the objective and upon available approaches, cover, and concealment. If the dismounted patrols find that the near edge of the area is clear, the remainder of the unit moves quickly forward. The dismounted patrols then continue the reconnaissance, overwatched and followed closely by the remainder of the unit.

c. In conducting a mounted reconnaissance, part of the unit remains mounted and moves forward cautiously but rapidly, overwatched by the remaining mounted elements. If the near edge of the area is clear, the overwatching elements move forward quickly and the advance continues.

4. **Reconnaissance by Fire.**

a. Reconnaissance by fire is accomplished by firing on likely or suspected enemy positions in an attempt to remove camouflage and to cause the enemy to disclose his presence by movement or return fire. During

reconnaissance by fire, positions being reconnoitered must be observed continuously so that enemy activity can be quickly and definitely located.

b. Reconnaissance by fire may be employed by route reconnaissance teams as a security measure when time is critical and the loss of surprise is not essential.

c. If the enemy returns the fire, the situation is further developed. If the fire is not returned, the reconnaissance continues. However, caution should be exercised, for reconnaissance by fire often fails to disclose the presence of a well-disciplined enemy.

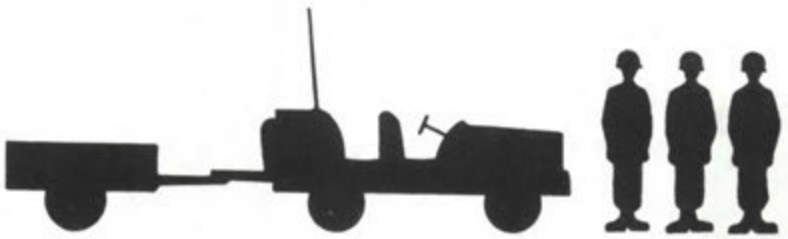
5. **Reconnaissance at Night.** Route reconnaissance operations are slower and less effective at night. Night reconnaissance is limited usually to electronic surveillance devices, dismounted patrolling, observation of routes, and the use of listening posts. Only against light enemy resistance and upon favorable terrain can vehicular reconnaissance be employed without being preceded by dismounted patrols. Use of night vision devices are often helpful; and when employed, their use is integrated into the overall reconnaissance and security plan.

6. **Types of Route Reconnaissance Missions.**

a. **Hasty route reconnaissance** is conducted to determine the immediate military trafficability of a specified route. Such information is vital to all units engaged in planning and executing vehicular movement. It is limited to critical terrain data which is necessary for route classification and which meets the intelligence requirements of the situation. Full appreciation of a route's capability cannot be determined until each factor affecting traffic flow is separately analyzed. The report of hasty route reconnaissance usually consists of a map overlay supplemented by additional reports (dependent on the detail required) concerning various aspects of the terrain. The route reconnaissance overlay is accurate, clear, and concise. Standard topographic (FM 21-31), military (FM 21-30), and route reconnaissance symbols are employed to insure that route reconnaissance reports are universally understood.

b. **Deliberate route reconnaissance** is made when sufficient time and qualified personnel are available. It provides necessary data for a thorough analysis and classification of significant terrain features along a route to include, when required, repair or demolition procedures. Deliberate reconnaissance reports differ from hasty reconnaissance reports only in the degree and completeness of reported information. Usually, an overlay is employed to point out the exact map location of each reconnoitered terrain feature. Inclosures are attached to the overlay which describe in detail each terrain feature covered by the report. The use of DA Reconnaissance Report forms as inclosures establishes a permanent record and insures that sufficient detail is included concerning important route characteristics.

7. **Suggested organization and equipment for a route reconnaissance patrol are shown in figure 1.**



PATROL LEADER
RADIO OPERATOR/RECORDER
DRIVER

ASSISTANT PATROL LEADER
MACHINEGUNNER/OBSERVER
DRIVER

Figure 1a. Suggested organization of a route reconnaissance patrol.

Item	Quantity
Truck, utility, ¼ ton, 4x4	2
*Carrier, personnel, armored	2
Trailer, amphibious, cargo, ¼ ton	1
Machinegun, 7.62-mm	1
Pedestal, 7.62-mm machinegun mount	1
Launcher, grenade, 40-mm	1
Binocular 7x50	2
Goggles, sun, plastic	6
Radiacmeter, IM-93/UD	1
Radiacmeter, IM-174/PD	2
Detector kit, chemical agent, VGH, AN-M15A1A	1
Paper, chemical agent detector, VGH, ABC M8	1 bk
Wristwatch	2
Radio set AN/VRC-47, mounted in truck, ¼ ton	1
Radio set An/PRC-25	1

Item	Quantity
Flashlight	4
Lensatic compass	2
Clinometer	1
Panel marking sets	2
Pioneer tools	1 set/vehicle
Towing chain	2
Material for marking fording and swimming sites	As required
Improvised means of measuring water depths	As required
Measuring tape	2
Three-man pneumatic reconnaissance boat	As required
Vehicular first aid kit	2
FM 5-34	1
Reconnaissance report forms and formats	As required
Adequate map and aerial photo coverage	As required
Tracing tape (tape, textile)	As required
Camera (Polaroid)	1

*Desirable when operating in support of mechanized forces or in northern areas.

Figure 1b. Suggested items to accompany route reconnaissance patrol.

8. **Route Reconnaissance Planning.** Reconnaissance instructions must be as detailed as possible and include exactly what information is to be obtained, the time by which the information is to be reported, where the information is to be reported, where the information is to be sought, action to be taken upon enemy contact, and when the mission is to be executed. Essential details include:

a. Pertinent known information of the enemy, friendly troops, and the area of operations.

b. Proposed plans of higher commands, to include anticipated traffic flow along the route and types of vehicles to be employed.

e. When, where, and how information is to be reported.

f. Time of departure.

g. Appropriate control measures.

h. Action to be taken when the mission is completed.

i. Special equipment requirements.

9. **Terrain Considerations.** Factors of terrain which are important in route reconnaissance and require consideration, when applicable, are:

a. Existing routes and their physical characteristics.

b. Gradients of slope and radii of curvature.

c. Bridges.

d. Vehicular fording, ferrying, and swimming sites.

e. Tunnels, underpasses, and similar obstructions to traffic flow.

f. Artificial obstacles such as areas of chemical, biological, and radiological contamination, roadblocks, craters, and minefields.

g. Rock falls and slide areas.

h. Drainage.

i. Other natural or manmade features, such as wooded and built-up areas, which may affect movement.

10. **An example of a type route reconnaissance mission follows:**

The scout platoon has been given the mission of conducting a route reconnaissance of Route Red. The battalion S2 had additionally indicated that enemy activity has been reported east of Phase Line Yellow and that the S2 desires reports on the route at each phase line (figures 2 through 5).

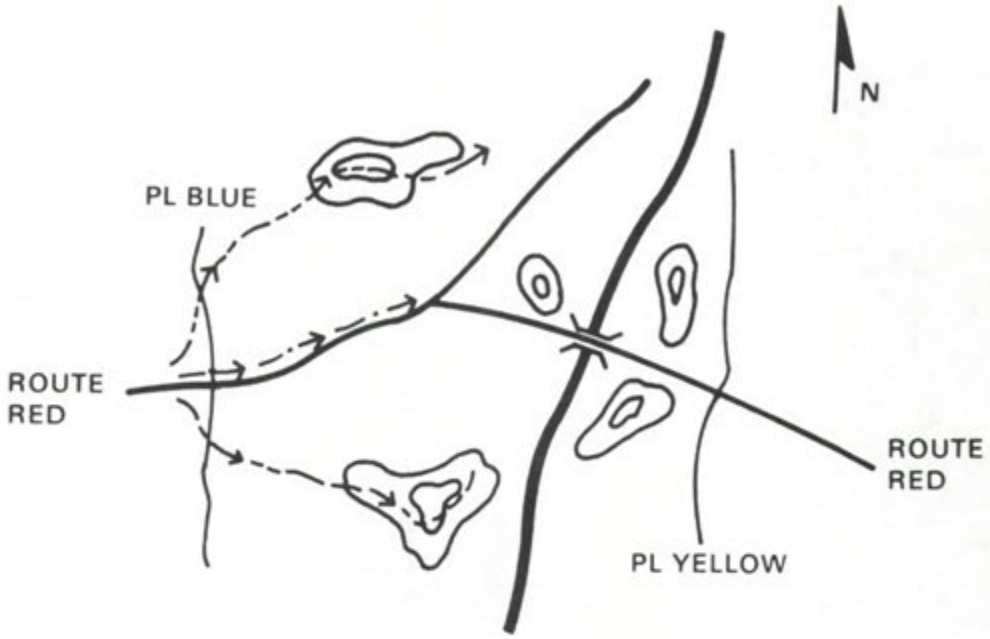


Figure 2. Route reconnaissance.

Having arrived at PL Blue using the traveling technique of movement, the platoon leader now decides to employ the traveling overwatch technique. Because the trafficability through this area appears good, the platoon leader directs that one squad maneuver to each flank and use the traveling overwatch technique. These two squads will remain in visual contact with the platoon leader and will not extend beyond 500 meters from the route unless directed to do so by the platoon leader. This measure will facilitate the speed by which lateral routes and adjacent terrain can be checked as well as provide flank security for the platoon.

The lead squad moving along the route has reported a bridge to the platoon leader. This squad moves to a covered and concealed position where it can observe and cover the bridge and the commanding terrain on the other side of the river. This squad then begins a thorough visual reconnaissance of these areas. The platoon leader at the same time directs the two flank squads to continue moving until they are within the vicinity of the river and to reconnoiter. Moving into covered and concealed positions (following the appropriate ground reconnaissance) from which they can see the river, the vehicle commander and observers from each vehicle patrol as shown below, while the drivers man the machineguns. In order to not establish contact at more than one point, the northernmost squad will cross the river, patrol the far bank, and occupy the commanding terrain on the far side prior to the southernmost squad crossing the river.

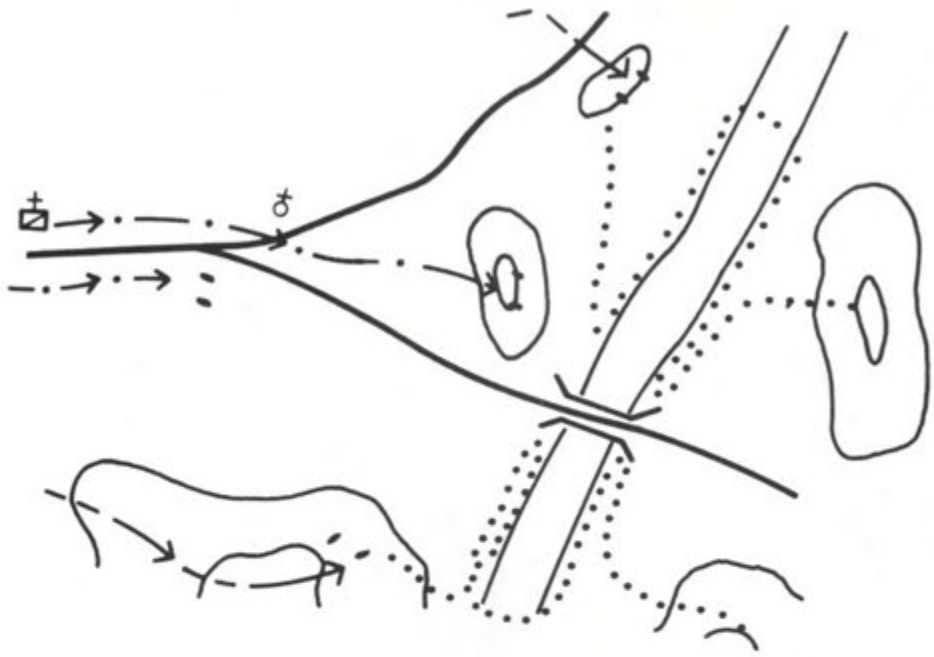


Figure 3. Route reconnaissance (continued).

Once both flank squads have secured the far terrain features, the bridge can be checked for mines or weakening by the enemy. The flank squad vehicles will then move across the bridge into covered and concealed positions behind the two hills.

As soon as the flank squads have cleared and secured the far side of the bridge, the platoon leader moves to the vicinity of the forwardmost squads and conducts a visual reconnaissance of the route ahead. The platoon leader also directs the platoon sergeant to move to the bridge and conduct an expedient bridge classification. The trail squad is directed to reconnoiter for possible bypasses up and down the river and determine their corresponding ford classifications. The squad overwatching the bridge will continue to provide rear security for the platoon's reconnaissance efforts and will become the trail squad once the platoon continues its route reconnaissance mission.

A possible uncoded spot report for the bridge might look like:

Line Alpha - Easy Rider 19
Line Bravo - Bridge Number Five
Line Charlie - FG097664, 1345 hours
Line Delta - Track classification - two way 40 - one way 75.
Line Echo - Continuing mission.

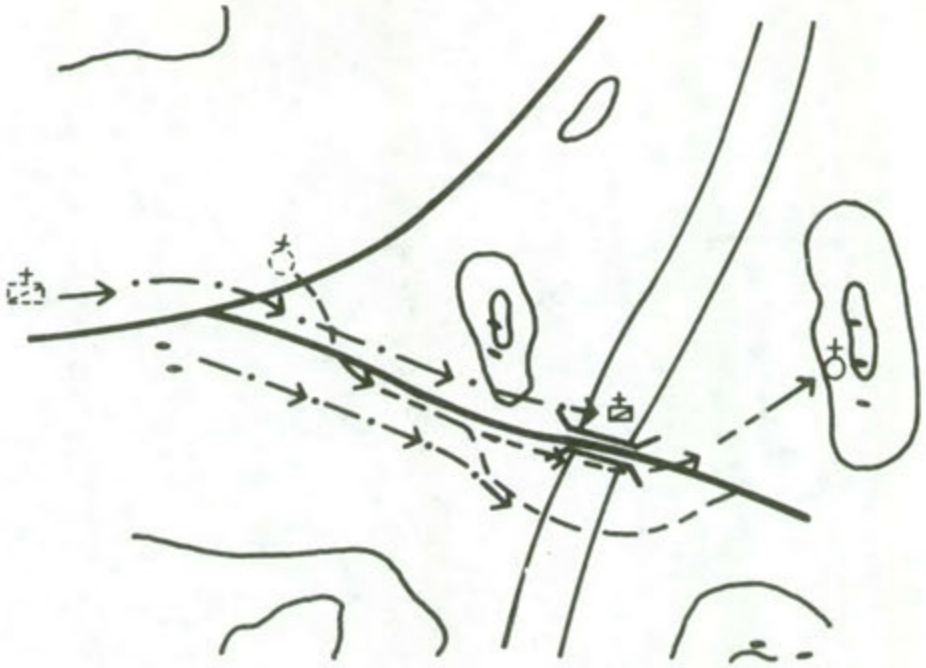


Figure 4. Route reconnaissance (continued).

Having arrived at Phase Line Yellow and submitted the appropriate report to the battalion S2, the scout platoon leader now determines that enemy contact is expected. He therefore, directs the platoon to employ the bounding overwatch movement technique. After this visual reconnaissance has confirmed his previous map reconnaissance of the area immediately beyond PL Yellow, the platoon leader decides to employ his two sections abreast. The platoon leader will move with the northernmost scout section, while the platoon sergeant will travel with the other section. Because the trafficability north of Route Red is more restrictive than the area south of the route, the platoon leader has also decided that the section he is accompanying will also have responsibility of the roadway and its classification.

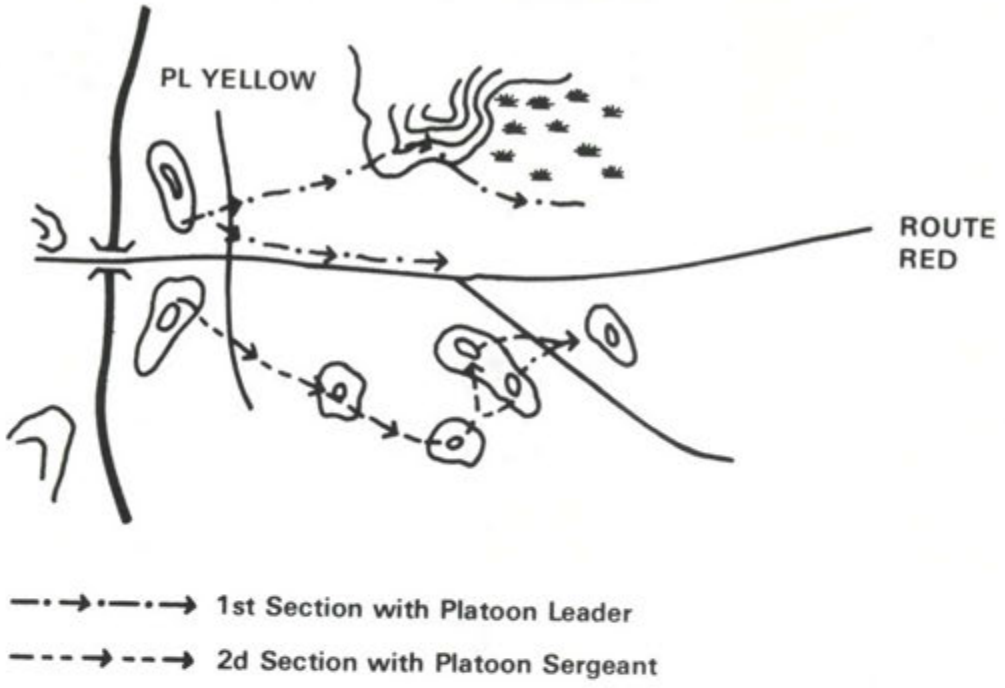


Figure 5. Route reconnaissance (continued).

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 6, page 6-1 thru 6-8)
FM 17-95, Cavalry, Jul 77 (chap 5, page 5-17 thru 5-21)

TASK NUMBER: 051-196-3009

PREPARE A ROUTE RECONNAISSANCE REPORT

CONDITIONS:

Under any environmental conditions, with FM 5-34, FM 5-36, overlay paper, completed applicable reconniassance reports (road--DA Form 124B; tunnel--DA Form 1250; ford--DA Form 1251; and bridge--DA Form 1249) covering a specified route; bridge classifications of all bridges on the route, a topographic map of the area, and a directive to prepare a route reconnaissance report.

STANDARDS:

The complete route reconnaissance report will consist of a route reconnaissance overlay and a route classification formula.

PERFORMANCE MEASURES:

1. Prepare a route reconnaissance overlay.

a. An overlay is employed to point out the exact map location of each reconnoitered terrain feature.

b.Inclosure (specific recon reports) are attached to the overlay which describe in detail each terrain feature covered by the report. The use of DA reconnaissance report forms as inclosures establishes a permanent record and insures that sufficient detail is included concerning important route characteristics.

c. Factors of terrain which are important and require consideration when applicable are:

(1) Existing routes and their physical characteristics.

(2) Gradients of slope and radii.

(3) Bridges.

(4) Vehicular fording, ferrying, and swimming sites.

(5) Tunnels, underpasses, and similiar obstructions to traffic flow.

(6) Artificial obstacles such as areas of chemical, biological, and radiological contamination, roadblocks, craters, and minefields.

(7) Rockfalls and slide areas.

(8) Drainage.

(9) Other natural or manmade features, such as wooded and built-up areas, which may affect movement.

d. Important features to be included on an overlay are shown below. The first four items are required:

(1) Two grid references.

(2) Magnetic north arrow. Route drawn to scale.

(3) Title block.

(4) Route classification formula.

(5) Length (in kilometers) between well-marked points.

(6) Curves having radii of less than 45 meters or 150 feet.

(7) Steep grades, with their maximum gradients in percent, and length of any grade of 5 percent or greater.

(8) Road width of constrictions (bridges, tunnels, and so forth), with the widths and lengths of the traveled ways in meters.

(9) Underpass limitations, with their limiting heights and widths in meters.

(10) Bridge bypasses, classified as easy, difficult, or impossible.

(11) Civil or military road numbers, or other designations.

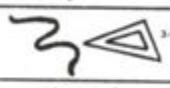
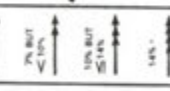
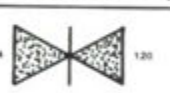
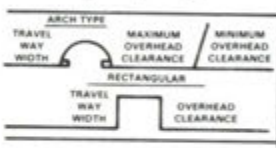
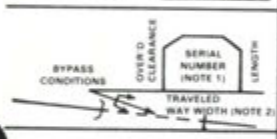
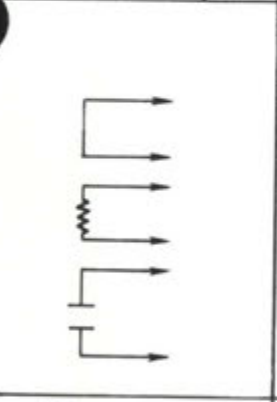
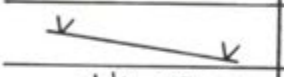
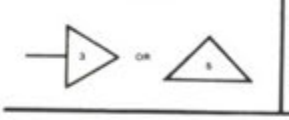
(12) Feasibility of driving off road, including shoulders.

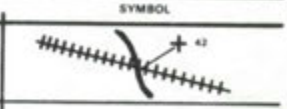
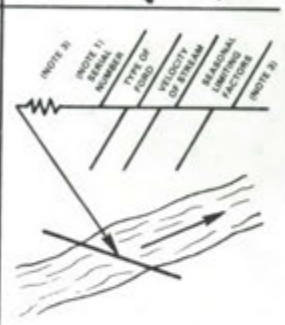
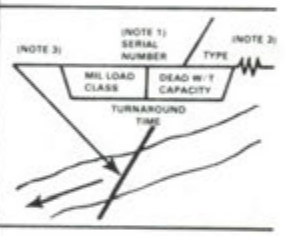
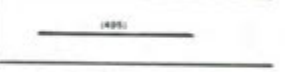
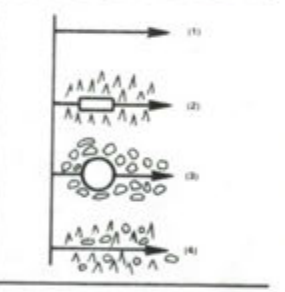
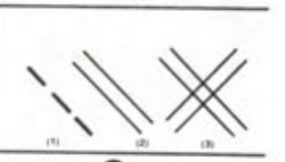
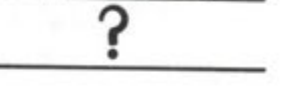
(13) Location of fords, ferries, and tunnels, including limiting information.

(14) Causeways, snowsheds, and galleries which constitute an obstruction to traffic should be included in the route reconnaissance report. Limit the data to clearance and load-carrying capacity. (If possible, support the information with photographs or sketches of each structure. Also, include enough descriptive information to permit an evaluation concerning the strengthening or removal of these structures.)

Route reconnaissance symbols are employed to insure that route reconnaissance reports are universally understood. A summary of pertinent reconnaissance symbols are shown below.

SYMBOLS FOR USE IN THE ROUTE RECONNAISSANCE REPORT

SYMBOL	DESCRIPTION & CRITERIA
	SHARP CURVE: (OB) ANY RADIUS LESS THAN OR EQUAL TO 30 METERS; HOWEVER, ANY CURVE GREATER THAN 30 METERS, BUT LESS THAN 45 METERS IS REPORTABLE.
	SERIES OF SHARP CURVES: THE FIGURE TO THE LEFT INDICATES THE NUMBER OF CURVES; THAT TO THE RIGHT, THE MINIMUM RADIUS OF CURVATURE IN METERS.
	STEEP GRADES: (OB) ANY GRADE 7% OR HIGHER. ACTUAL % OF GRADE WILL BE SHOWN. ARROWS ALWAYS POINT UPHILL, AND LENGTH OF ARROW REPRESENTS LENGTH OF GRADE IF MAP SCALE PERMITS.
	CONSTRICTION: (OB) ANY REDUCTION IN THE TRAVELED WAY BELOW THE STANDARDS OF TABLE 1. THE FIGURE TO THE LEFT INDICATES THE WIDTH OF THE CONSTRICTION; THAT TO THE RIGHT, THE TOTAL CONSTRICTED LENGTH, BOTH IN METERS.
	UNDERPASSES: SHOW SHAPE OF STRUCTURE (OB) WHEN OVERHEAD CLEARANCE IS LESS THAN 4.30 M OR WHEN THE TRAVELED WAY IS BELOW THE STANDARDS OF TABLE 1. SEE NOTE 4.
	TUNNEL: (INCLUDES MANMADE SNOWSHEDS.) SHOW SHAPE OF STRUCTURE. (OB) WHEN OVERHEAD CLEARANCE IS LESS THAN 4.30 M OR WHEN THE TRAVELED WAY IS BELOW THE STANDARDS OF TABLE 1. SEE NOTE 4.
	BYPASSES: ARE LOCAL ALTERNATE ROUTES WHICH ENABLE TRAFFIC TO AVOID AN OBSTRUCTION. BYPASSES ARE CLASSIFIED AS EASY, DIFFICULT, OR IMPOSSIBLE. EACH TYPE BYPASS IS REPRESENTED SYMBOLICALLY ON THE LINE EXTENDING FROM THE SYMBOL TO THE MAP LOCATION AND DEFINED AS FOLLOWS: BYPASSES EASY: THE OBSTACLE CAN BE CROSSED WITHIN THE IMMEDIATE VICINITY BY A US 2½-TON TRUCK (OR NATO EQUIVALENT) WITHOUT WORK TO IMPROVE THE BYPASS. BYPASS DIFFICULT: THE OBSTACLE CAN BE CROSSED WITHIN THE IMMEDIATE VICINITY, BUT SOME WORK WILL BE NECESSARY TO PREPARE THE BYPASS. BYPASS IMPOSSIBLE: THE OBSTACLE CAN ONLY BE CROSSED BY ONE OF THE FOLLOWING METHODS: (1) REPAIR OF ITEM: I.E., BRIDGE (2) NEW CONSTRUCTION (3) DETOUR USING AN ALTERNATE ROUTE WHICH CROSSES THE OBSTACLE SOME DISTANCE AWAY.
	LIMITS OF SECTOR: LIMITS OF RECONNOITERED SECTOR OR OF ROUTE HAVING THE SAME ROAD CLASSIFICATION FORMULA.
	CULVERT: REGARDLESS OF TYPE, LENGTH, SIZE, OR NUMBER OF PIPES IN THE SYSTEM.
	CRITICAL POINTS: ARE USED AS NUMBERED KEYS TO DESCRIBE IN DETAIL, ON ATTACHED RECONNAISSANCE FORMS OR DOCUMENTS, THOSE FEATURES THAT CANNOT BE ADEQUATELY COVERED BY OTHER RECONNAISSANCE SYMBOLS ON THE OVERLAY.

DESCRIPTION & CRITERIA	SYMBOL
RAILROAD (RR) LEVEL GRADE CROSSING. PASSING TRAINS WILL INTERRUPT TRAFFIC FLOW. THE FIGURE INDICATES OVERHEAD CLEARANCES.	
FORD: ALL FORDS ARE CONSIDERED AS OBSTRUCTION (OB) TO TRAFFIC. TYPE OF FORD: V - VEHICULAR P - PEDESTRIAN SEASONAL LIMITING FACTORS: X - NO SEASONAL LIMITATION EXCEPT FOR DURATION SUDDEN FLOODING. Y - SIGNIFICANT SEASONAL LIMITATIONS. APPROACH CONDITIONS DIFFICULT EASY NATURE OF BOTTOM: M — MUD S — SAND C — CLAY G — GRAVEL P — ARTIFICIAL PAVING R — ROCK	
FERRY: ALL FERRIES ARE CONSIDERED AS OBSTRUCTIONS (OB) TO TRAFFIC. APPROACH CONDITIONS DIFFICULT EASY TYPE OF FERRY: V - VEHICULAR FERRY P - PEDESTRIAN FERRY	
ROUTE DESIGNATION: CIVIL OR MILITARY ROUTE DESIGNATION. WRITTEN IN PARENTHESES ALONG ROUTE.	
OFF-ROUTE MOVEMENT (TURNOFFS) & CONCEALMENT (ARROWS POINT TO LEFT OR RIGHT OF ROAD WHERE TURNOFF EXISTS): 91) POSSIBLE TURNOFF. (2) TRACKED VEHICLE TURNOFF WITH CONIFEROUS CONCEALMENT. (3) WHEELED VEHICLE TURNOFF WITH DECIDUOUS CONCEALMENT. (4) POSSIBLE TURNOFF IN MIXED CONCEALMENT. NOTE: RECORD DISTANCE ON STEM OF ARROWS WHEN OFF-ROUTE MOVEMENT IS LESS THAN ONE KM.	
OBSTACLES (ROADBLOCKS, CRATERS, BLOWN BRIDGES, LANDSLIDES, ETC.): 1. PROPOSED OBSTACLE. 2. PREPARED BUT PASSABLE OBSTACLE. 3. COMPLETED OBSTACLE.	
UNKNOWN OR DOUBTFUL INFORMATION: USED IN ALL SYMBOLS WHERE INFORMATION IS NOT KNOWN OR DOUBTFUL.	

(15) Critical dimensions of a route are shown in the table below:

—ROUTE WIDTHS

TRAFFIC FLOW POSSIBILITIES	WIDTHS FOR WHEELED VEHICLES	WIDTHS FOR TRACKED VEHICLES
SINGLE FLOW	5.50 METERS TO 7 METERS (18FT to 23FT)	6 METERS TO 8 METERS (19½ FT to 26 FT)
DOUBLE FLOW	OVER 7 METERS (23FT)	OVER 8 METERS (26 FT)

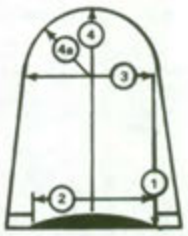
-MINIMUM ROUTE WIDTHS FOR BRIDGES

BRIDGE CLASSIFICATION	MINIMUM WIDTH BETWEEN CURBS	
	ONE LANE METERS	TWO LANE METERS
4-12	2.75(9'-0)	5.50(18'-0")
13-30	3.35(11'-0")	5.50(18'-0")
31-60	4.00(13'-2")	7.30(23'-0")
61-100	4.50(14'-9")	8.20(27'-0")

MINIMUM OVERHEAD CLEARANCES FOR BRIDGES

BRIDGE CLASSIFICATION	MINIMUM OVERHEAD CLEARANCE
UP TO 70	4.30 METERS (14 FT 0- IN)
ABOVE 70	4.70 METERS (15 FT -6 IN)

MEASURING WIDTH OR ROADWAY AND HORIZONTAL AND VERTICAL CLEARANCES FOR TUNNELS, UNDERPASSES, AND THROUGH TRUSS BRIDGES.



1. MINIMUM OVERHEAD CLEARANCE MEASURED VERTICALLY FROM EDGE OF TRAVELED WAY.

2. EFFECTIVE WIDTH OF THE TRAVELED WAY CURB-TO-CURB.

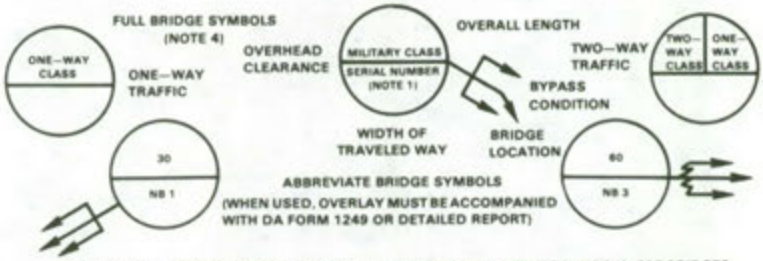
3. HORIZONTAL CLEARANCE IS THE MINIMUM WIDTH MEASURED AT LEAST FOUR FEET ABOVE THE TRAVELED WAY.

4. MAXIMUM OVERHEAD CLEARANCE IS THE MINIMUM DISTANCE BETWEEN THE TOP OF THE TRAVELED WAY AND THE LOWER EDGE OF THE OVERHEAD OR ANY OBSTRUCTION BELOW THE OVERHEAD SUCH AS TROLLEY WIRES OR ELECTRIC WIRES.

4a. RISE OF ARCH. RADIUS OF CURVED PORTION.

TABLE 1

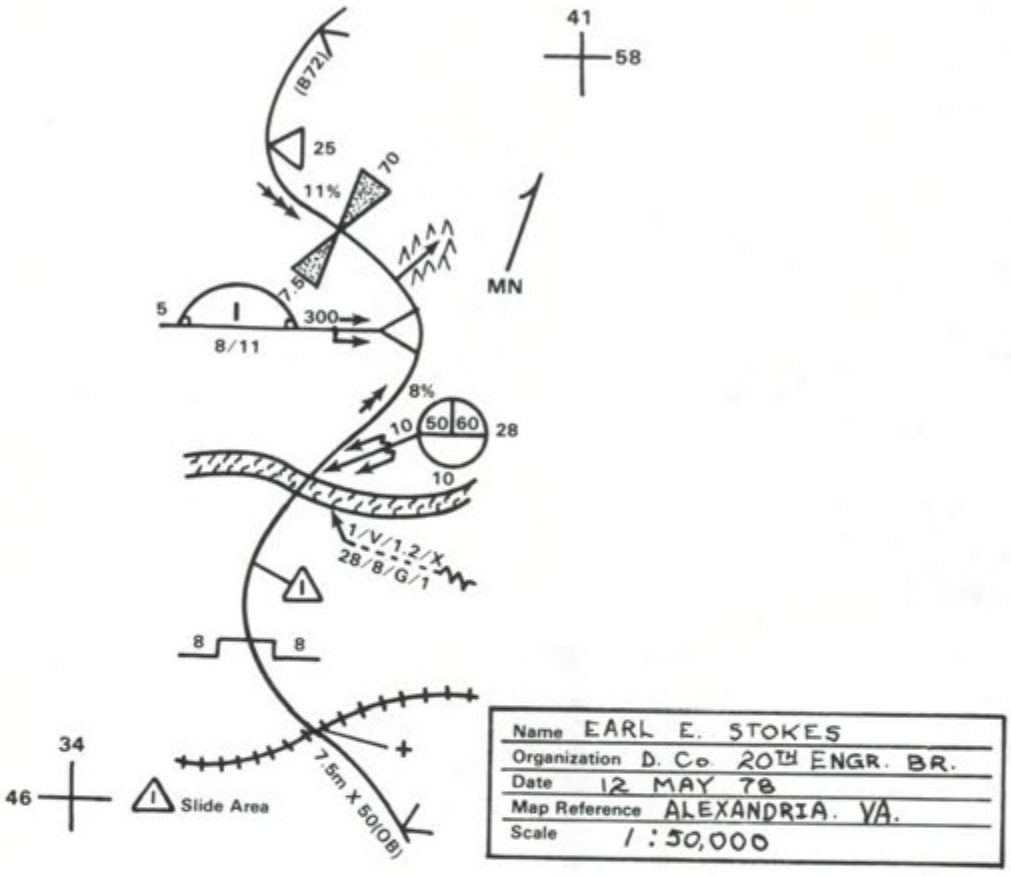
(16) Use the abbreviated bridge symbol when required as shown below.



ONLY SINGLE-FLOW TRAFFIC IS REPRESENTED IN ABBREVIATED BRIDGE SYMBOLS. FOR BRIDGES WITH SEPARATE TRACKED AND WHEELED VEHICLE CLASSIFICATION, ONLY THE LOWER CLASSIFICATION IS SHOWN. IF A BRIDGE HAS MORE THAN ONE CLASSIFICATION, THE CLASSIFICATION NUMBER SHOWN IS ASTERISKED (*) AND FULL CLASSIFICATION IS SHOWN IN THE ACCOMPANYING REPORT.

NOTE 1: SERIAL NUMBERS	A SERIAL NUMBER IS ASSIGNED TO EACH BRIDGE, TUNNEL, FORD AND FERRY. SERIAL NUMBERS MUST NOT BE DUPLICATED ON ANY ONE MAP SHEET OVERLAY OR DOCUMENT.
NOTE 2: TRAVELED WAY WIDTH	IF SIDEWALKS PERMIT THE PASSAGE OF WIDER VEHICLES, SYMBOLIZE THE SIDEWALKS AND RECORD THE WIDTH AS THE TRAVELED WAY/TOTAL WIDTH.
NOTE 3: BANK ORIENTATION	THE LEFT AND RIGHT BANKS OF A STREAM ARE DETERMINED BY LOOKING IN THE RIGHT DIRECTION OF THE CURRENT DOWNSTREAM.
NOTE 4: CRITICAL DIMENSIONS	ANY OVERHEAD CLEARANCE LESS THAN THE STANDARDS OF TABLE 1 IS UNDERLINED. ANY WIDTH OF A BRIDGE WHICH IS LESS THAN THE STANDARDS OF TABLE 1 IS UNDERLINED. THE TWO-WAY CLASS OF ANY TWO-LANE BRIDGE IS DOWNGRADED IF THE WIDTH OF THE BRIDGE IS LESS THAN THE STANDARDS OF TABLE 3. THE WIDTH OF THE TRAVELED WAY OF TUNNELS OR UNDERPASSES WHICH IS LESS THAN THAT OF THE OUTSIDE ROUTE IS UNDERLINED.

(17) An example route reconnaissance overlay is shown below:



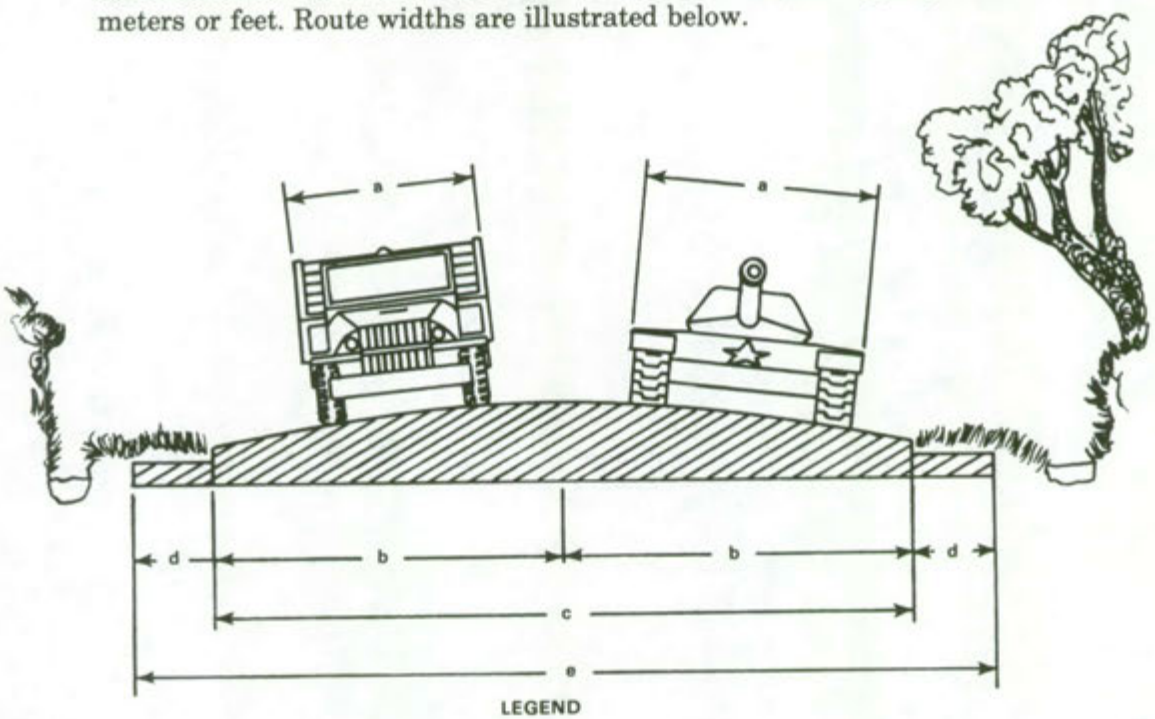
NOTE: The route classification formula, which is required on the overlay, is explained in the next performance measure.

2. Determine the route classification.

a. Normally, classification is actually carried out during hasty route reconnaissance. When technical difficulties are encountered, however, and if adequate time is available, thorough route classification is accomplished by military engineers whose findings are based on the information within route reconnaissance reports.

b. Routes are classified according to the factors of minimum width, worst-route type, least bridge military load classification, and obstructions to traffic flow.

(1) Width. The width of a route including bridges, tunnels, roads, and other constrictions is the narrowest width of the traveled way expressed in meters or feet. Route widths are illustrated below.



LEGEND

a. WIDTH OF VEHICLE

b. WIDTH OF LANE

c. WIDTH OF TRAVELED WAY

d. WIDTH OF HARD SHOULDER

e. WIDTH OF GRADING

Route Widths.

(2) Number of Lanes. The number of lanes of a given route is determined by the width of the traveled way. The average width of a lane required for the movement of one column is established at 3.50 meters (11½ ft) for wheeled vehicles and 4 meters (13 ft) for tracked vehicles. Single lanes accommodate vehicular traffic in one direction only with no overtaking in the same direction or passing in the oncoming direction. Traffic flow is determined by the number of lanes.

(a) A route is single flow when it allows a column of vehicles to proceed and, in addition, individual oncoming or overtaking vehicles to pass at predetermined points. It is desirable that the width of a single flow route be equal to at least 1½ lanes.

(b) A route is double flow when it allows two columns of vehicles to proceed simultaneously either in the same or opposite direction. It is essential that the width of a double flow route be equal to at least two lanes.

(c) If reconnaissance personnel are to perform hasty route reconnaissance, instructions should indicate if the anticipated traffic is to be single or double flow and whether the route is for the use of wheeled vehicles or tracked vehicles. In other words, those conducting reconnaissance are informed of what traveled way widths are to be considered and reported as width obstructions. By referring to the table, it can be seen that a width obstruction for single flow, wheeled traffic does not exist until the traveled way is reduced below 5.50 meters; whereas, this minimum width must be increased to 6 meters to accommodate single flow, tracked vehicles. For double flow traffic, a width obstruction is not present for wheeled vehicles until the traveled way is reduced below 7 meters; whereas, for tracked vehicles, the width is critical below 8 meters. (In the absence of instructions, routes are reconnoitered and reported based on the minimum traveled way width for double flow, tracked vehicles (8 meters). On the other hand, if a route is to be reconnoitered to determine the type of vehicles the route will accommodate, procedures of deliberate road reconnaissance are undertaken to ascertain critical widths.)

(3) Route Type. For the purpose of classification, routes are designated by their ability to withstand the effects of weather. (Route type is determined by the worst section of the route.) Routes are classified by type as --

(a) Type A - All-Weather Route — any route which with reasonable maintenance is passable throughout the year to traffic never appreciably less than maximum capacity. The roads which form this type of route normally have waterproof surfaces and are only slightly affected by precipitation or temperature fluctuations. At no time is the route closed to traffic by weather effects other than temporary snow or flood blockage.

(b) Type Y - All-Weather Route (Limited Traffic Due to Weather) — any route which with reasonable maintenance can be kept open in all weather but sometimes only to traffic considerably less than maximum capacity. The roads which form this type of route usually do not have waterproof surfaces and are considerably affected by precipitation or temperature fluctuations. Traffic may be completely halted for short periods. Heavy, unrestricted use during adverse weather may cause complete collapse of the surface.

(c) Type Z - Fair-Weather Route — any route which quickly becomes impassable in adverse weather and cannot be kept open by maintenance short of major construction. This category of route is so seriously affected by weather that traffic may be brought to a half for long periods.

(4) Military Load Classification.

(a) The military load classification system is a load capacity rating system which considers a vehicle's weight and type and its effect on routes and bridges. The classification system is represented by whole numbers assigned to vehicles, bridges, and routes. Most allied military vehicles are externally marked with their respective classification number. Bridges and routes are assigned military load classifications based on their safe load capacity and physical dimensions.

(b) Normally, the lowest bridge military load classification number regardless of vehicle type or conditions of traffic flow determines the military load classification of a route. By selecting the lowest bridge classification number, it is insured that the route is not overloaded. Where vehicles bear a higher military load classification than the route, the route reconnaissance overlay is checked or a special reconnaissance is initiated to determine if a change in traffic control procedures, such as a single flow crossing, may permit utilization of the route by heavier traffic. If no bridge is located on the route or if roads are particularly bad, the worst section of roads governs the route's classification.

(5) Obstructions to Traffic Flow. Route obstructions are factors which restrict the type and amount or speed of traffic flow. Route obstructions, with the exception of bridge capacities, which are reported separately as a military load classification, are indicated in the route classification formula by the abbreviation (OB). Moreover, reconnaissance symbols are used to describe the nature of each obstruction on the route reconnaissance overlay. Obstructions to be reported include --

(a) Overhead obstructions such as bridges, tunnels, underpasses, overhead wires, and overhanging buildings whose overhead clearance is less than 4.3 meters (14 ft).

(b) Reduction in traveled way widths which are below standard minimums prescribed for the type of traffic flow (single or double, wheeled or tracked). Examples are bridges, tunnels, craters, lanes through mined areas, and projecting buildings or rubble.

(c) Gradients (slopes) of 7 percent or greater.

(d) Curves with a radius of curvature less than 30 meters (100 ft).

(e) Ferries.

(f) Fords.

c. The route classification formula is developed from notations expressed in the standardized sequence of minimum traveled way width, route type, lowest military load classification, and an obstruction or obstructions present. The formula briefly describes a specific route and is used together with a route reconnaissance overlay. If an obstruction (s) appears in the route classification formula, it is necessary to refer to the route reconnaissance overlay in order to determine the exact nature of the obstruction(s). The overlay may also show bypass possibilities. Illustrative formulas are shown below:

(1) 20 ft Z 10. This example formula describes a fair-weather route with a minimum traveled way of 20 feet and a military load classification of 10. This route, based on its minimum width of traveled way (see table 1) accommodates both wheeled and tracked, single flow traffic without obstruction.

(2) 20 ft Z 10 (OB). This example formula describes a route with similar characteristics as in the preceding example, but with an obstruction(s). This obstruction(s) could consist of one or more of the following:

(a) Overhead clearances of less than 4.25 meters (14 ft).

(b) Grades of 7 percent or greater.

(c) Curves with radius less than 30 meters (100 ft).

(d) Fords and ferries.

(e) It should be noted that 20 feet of traveled way limits this route to single flow traffic without a width obstruction. If the route is to be used for double flow traffic, however, 20 feet of traveled way constitutes an obstruction and is indicated in the formula as an obstruction (OB).

(3) 7m Y 50 (OB). This example formula describes a limited all-weather route with a minimum traveled way of 7 meters, a military load classification of 50, and an obstruction(s).

NOTE: For double flow, wheeled traffic, the traveled way width is adequate; however, the route's width is not suitable for double flow, tracked vehicles. This width constriction would be indicated as (OB) in the route classification formula if the route were to be used for both types of vehicles.

(4) 10.5m X 120 (OB). This example formula describes an all-weather route with a minimum traveled way width of 10.5 meters, which is suitable for double flow traffic of both wheeled and tracked vehicles, and a military load classification of 120 with an obstruction(s).

d. Special Conditions:

(1) Snow Blockage. The effects of snow are not normally considered as an obstruction to traffic flow in route classification since vehicular movement is determined by the depth of the snow and the availability of snow removal equipment. In those cases, however, where snow blockage is regular, recurrent, and serious, the formula for classifying a route is followed by the symbol (T). For example:

(a) 20 ft Y 50 (T).

(b) 7m Y 50 (OB) (T).

(2) Flooding. The effect of flooding on traffic flow is also not normally considered in route classification except where flooding is regular, recurrent, and serious. In such cases, the formula for classifying a route is followed by the symbol (T). For example:

(a) 20 ft Y 50 (T).

(b) 7m Y 50 (OB) (T).

REFERENCES:

FM 5-34, Engineer Field Data, Sep 76 (chap 14, pages 310 thru 319)
FM 5-36, Route Reconnaissance and Classification, Jan 70 (chap 2, sec I, pages 2-6 thru 2-14, para 2-11 thru 2-14)

TASK NUMBER: 051-196-3008

CONDUCT A BRIDGE RECONNAISSANCE

CONDITIONS:

Under any environmental conditions, with squad/platoon personnel, TOE tools and equipment, squad/platoon vehicle, FM 5-34, FM 5-36, DA Form 1249 (Bridge Reconnaissance Report), and a mission direction to reconnoiter a specified bridge.

STANDARDS:

The reconnaissance will be completed within the time specified in the mission directive; DA Form 1249 will be completed (less the military load classification) and a map overlay symbol (less the military load classification) will be prepared.

PERFORMANCE MEASURES:

1. General.

a. Deliberate bridge reconnaissance. Deliberate reconnaissance is conducted when sufficient time and qualified personnel are available to consider all aspects of a bridge required for thorough structural analysis. This analysis may be for the purpose of repairs, demolition, or military load classification.

b. Hasty bridge reconnaissance. As opposed to the deliberate reconnaissance, a hasty bridge reconnaissance is performed to acquire specific limited information to determine the suitability of the bridge for immediate tactical use.

2. Elements of bridge information.

a. Particular elements of bridge information to be reported are dictated by the nature of the reconnaissance mission.

b. The following elements of bridge information are given in the form of a pull bridge symbol on overprinted maps or overlays.

(1) Serial number of bridge.

(2) Location.

(3) Military load class.

(4) Overall length.

(5) Roadway width.

(6) Overhead clearance.

(7) Bypass possibilities.

3. Bridge Reconnaissance Report Form (DA Form 1249). This form serves as a supplement to the route reconnaissance overlay. The instructions for making the reconnaissance guide the reconnaissance party on the amount of detail required on the overlay. Elements of bridge information are recorded as required, on the columns of the bridge reconnaissance report (refer to figure 1) as follows (all dimensions are in meters):

a. Column 1. The assigned serial number of the bridge is entered. This number corresponds to the serial number used on the bridge symbol of the route reconnaissance overlay.

b. Column 2. Bridge location is reported by means of UTM and coordinates.

c. Column 3. Horizontal clearance is the clear distance between the inside edges of the bridge structure measured at a height of 30 centimeters (12 inches) above the surface of the traveled way and upwards. Any horizontal clearance less than the minimum required for the roadway width of the brdige as shown on table 2 is underlined. Unlimited horizontal clearance is indicated by the symbol for infinity.

d. Column 4. Underbridge clearance is the minimum clear distance between the underside of the bridge and the surface of the ground or water at mean level. Mean water level can be determined from gaging station records, observation of high and low water marks, or information gained from local inhabitants.

e. Column 5. The number of identical spans (spans of the same type, material of construction, length, and condition) is listed in this column. Where only one span is described, the number need not be given. Spans are listed in sequence starting from the west. In those cases where the orientation of the span is due north and south, or so close to north and south as to create uncertainty as to which is the most westerly span, the abbreviation for north (N) is inserted on column 5 preceding the number of spans and the spans are listed in sequence from the north.

f. Column 6. The type of span construction is recorded by applicable number symbol (table 3).

g. Column 7. The construction material of each span is recorded by letter symbol (table 4).

h. Column 8. Span length is recorded. This is the center-to-center distance between bearings. Hence, the sum of the span lengths may not equal the overall length. The following special information is also recorded:

(1) Spans which are not usable because of damage or destruction are indicated by the symbol # placed after the dimension of the span length.

(2) Spans which are over water are indicated by placing the letter "W" after the dimension of the span length.

BRIDGE RECONNAISSANCE REPORT (FM 5-36)

DATE: 1 Jun — SIGNATURE: John H. Doe

TO: (Headquarters ordering reconnaissance) (COMMANDING OFFICER; ATTN:): S2 21ST ENGR BN CEI 5TH INF DIV)

FROM: (Name, grade, and unit of officer or NCO making reconnaissance): John H. Doe 1st Lt CoA 21st ENGR BN

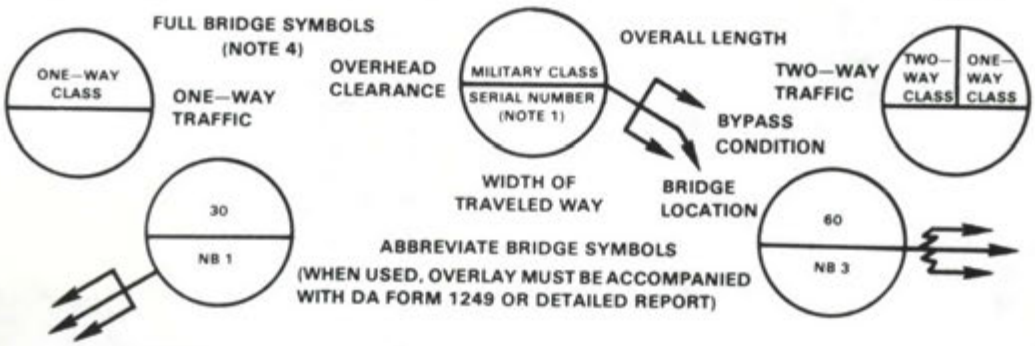
MAPS (Country, scale and sheet number or name): Virginia, Amendale, 1:25000; Sheet 5561*

DATE/TIME GROUP (Of signature): 012960Z

ESSENTIAL BRIDGE INFORMATION

SERIAL NO.	LOCATION	CLEARANCE: HORIZONTAL	CLEARANCE: UNDER BRIDGE	SPANS: NUMBER	SPANS: TYPE OF CONSTRUCTION	SPANS: KIND OF CONSTRUCTION MATERIAL	SPANS: LENGTH AND CONDITION	ADDITIONAL BRIDGE INFORMATION: Military Load Classification	Deck/Curb to Curb Width	Traveled Width	Overhead Restriction	By-pass Possibilities	Remarks
		3	4	5	6	7	8	9	10	11	12	13	14
1	LA 072687	00	2	1	3	h	4.8 w	30	4.9	3.5	∞	Easy	NONE
2	LA 118759	9.5	6.5		4	K	4	40 50	2.5	7.5	4	Difficult.	NONE
					1	■	16 w ■						
					4	K	4 w						
3	LA 165650	00	23	5	3	■k	25	80 60	12.6	8.5	∞	Impossible	NONE
4	LA 156643	10.5	8.5	3	6	K	10	00 200 60 80	200	10	10.5	Impossible	NONE
				2	2	■	20 w						
				3	6	K	10						

DA FORM 1249 — PREVIOUS EDITION OF THIS FORM IS OBSOLETE.



ONLY SINGLE-FLOW TRAFFIC IS REPRESENTED IN ABBREVIATED BRIDGE SYMBOLS. FOR BRIDGES WITH SEPARATE TRACKED AND WHEELED VEHICLE CLASSIFICATION, ONLY THE LOWER CLASSIFICATION IS SHOWN. IF A BRIDGE HAS MORE THAN ONE CLASSIFICATION, THE CLASSIFICATION NUMBER SHOWN IS ASTERISKED (*) AND FULL CLASSIFICATION IS SHOWN IN THE ACCOMPANYING REPORT.

NOTE 1: SERIAL NUMBERS	A SERIAL NUMBER IS ASSIGNED TO EACH BRIDGE, TUNNEL, FORD AND FERRY. SERIAL NUMBERS MUST NOT BE DUPLICATED ON ANY ONE MAP SHEET OVERLAY OR DOCUMENT.
NOTE 2: TRAVELED WAY WIDTH	IF SIDEWALKS PERMIT THE PASSAGE OF WIDER VEHICLES, SYMBOLIZE THE SIDEWALKS AND RECORD THE WIDTH AS THE TRAVELED WAY/TOTAL WIDTH.
NOTE 3: BANK ORIENTATION	THE LEFT AND RIGHT BANKS OF A STREAM ARE DETERMINED BY LOOKING IN THE RIGHT DIRECTION OF THE CURRENT DOWNSTREAM.
NOTE 4: CRITICAL DIMENSIONS	ANY OVERHEAD CLEARANCE LESS THAN THE STANDARDS OF TABLE 2 IS UNDERLINED. ANY WIDTH OF A BRIDGE WHICH IS LESS THAN THE STANDARDS OF TABLE 2 IS UNDERLINED. THE TWO-WAY CLASS OF ANY TWO-LANE BRIDGE IS DOWNGRADED IF THE WIDTH OF THE BRIDGE IS LESS THAN THE STANDARDS OF TABLE 3. THE WIDTH OF THE TRAVELED WAY OF TUNNELS OR UNDERPASSES WHICH IS LESS THAN THAT OF THE OUTSIDE ROUTE IS UNDERLINED.

Figure 1. Bridge reconnaissance report.

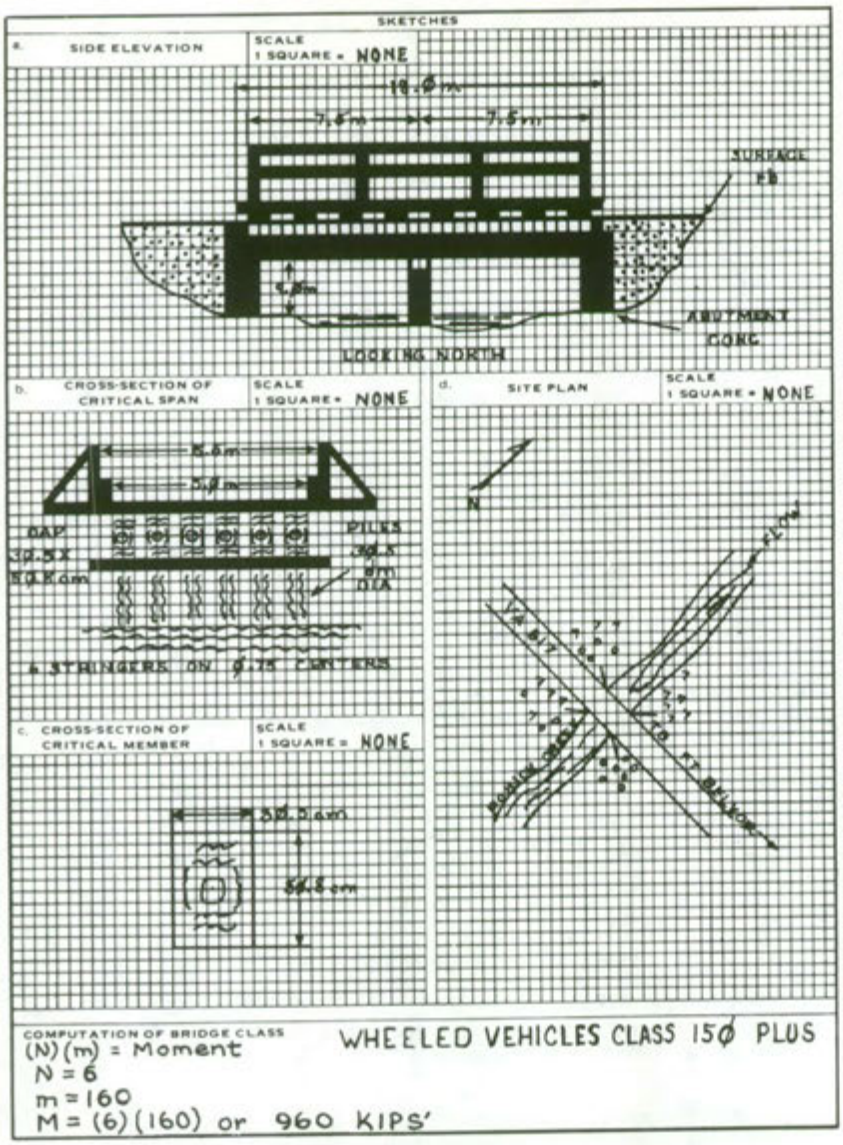


Figure 2.

Minimum lane widths for bridges.

Bridge Classification	Minimum Width Between Curbs*	
	One Lane	Two Lane
4-12	5.50 meters (18'-0")	2.75 meters (9'-0")
13-30	5.50 meters (18'-0")	3.35 meters (11'-0")
31-60	7.30 meters (24'-0")	4.00 meters (13'-2")
61-100	8.20 meters (27'-0")	4.50 meters (14'-9")

Table 1.

**Note.* A minimum of 25 cm (10") between the inner edge of the bridge structure and the inner edge of the curb is required 30 cm (12") above the curbs for all classifications.

Minimum overhead clearances for bridges.

Bridge Classification	Minimum Overhead Clearance
Up to 70	4.30 meters (14 ft - 0 in.)
Above 70	4.70 meters (15 ft - 6 in.)

Table 2.

i. Additional Information. When the abbreviated bridge symbol is used, or when the mission requires it, columns are added to give the following elements of bridge information:

(1) Military load class (leave blank).

(2) Overall length.

Table 3. Span Type

Type of Span Construction	Number Symbol
Truss	1
Girder	2
Beam	3
Slab	4
Arch (closed spandrel)	5
Arch (open spandrel)	6
Suspension	7
Floating	8
Swing	9
Bascule	10
Vertical lift	11
Other (to be specified by name)	12

Table 4. Construction Material

Material of Span Construction	Letter Symbol
Steel or other metal	a
Concrete	k
Reinforced concrete	ak
Prestressed concrete	kk
Sonte or brick	p
Wood	h
Other (to be specified by name)	o

(3) Roadway width.

(4) Overhead clearance.

(5) Bypass possibilities. (Specify "easy," "difficult," or "impossible.")

(6) Remarks: Any further important details of the bridge such as damage, preparation for demolition, effort to repair, and elaboration of information given under other column headings.

j. Railway Bridges. Details of railway bridges may be included on the reconnaissance report form. The letters "RL" are added after the serial number in column 1. Details of the work required to convert the bridge to use by road vehicles are listed under "Remarks."

k. Unknown Information. Any item of information which is unknown, or undetermined, is represented by a question mark (?) in the appropriate column of the report.

4. Bridge Sketches. Sketches on the back of DA Form 1249 depict as much information as necessary (figure 2). Each serial numbered bridge shown on the front side of DA Form 1249 will have a sketch accompanying it. Minimum required detail is as follows:

a. A side elevation which shows the general features of the bridge, including the number of spans, piers, and abutments, and their type and material of construction. Critical dimensions such as span length, height above streambed, water level, and panel length are also noted. A cross-section of the obstacle (e.g., stream or gorge) may also be included on the sketch.

b. The critical span (the span with the least load-carrying capacity) which is sketched in cross-section shows sufficient details of construction upon which to base computation of the military load classification and to ascertain maintenance, reinforcement, and demolition requirements. Such items as width of span, type and materials of construction, and structural design are included. Tables 5 and 6 outline the required dimension measurements for each of the seven basic types of spans.

c. Cross-sections of critical members which are sketched in sufficient detail to provide a basis for calculating the strength of individual members.

Table 5. General Dimension Data Required for Each of the Seven Basic Types of Bridges

NUMBER ON FIGURE	DIMENSIONS DATA	BASIC TYPE OF BRIDGE						
		SIMPLE STRINGER	SLAB	T BEAM	TRUSS	GIRDER	ARCH	SUSPEN-SION
1	OVERALL LENGTH	X	X	X	X	X	X	X
2	NUMBER OF SPANS	X	X	X	X	X	X	X
2	LENGTH OF SPANS	X	X	X	X	X	X	X
2A	PANEL LENGTH	...	...	...	...	...	...	X
3	HEIGHT ABOVE STREAMBED	X	X	X	X	X	X	X
3A	HEIGHT ABOVE ESTIMATED NORMAL WATER LEVEL	X	X	X	X	X	X	X
4	TRAVELED WAY WIDTH	X	X	X	X	X	X	X
5	OVERHEAD CLEARANCE	oo	oo	oo	X	oo	oo	X
6	HORIZONTAL CLEARANCE	X	X	X	X	X	X	X

NOTE: THE LETTER "X" INDICATES THE DIMENSION IS REQUIRED

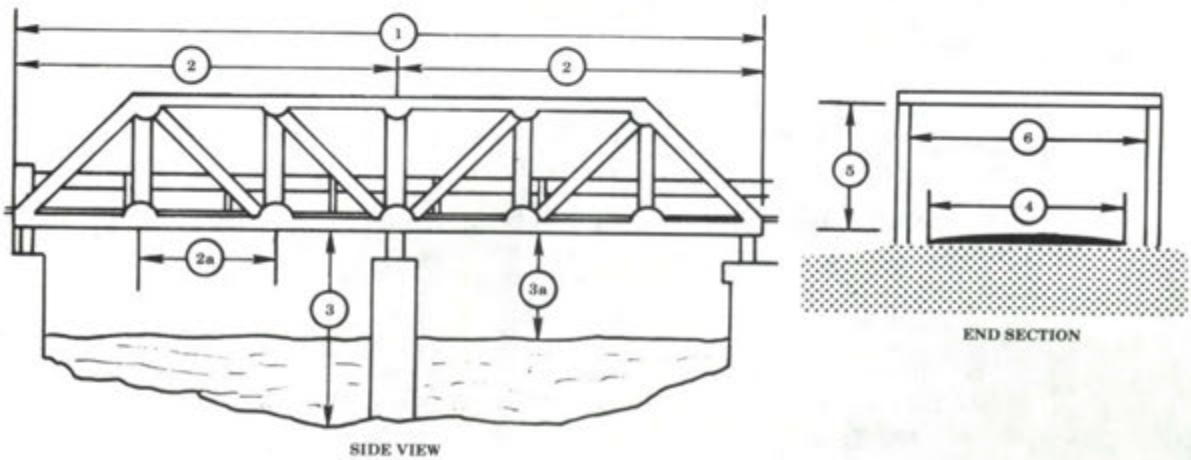


Table 6. Capacity Dimension Data Required for Each of The Seven Basic Types of Bridges

CAPACITY (1) DIMENSIONS DATA	BASIC TYPES OF BRIDGE									
	SIMPLE STRINGERS					SLAB	T-BEAMS	TRUSS	GIRDER	ARCH	SUSPENSION
THICKNESS OF WEARING SURFACE	X					X	X	X	X	X	X
THICKNESS OF FLOORING, DECK, OR DEPTH OF FILL AT CROWN	X					X	X	X	X	X	X
	TIMBER		STEEL								
	RECTANG	LOG	I-BEAM	CHANNEL	RAIL						
DISTANCE, C - TO - C, BETWEEN T-BEAM, STRINGERS, OR FLOOR BEAMS	X	X	X	X	X		X	X	X	X	X
NO. OF T-BEAMS OR STRINGERS	X	X	X	X	X		X	X	X		X
DEPTH OF EACH T-BEAM OR STRINGER	X	(2)	X	X	X		X	X	X		X
WIDTH OF EACH T-BEAM OR STRINGER	X		(3)	(3)	(3)		X	X	X		X
THICKNESS OF WEB OF I-BEAMS, WF-BEAMS, CHANNELS, OR RAILS			X	X	X			X	X		X
SAG OF CABLE											X
NO. OF EACH SIZE OF CABLE											X
THICKNESS OF ARCH RING										X	
RISE OF ARCH										X	
DIAMETER OF EACH SIZE OF DABLE									X		X
DEPTH OF PLATE GIRDER									X		
WIDTH OF FLANGE PLATES									X		
THICKNESS OF FLANGE PLATES									X		
NO. OF FLANGE PLATES									X		
DEPTH OF FLANGE ANGLE									X		
WIDTH OF FLANGE ANGLE									X		
THICKNESS OF FLANGE ANGLE									X		
DEPTH OF WEB PLATE									X		
THICKNESS OF WEB PLATE											
AVERAGE THICKNESS OF FLANGE			X								

NOTE: "X" INDICATES REQUIRED DIMENSION.
1. CAPACITY IS COMPUTED BY THE USE OF FORMULAS AND DATA IN BRIDGE MANUALS.
2. DIAMETER.
3. WIDTH OF FLANGE.

d. The site plan sketch which shows the location of the bridge, the alinement of the bridge relative to approaches, the gap or obstacle spanned (such as damage or obstructions), the classification, dimensions and gradient of approaches, the direction of flow of the stream, and sufficient topographic detail of the barrier to indicate possible fording sites.

5. Photographs. Bridge photographs may be included if they are up to date. The minimum photographic coverage includes a side view, a view from the traveler's way of the bridge, and a view from underneath the flooring.

6. Additional Bridge Information. Some additional items which may be collected when required include the following items:

a. Approaches to include limiting factors, minimum traveled way, width, surface material, and obstructions.

b. Nature of crossing or obstacle to include naming the geographical feature which the bridge spans and reporting its width and depth. If the crossing is over a water obstacle, additional information includes current condition; width, and depth at mean water level; tidal conditions; flood susceptibility; proximity of dams, locks, etc; nature and slope of banks; and type of stream bottom.

c. Abutments to include foundation conditions, type and material of construction and bearing areas.

d. Intermediate supports to include foundation condition; type and material of construction, bearing areas, height above ground or mean water level, horizontal clearance between supports at ground or mean water level, special design features such as ice breakers, and critical dimensions required for demolition or strength calculations.

e. Bridge structure to include a detailed description of the type and material of construction to include wearing surface deck or flooring and supporting members. Also included are capacity dimensions where applicable (table 4), engines and machinery for swing, lift, bascule, and retractable bridges, supply, utility or communication lines supported by the bridge. Mode of construction and critical dimensions for demolition and calculation of the military load class.

7. A map overlay symbol will be made from the reconnaissance information gathered for each bridge reconnoitered (less the military load classification). For detailed information on preparing this symbol, refer to figure 1.

REFERENCES:

FM 5-34, Engineer Field Data, Sep 76 (pages 316, 325, and 326)
FM 5-36, Reconnaissance and Classification, Jan 70 (chap 3, sec II, pages 2-53 thru 2-65)

TASK NUMBER: 071-326-5806

PLAN AND CONDUCT AN AREA RECONNAISSANCE MISSION

CONDITIONS:

In a field environment, given a rifle platoon or a scout platoon, a 1:50,000 map, and a mission to conduct an area reconnaissance within a specified time and specified area on the map.

STANDARDS:

Plan and conduct an area reconnaissance well enough to:

1. Organize the platoon into the command, reconnaissance, and security elements necessary to accomplish the mission.

2. Employ one of the three techniques of area reconnaissance (fan, box, or successive sectors).

3. Obtain and report information about the terrain and/or enemy within the specified area.

4. Infiltrate and exfiltrate the target area without being detected by the enemy.

PERFORMANCE MEASURES:

1. **Estimate of the Situation:** Upon receipt of the reconnaissance mission, you must develop an estimate of the situation. This estimate is based on all current intelligence available about the enemy in the vicinity of the target area, and on the capabilities of your unit. While you are planning for the mission, your unit is engaged in normal preparation for the mission. Tailor your organization to best support the mission. The recon element will normally be no larger than a squad.

2. **Planning Details:** The overall plan is developed with a consideration of the following factors:

a. Intelligence: All recon operations must be based on the best information available as to actual conditions in the objective area.

b. Deceptive Measures: Success of reconnaissance operations will be determined, to a large extent, on deception measures and on undetected infiltration and exfiltration.

c. Use the Smallest Unit Possible to Accomplish the Mission: This decreases the possibility of enemy detection. While only a small element may do the actual reconnoitering, the parent unit must be large enough to provide security or support if the subordinate reconnaissance is detected or engaged by an enemy force.

d. Remain Undetected: The unit maximizes stealth, camouflage, concealment, and sound and light discipline while taking advantage of periods of limited visibility to avoid contact and to get near or on the objective.

e. Use STANO Devices: The unit makes maximum use of STANO devices to enhance its ability to move and to gain information about the enemy. Based on intelligence reports, however, consideration must be given to the enemy's detection devices. When detection devices are available to the enemy, passive devices should be used to decrease the probability of enemy detection.

f. Rehearsals: After all intelligence has been analyzed, the plan developed, special items of equipment procured and issued, and the troops briefed, the unit then rehearses the plan. The rehearsal is a key factor that enhances the probability of success of the operation. Rehearsals are as detailed as time will allow and include dry runs and briefings with appropriate repetition and questioning to insure understanding of the plan. Contingency plans are also rehearsed where applicable; as a minimum, these plans must be repeated by the recon members to insure they are understood.

g. Minimize Audio and Electronic Communications: Constraints on communication depend upon enemy detection capabilities and upon how time-sensitive the information obtained about the enemy is. There may be instances where the importance of the information may require an immediate report that could threaten the unit's existence. Often, a one-time radio contact during the mission is necessary.

h. Inspections: The planning phase of the operation will include at least one inspection of all members of the reconnaissance force, to include their equipment. Only essential equipment identified by the platoon leader as required for mission accomplishment will be carried. Special equipment must be closely inspected and safeguarded to insure its functioning during the mission. Personnel and equipment assigned to augment the unit must also be carefully inspected and monitored prior to and during the operation. Any shortcoming found in personnel or equipment is corrected before the operation begins. Thorough inspections and supervision of personnel and equipment prior to the operation reduce the probabilities of compromise or failure.

3. **Regardless of the type of reconnaissance, units are normally assigned one of the three subordinate missions:** Command and control, reconnaissance of the objective, or security of the force.

a. Command and Control: The commander of the unit conducting a reconnaissance normally will require a small command group to assist in communicating with higher headquarters, subordinate elements, and supporting forces; to coordinate and control supporting elements, fire support, and air or water transport; and to assist in providing logistical support for the operation. For small operations, this group may consist of only the commander and a radio operator. For larger operations, the commander may require intelligence, logistics, and fire support elements, with adequate communication personnel for sustained 24-hour operations. The command group is always kept as small as possible.

b. Reconnaissance of the Objective: The element with the recon mission approaches the target by stealth and concealment. All plans and applicable contingencies are conducted with the major effort made toward acquiring the information required while at the same time remaining undetected. The recon element must skillfully avoid all known and discovered enemy sensing devices; therefore, patience becomes of the utmost importance. Passive STANO devices will be used to observe activities at the objective. Information received about the target may be transmitted (back to the appropriate headquarters by electronic means) as it is observed, or the recon personnel may withdraw from the target and disseminate information by other means. The reconnaissance site should be sterilized prior to withdrawal. Withdrawal from the area must be as skillful, patient, and precise as was the movement into it.

c. Security of the Force: The element(s) with this mission must provide the commander sufficient warning of the location and movement of enemy forces to permit the force to take evasive action or, when this is not possible, provide covering fires to permit withdrawal of the reconnaissance element. Only by timely warning and accurate information can the commander be given the time and space to react or, if the reconnaissance element is detected, provide it with sufficient overwatching suppressive fires or time to evade and permit its safe withdrawal.

4. **In an area reconnaissance, the platoon is tasked to obtain information about the terrain and/or enemy within a clearly defined locality.** The techniques presented below can be utilized regardless of the nature of the intelligence objective. The major differences would result basically from the movement techniques involved.

a. Once given an area reconnaissance mission, the platoon will move to the designated area in the shortest possible time. This normally involves traveling along existing road networks, and, of course, employing the appropriate movement techniques. During this movement to an area, unless otherwise ordered, the platoon should report and bypass enemy opposition.

b. The choice of the techniques depicted below should be based on the distribution of intelligence objectives within the area and the time allocated for their reconnaissance. Objective rally points (ORP) and rendezvous points are used to facilitate control.

5. **The Fan Technique:** The fan technique is a simple area reconnaissance in which one ORP is established. Usually, the ORP is in the center of the area of operations to capitalize on control, organic or attached support, and use of available time. Reconnaissance elements depart from the ORP, recon their areas of responsibility, and return. When using two or more reconnaissance elements at one time, it is imperative that all elements have close coordination prior to departure from the ORP. One definite advantage is that the fan technique provides the opportunity to recon an area more thoroughly in a shorter period of time than does the box technique or the successive-sectors technique.

THE FAN TECHNIQUE

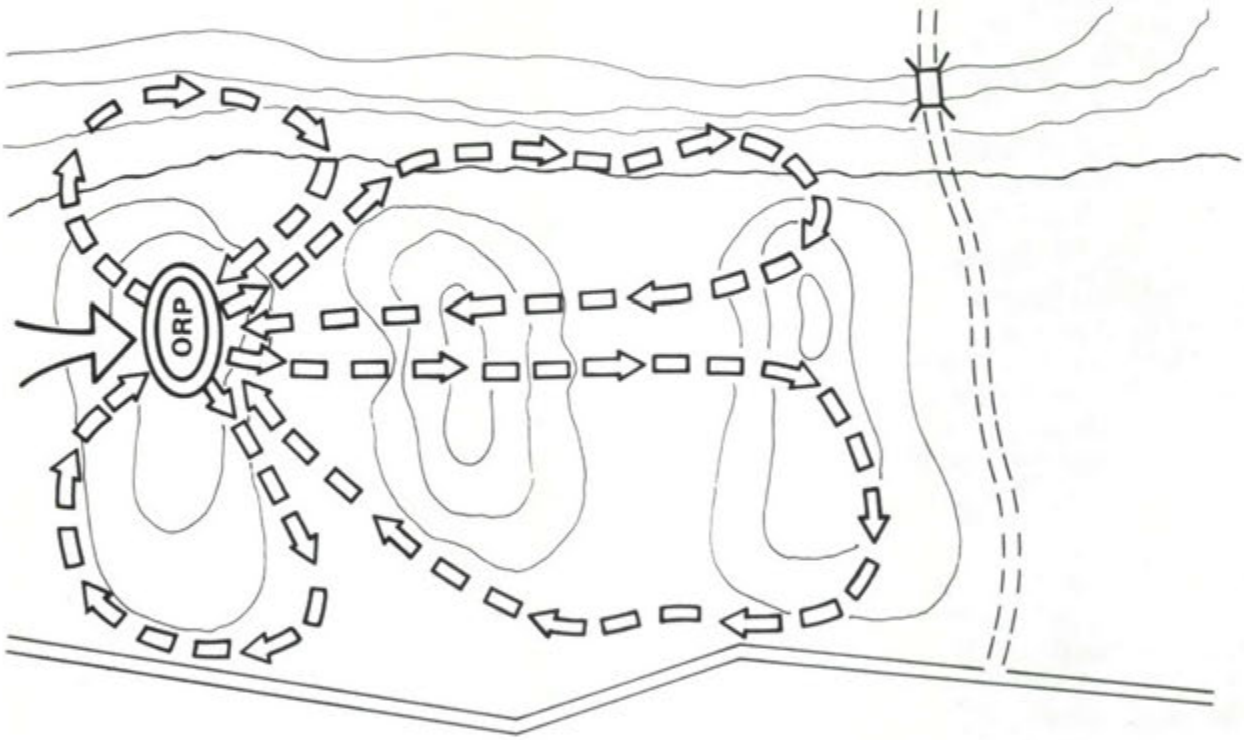


Figure 1.

6. **The Box Technique:** Using the box technique of area reconnaissance, the platoon leader divides his area of responsibility among his subordinates. Detailed instructions must be understood by subordinate elements as to their assigned routes, limiting boundaries, and any further details specifically requested by higher headquarters.

The box technique capitalizes on speed but minimizes chances of obtaining complete, detailed information.

THE BOX TECHNIQUE

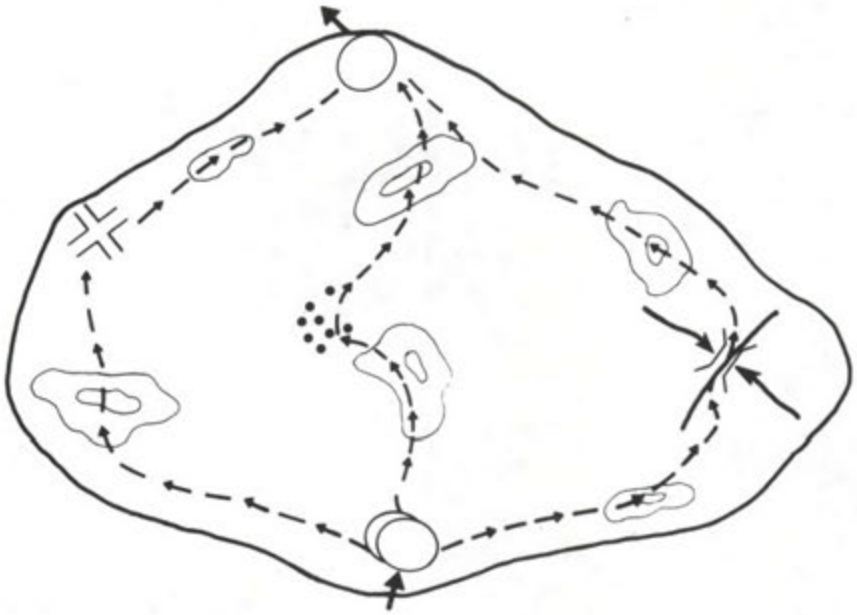


Figure 2.

7. **The Successive-Sectors Technique:** The successive-sectors technique of area reconnaissance is basically a series of condensed box methods. The reconnaissance element leader carefully analyzes the terrain to be reconnoitered and establishes an ORP and rendezvous point in the vicinity of each prominent terrain feature and/or suspected enemy location. By using this method, detailed information is substantially increased while speed is somewhat decreased.

THE SUCCESSIVE-SECTORS TECHNIQUE

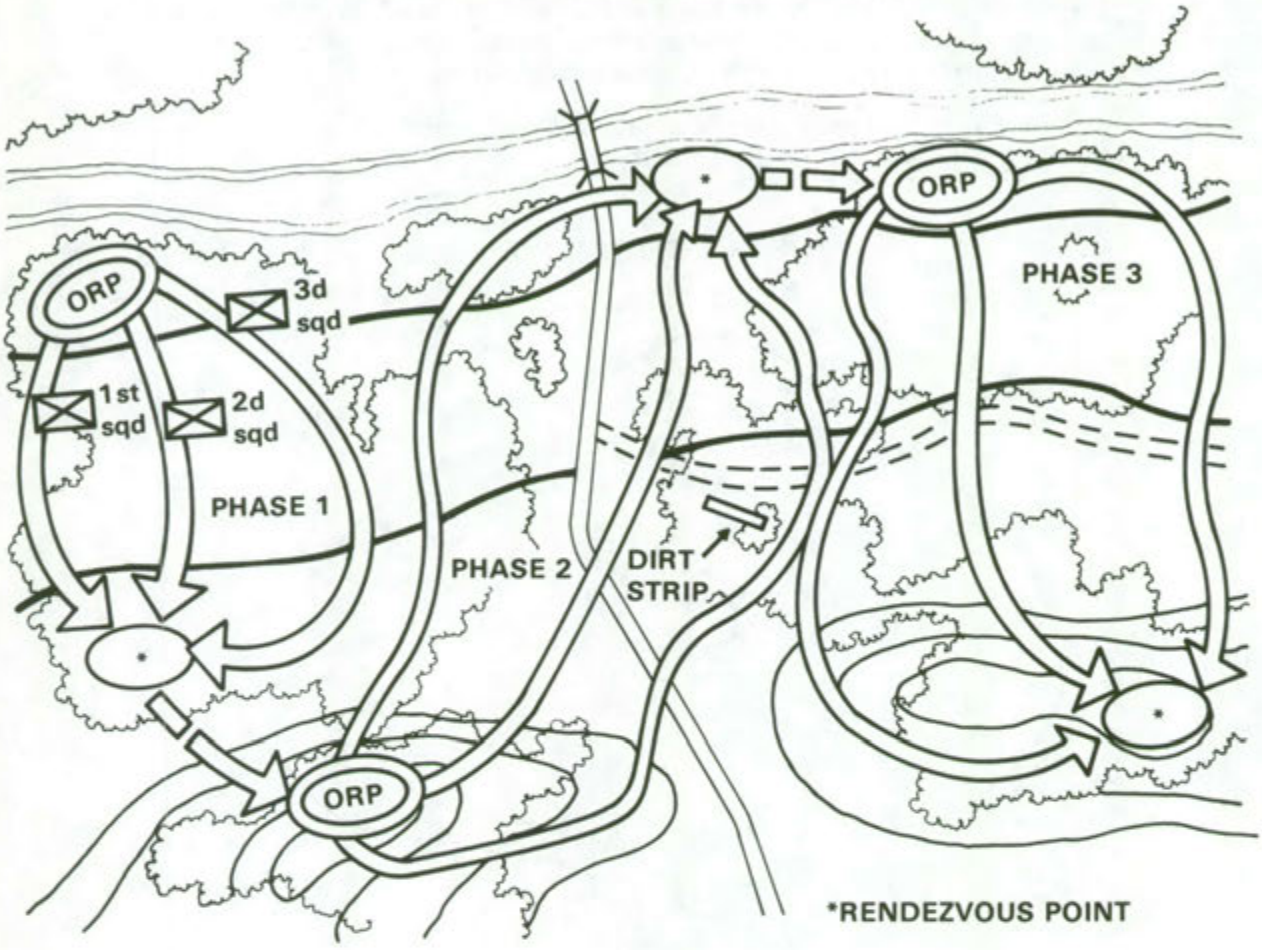


Figure 3.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 6, pages 6-1 thru 6-8)

TASK NUMBER: 071-326-5807

PLAN AND CONDUCT A SCREENING MISSION

CONDITIONS:

In a field environment, given a TOE scout platoon, a 1:50,000 map, and a mission to conduct either a stationary or mobile screen.

STANDARDS:

Plan and conduct a screening mission well enough to:

1. Select the proper screening technique that is appropriate for the battalion mission.

2. Establish OPs along major avenues of approach into the battalion sector to provide early warning of enemy approach.

3. Engage the enemy with long-range fires to impede his advance and to inflict maximum casualties.

4. Report the location, strength, disposition, and movement of the enemy force.

PERFORMANCE MEASURES:

1. **The scout platoon** provides limited security for its parent battalion by participating in guard operations and screening operations, and by maintaining contact between friendly forces. Being capable of offering only minor resistance to a sizeable enemy threat, the major responsibility of the scout platoon is early warning. By positioning the platoon between the battalion and the known or suspected enemy force, it must operate at a distance which will permit the battalion time to react. The security force must maneuver according to the location and/or movement of the battalion and regulate its rate of movement accordingly.

Continuous surveillance of the area forward of the platoon will result in the required early detection and it is for this reason that the ground surveillance section may be located to assist the platoons' visual observation capability. Once the enemy has been discovered, the scout platoon will attempt to conduct a thorough reconnaissance to gain more specific details or identification. This early detection is also essential to exploit the maximum range of our weapons.

2. **A screening force** executes surveillance over an extended frontage to the front, flanks, or rear of a moving or stationary force to provide for early warning by observation, reporting, and by maintaining positive knowledge

of the location and activity of all enemy forces observed.

The scout platoon accomplishes a screening mission by establishing a series of OPs and conducting patrols. The actual frontage of the screen is determined by:

a. The limit of observation afforded by the terrain and weather conditions.

b. The overall mission of the battalion.

c. The capabilities of the platoon with regard to vehicle and personnel availability. Normally there will be four OPs, but for short periods of time and generally during daylight hours only, the platoon can occupy up to one OP per vehicle.

The purpose of the OPs is to provide early warning of enemy approach; to report the location, strength, disposition, and movement of the enemy; and to adjust long-range fires to cause the enemy to deploy early, as well as to inflict casualties. The platoon fires its organic weapons in self-defense or within its capability to destroy or disperse small reconnaissance elements that may attempt to penetrate the screen. It will impede the advance of any major enemy threat by using available organic and supporting indirect fires.

3. **Stationary Screen:** The scout platoon leader will select the general location of OPs by a map reconnaissance. Of prime concern is the requirement for overlapping fields of observation of likely enemy avenues of approach. Visual deadspace is covered through the use of mounted and/or dismounted patrols moving to preselected contact points. These contact points are established between and forward of the OPs, and the patrols will make contact at them at designated intervals.

The scout squad leader chooses the specific location for the OPs. In addition to the above, he looks for concealment, ease of movement to and from the OPs, and good communications, and he avoids landmarks when possible. The OPs should be manned by dismounted scouts with the vehicles being placed in covered and concealed positions to the rear.

If space permits, successive lines of OPs are planned and depicted as phase lines. Individual OPs must receive permission to withdraw and must attempt to keep contact with the enemy during any movement to successive lines. Supporting fires should be planned to support the OPs in order to speed the reaction time when delivery of such fires becomes necessary.

a. In the situation below, a platoon (at 100% strength) has the mission of screening the right flank for a battalion's attack.

OPs were selected and occupied using the previously discussed considerations. Four OPs were found to be sufficient with no elements attached to the platoon. Space does not permit successive screen lines.

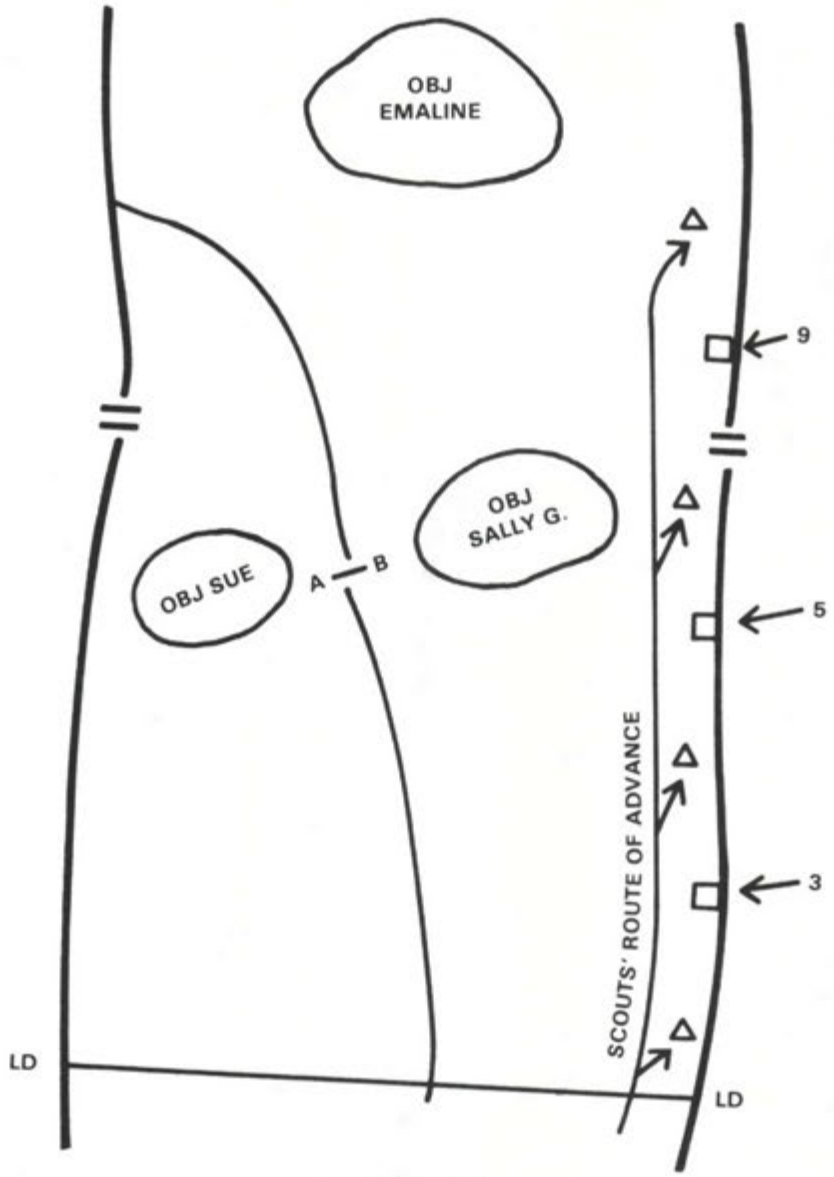


Figure 1.

The scout squads will occupy their OP as the lead elements of the attacking team pass by them. Coordination has been effected between the scout platoon leader and the attacking team commander, and the routes into the positions will in no way interfere with the scheme of maneuver of the attacking force.

As each squad approaches the area designated for its OP, the squad will stop in a covered and concealed position and conduct a dismounted visual reconnaissance of the area - just as if moving by bounding overwatch. The squad leader and the scout observer from his vehicle will then conduct a quick security check of the OP area, at which time the exact site for the OP will be chosen. The assistant squad leader will then bring both vehicles

forward (as required, to a safe and secure, covered and concealed defilade position). The assistant squad leader will post his observer as security, instruct the drivers to camouflage the vehicles, and move forward to the squad leader's position with the required observation devices and a radio. Once the OP is set in, the squad leader reports to the platoon leader by radio, checks the overall condition of his OP, and prepares to conduct his portion of the contact patrolling.

Once all four OPs have been manned, an appropriate report will be sent to the battalion CP. The platoon leader has initially chosen to collocate with the squad occupying the third OP from the LD because it covers the most likely avenue of approach into the flanks. The platoon sergeant occupies a position near the LD in order to relay all transmissions to battalion.

At each OP, two persons will observe at any one time. If this operation continues into the night, when security requires 100% participation, two people may be permitted to sleep. The remaining two will conduct the patrol. Patrols will make contact at points 3 and 9 at even hours and at point 5 at odd hours. All patrols will be dismounted initially, and one patrol member will carry an M60 machinegun.

The two people manning the OP will use an AN/GRC-160 in the AN/PRC-77 mode for communications, and all vehicles will remain on the reverse slope in covered and concealed positions. One of the two observers will continually check the area without optical aid, for any movement. The other observer will systematically check the same area with binoculars or a starlight scope. The two observers will employ teamwork and trade duties periodically.

Situation reports will be submitted to the platoon leader every 30 minutes, or as required, and relayed to the battalion by the platoon sergeant. Prior to EENT, warning devices will be emplaced by the dismounted patrols. Night surveillance devices will be used if the platoon is required to remain in position throughout the night.

It should be readily apparent that when the scout platoon is operating at reduced strength, the ability to occupy OPs and conduct the required patrolling is severely restricted. Unless observation was virtually restricted and patrols were not needed, the reduced strength platoon would have to occupy fewer than four OPs.

4. **Mobile Screen:** Although the previous scenario depicted a realtively limited attack, the mechanized battalion is often required to conduct such attacks over 10 or more kilometers. Under these circumstances, a **mobile screen** may be required.

Operating in much the same way as the previous stationary screen, the scout platoon leader will, however, plan for additional OPs. Based on the enemy threat, the desires of the battalion commander, and the fact that time will normally not permit patrolling between OPs, the scouts may occupy only those OPs overlooking the major avenues of approach into the battalion's flank. The occupation of these OPs can take various forms.

a. During a slow moving attack, the platoon leader will find it necessary to displace certain squads in order to keep abreast of the main thrust of the attack. This can be accomplished by the **leap frog technique.**

For example, the scout platoon has already occupied OPs 1, 2, 3, and 4. The main thrust of the attacking force has already seized OBJ 1 and 2 and is beginning its attack to OBJ 3. Because the attack is rather slow, the platoon leader displaces the scout squad at OP 1 and has it move to and occupy OP 5, thus giving the main body continuous flank security. Once OP 5 is occupied, the scout squad at OP 2 would be displaced and occupy OP 6. This technique, although time-consuming and dependent on trafficability, affords the commander three permanent OPs constantly watching his flank and no more than one in motion.

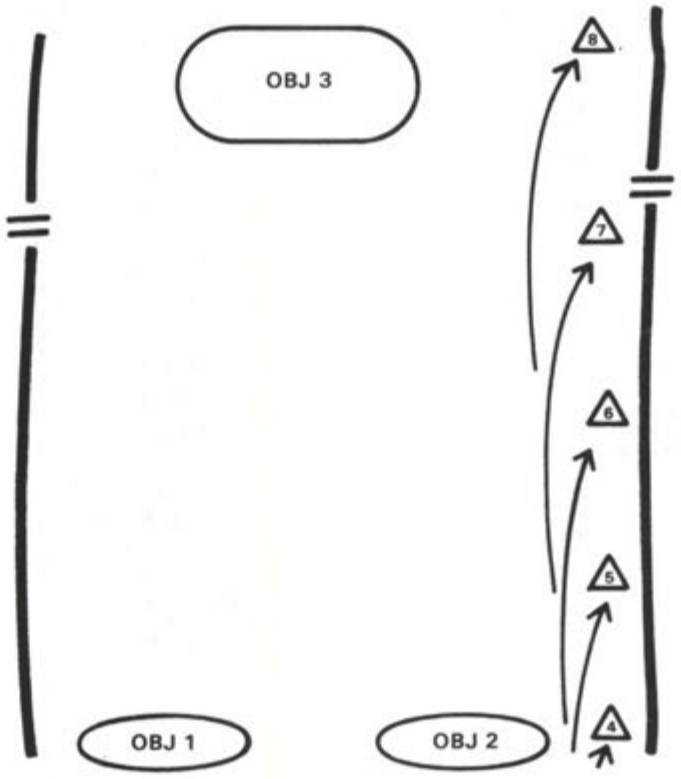


Figure 2.

b. The **continuous marching technique** can be used when the protected force is advancing rapidly at a constant rate and the enemy resistance to the flank is very light. The screening force uses a column formation and moves without halting, adjusting its rate of advance to the movement of the protected force. Continuous marching should not be thought of as only the traveling movement technique. The movement technique will of course be dependent on the likelihood of contact.

EXAMPLE: OBJ 1 and 2 have already been seized and now the momentum of the attack has increased substantially towards OBJ 3. The scout platoon leader must now screen a fast moving main force and decides to use continuous marching. This method, although it detracts from selecting and occupying OPs, does in fact give the scout platoon leader the flexibility to screen a fast moving force.

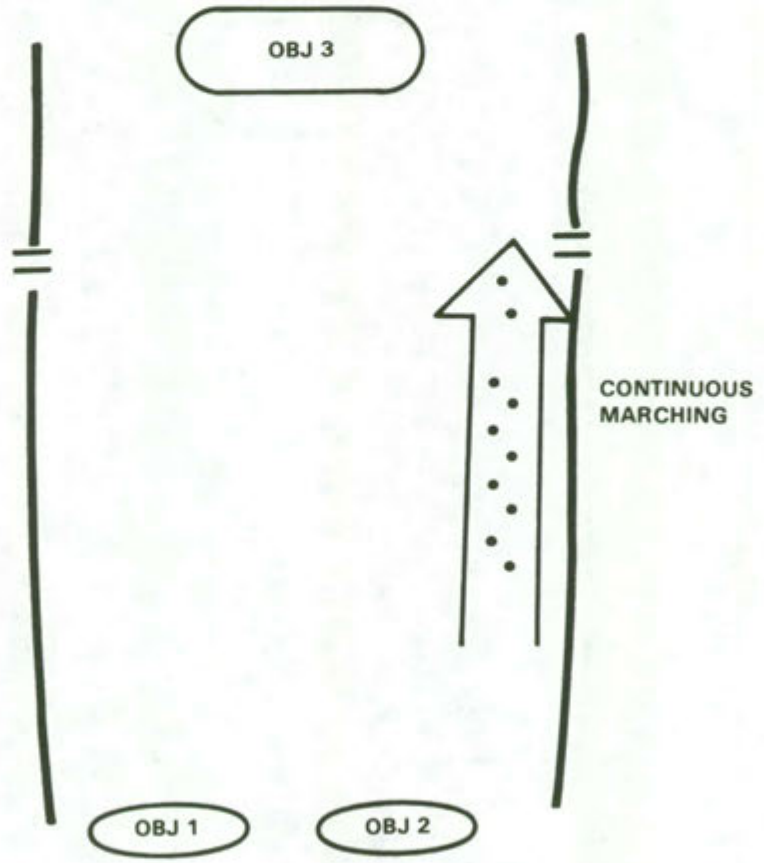


Figure 3.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, page 5-45)
FM 17-95, Cavalry, Jul 77 (chap 6, page 6-11 thru 6-20)

TASK NUMBER: 071-326-5808

PLAN AND CONDUCT A ZONE RECONNAISSANCE MISSION

CONDITIONS

In a field environment, given a TOE scout platoon, a 1:50,000 map, and a mission to conduct a zone reconnaissance.

STANDARDS:

Plan and conduct a zone reconnaissance well enough to:

1. Properly organize the platoon to conduct the reconnaissance mission.

2. Use movement techniques appropriate for the likelihood of enemy contact.

3. Obtain and report all available information about the terrain, routes, and enemy activity within the zone.

PERFORMANCE MEASURES:

1. Zone reconnaissance is the effort to obtain information about the enemy or terrain between two assigned boundaries. All major roads and terrain features within the zone must be reconnoitered. The same type information as listed for route reconnaissance is obtained. Zone reconnaissance is more time-consuming than other types of reconnaissance.

2. Zone reconnaissance is essentially an expanded version of a route reconnaissance, with all routes and terrain features being checked. Because of the extensive amount of time which is required to conduct such a thorough search, the scout platoon should move over those routes that permit the quickest and most complete coverage of the zone. Additionally, those points from which the scout platoon can thoroughly observe surrounding terrain can also be used when time is critical.

3. Figure 1 shows a portion of a platoon's zone reconnaissance when enemy contact is not likely. The platoon headquarters will generally move through the center of the zone for control and communication. As lateral routes or major terrain features are encountered, a scout squad is directed to reconnoiter and report. These lateral routes and major terrain features (roads, trails, rivers, prominent hills, etc.) are physically checked to the assigned boundaries.

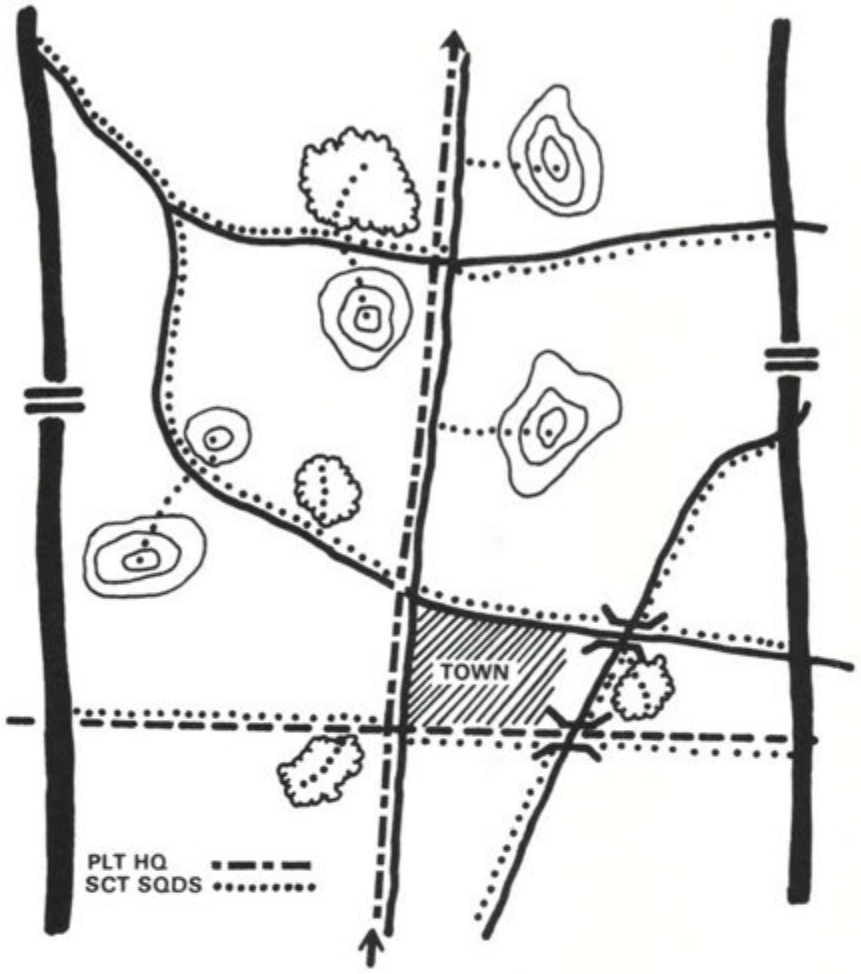


Figure 1.

4. In a zone reconnaissance, the scout squads are vulnerable to enemy action because they must operate independently of the platoon for short periods of time. The zone reconnaissance mission, therefore, will normally not be assigned to the scout platoon except where contact with enemy forces of platoon size or larger is remote, or where the scout platoon has been given additional combat strength, e.g., TOWs, tanks, and infantry.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 6, page 6-1 thru 6-8)
FM 17-95, Cavalry, Jul 77 (chap 5, page 5-22 thru 5-33)

TASK NUMBER: 071-326-5625

PREPARE AND ISSUE AN ORAL PLATOON OFFENSIVE OPERATION ORDER

CONDITIONS:

You are the platoon sergeant/acting platoon leader of an infantry platoon. You have just received an operation order for an attack from your company commander. Given any available pocket-size reference card (such as the Infantry Leader's Reference Card, GTA 7-1-27; or Small Unit Leader's Card (Infantry), GTA 21-2-9).

STANDARDS:

Within 30 minutes, develop a clear and concise oral platoon order for the attack and issue it to your squad leaders. The order must be issued, insuring squad leaders understand their mission and specific coordinating instructions which apply to them. As a minimum, the order must contain the following items properly placed in the five-paragraph format:

1. The mission of the company.
2. The mission of the platoon.
3. The mission of each squad.
4. The order and route of march.
5. Location of assault position and how to deploy into it.
6. Actions during the assault.
7. Consolidation instructions.
8. Critical signal instructions.
9. Location of the platoon leader during the attack.

PERFORMANCE MEASURES:

1. As a platoon sergeant/acting platoon leader, you are responsible for keeping your men informed through your squad leaders. The platoon order is one of the primary methods of doing this. Generally, your platoon order will be based on the operation order given to you by your company commander. It must be altered to delete information that does not concern your platoon and to add sufficient detail to allow proper planning by your squad leaders. Your oral platoon order should follow the same basic five-paragraph format used in the company order.

* *

OPERATION ORDER
(Explanation)

1. **SITUATION:** This paragraph contains all available information concerning the enemy and friendly situations.

a. Enemy forces: Any available information such as strength, weaknesses, probable courses of action, weather, and terrain.

b. Friendly forces: All available information concerning the missions of next higher and adjacent forces.

c. Attachments and detachments: Information concerning any units that have been attached to or detached from the platoon.

2. **MISSION:** A clear, concise statement of the task that must be accomplished by the platoon.

3. **EXECUTION:** Contains the mission for each rifle squad and attached element (if any). This paragraph also contains any special instructions that apply to a specific squad or to the platoon as a whole, and the plan for fire support.

4. **SERVICE SUPPORT:** Administrative details to include ammunition supply, ration resupply, and the evacuation of casualties.

5. **COMMAND AND SIGNAL:** Communications instructions to include visual signals, radio frequencies and callsigns, and the platoon leader and company commander's location during the operation.

* *

2. In preparing your platoon order, look for those items in the company order which you must alter to fit the platoon's mission. For example, if paragraphs 2 and 3 of the company order are given as:

"2. **MISSION:** Company A attacks 240600 May to seize Hill 492 and Hill 475 and continues the attack, on order, to seize Hill 510.

"3. **EXECUTION:** 2d Platoon makes the main attack on the right to seize Objective 1 and, on order, Objective 3 . . . ."

As 2d Platoon leader (acting), you might alter your paragraphs 2 and 3 as follows:

"2. **MISSION:** 2d Platoon attacks 240600 May to seize Hill 492 and, on order, Hill 475.

"3. **EXECUTION:** 2d Squad leader, your squad will be fire support base for the platoon. You will establish your base of fire from that ridgeline at coordinates FL 123456. Commence firing on my order. 1st Squad leader, your squad will attack to seize . . . ."

3. Your paragraph 1 should contain the mission of the company which was stated in paragraph 2 of the company operation order. Your paragraphs 4 and 5 will be similar to paragraphs 4 and 5 of the company order, but narrowed down to apply only to your platoon. For example, if paragraph 4 of the company order gives you the location of the battalion field trains, your platoon order will probably not contain that information because it does not directly affect your squads. Your responsibility as a platoon sergeant/acting platoon leader is to give your men the information that pertains to them. The five-paragraph order format should be used as a checklist to prevent your omitting important information. It is not all-inclusive, however, and may be modified as necessary.

4. Whenever possible, you should give your order to your squad leaders from a vantage point on or near the ground to be attacked. From such a point, you can orient your squad leaders by pointing out important terrain features. However, many times this will not be possible, and you will have to sketch the terrain on the ground. Terrain models are easy to construct, and they allow the leader to relate his order to terrain features.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 2, sec III, pages 2-11 thru 2-18)
FM 7-8, The Light Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5630

IMPLEMENT PLATOON MOVEMENT TECHNIQUE WHEN NOT IN CONTACT WITH THE ENEMY

CONDITIONS:

As the platoon sergeant/acting platoon leader of an infantry platoon, directed to conduct a movement to contact. (Control measures will be specified, e.g., phase lines, boundaries, routes, axis of advance, etc.) During the movement, the likelihood of contact will vary from "not likely" to "expected."

STANDARDS:

1. Control measures will be adhered to (e.g., times for crossing phase lines will be met) unless/until contact is made with an enemy force.

2. At least one squad must be prepared to maneuver or, as a minimum, provide suppressive fire.

3. Control of movement will be maintained continuously.

4. The appropriate movement technique used based on the likelihood of contact.

PERFORMANCE MEASURES:

1. **Proper use of terrain:** Because dismounted infantry soldiers are vulnerable to all weapons, they can survive and successively accomplish their missions on the battlefield **ONLY** if they make every effort to operate without being seen. The platoon's best protection is afforded by the terrain. It is essential that the platoon make maximum use of available cover and concealment at all times -- especially when moving against a hidden enemy.

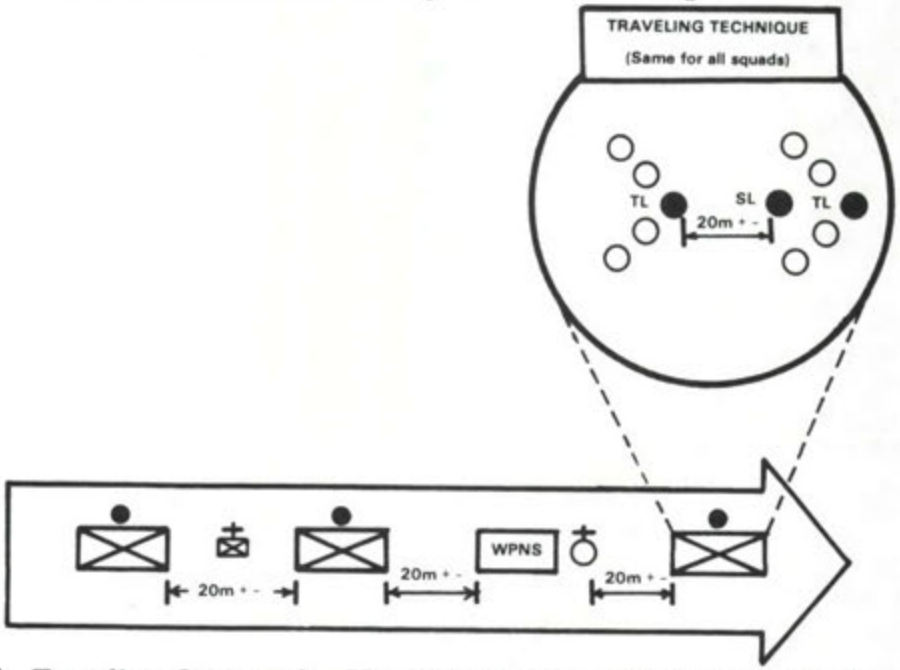
2. **Selection of technique of movement when not in contact:** The rifle platoon adjusts its technique of movement to the likelihood of making contact with the enemy:

LIKELIHOOD OF CONTACT	TECHNIQUE OF MOVEMENT
• NOT LIKELY	• TRAVELING
• POSSIBLE	• TRAVELING OVERWATCH
• EXPECTED	• BOUNDING OVERWATCH

3. **Movement techniques:**

a. Traveling - Use the **traveling** technique when speed is important and contact with the enemy is not likely. **All squads use the traveling**

technique and move in a column, keeping about 20 meters apart, depending on the terrain and visibility. When traveling, the best location for the platoon leader will normally be behind the lead squad to facilitate control. The platoon sergeant normally travels at the head of the trail squad to assist the platoon leader in controlling the trail elements of the platoon. A machinegun and/or Dragon may move with the platoon sergeant if the platoon leader detemines this would provide an advantage.

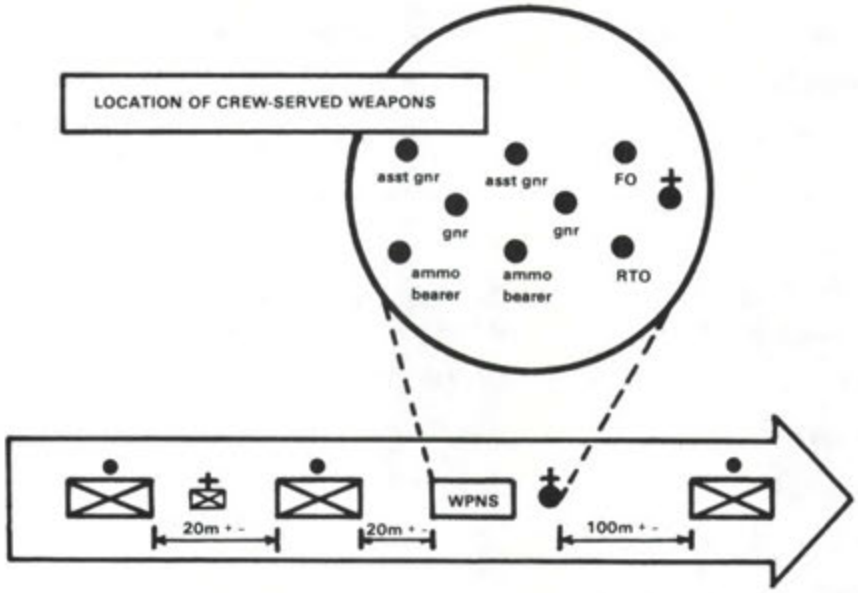


b. Traveling Overwatch - Use the **traveling overwatch** technique when the likelihood of enemy contact is possible, but not expected.

(1) This technique lets the platoon find the enemy with the lead squad only, leaving the platoon (-) free to support the lead squad by fire and/or to maneuver against the enemy if contact is made. To give the platoon the added protection of some time and space in which to react if it unexpectedly runs into enemy fire, the platoon leader increases the distance between the lead squad and the platoon (-). The distance is determined by terrain and visibility, but must be short enough to permit visual contact between the lead squad and the platoon, yet far enough so the platoon (-) will not be pinned down by enemy fire directed at the lead squad. To the extent permitted by terrain/visibility, the platoon leader should strive to maintain a distance of at least 50 meters and, preferably, 100 meters or more. **The lead squad uses the traveling overwatch technique.** The platoon leader is normally at the head of the platoon (-) for control and observation and **all elements of the platoon (-) use the traveling technique.**

(2) Crew-served weapons (Dragons and machineguns) may be dispersed throughout the column by attaching them to the platoon sergeant or trail squads. Regardless of how the platoon is organized, the platoon leader normally retains direct control over at least one machinegun and one Dragon, and they travel directly behind him. Placing crew-served weapons in these locations in the column:

- provides immediate responsiveness to the platoon leader.
- facilitates support of lead elements making contact.
- insures that they will not be pinned down by enemy fire directed at lead elements.



c. Bounding Overwatch - Use **bounding overwatch** when contact is expected. The basic pattern of this technique is a three-legged walk, with squads rotating the following missions:

(1) ONE SQUAD OVERWATCHING. One squad covers the forward progress of the platoon (-) from covered and concealed positions offering observation and fire against potential enemy positions. It can immediately support the bounding squad by fire if it makes contact.

- The squad leader **OVERWATCHING** must know:
  - the direction of the enemy threat.
  - the location of his overwatch position.
  - the route and destination of the bounding squad.
  - the location of the platoon leader.
  - what he can expect to do next.
  - how he will receive his orders.

(2) ONE SQUAD BOUNDING. One squad bounds to a further position from which it will take up the overwatch mission, unless it makes contact en route. This is the squad which should find the enemy. The length of its bound is closely tied to terrain, the range of the overwatching squad's weapons, and the ability of the platoon leader to control his squads. The

bounding squad will normally use the bounding overwatch technique since contact is expected.

- The squad leader **BOUNDING** must know:
  - where his squad is to move and by which route.
  - what movement technique to use (dependent upon speed required).
  - what he should do when he gets there.
- the location of the overwatching squad and the platoon leader.
  - what he can expect to do next.
  - how he will receive his orders.

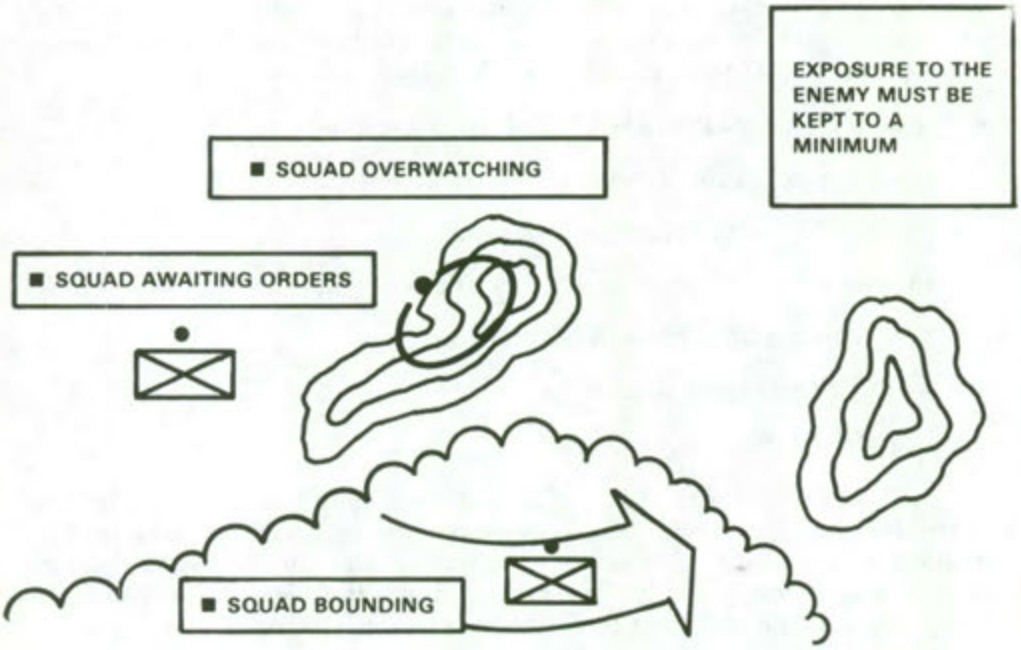
(3) ONE SQUAD AWAITING ORDERS. One squad is committed and available for employment as the platoon leader directs:

- The squad leader **AWAITING ORDERS** must know:
  - how he will receive his orders.

He should know:

- what is happening.
- what he can expect to do next.

The platoon leader normally positions crew-served weapons with the overwatch element, and any FIST member is also positioned with the overwatch element so that he is prepared to call for and adjust indirect fire.



NOTE: There are other possible variations to this basic pattern. A platoon leader may have the squad awaiting orders move to an overwatch position, thus having two squads in overwatch and one squad bounding. Where there is no suitable squad overwatch position, a platoon leader may have the lead squad use squad bounding overwatch with the trailing squads using traveling or traveling overwatch. In any case, the platoon leader has several options in moving the platoon when not in contact.

REFERENCES:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5635

DIRECT FIRE AND MANEUVER OF PLATOON AGAINST AN ENEMY POSITION

CONDITIONS:

You are the acting platoon leader of a platoon conducting a movement to contact which has encountered an enemy position.

STANDARDS:

1. Determine the strength and disposition of the enemy force.

2. Fix the enemy with all available suppressive fire to keep him from firing his weapons accurately and redeploying his force to meet your assault.

3. Fight the enemy by assaulting his flank, rear, or other weak points using fire and maneuver, all organic and supporting weapons, and all available cover and concealment.

PERFORMANCE MEASURES:

1. **Developing the Situation:** When movement to contact results in enemy contact, the lead platoon develops the situation by striving to gain knowledge of the enemy's disposition and strength not revealed by the initial contact. It maneuvers carefully to determine flanks or other weak points. Other means, such as reconnaissance by fire or detection devices, may also be used. If a weak point is found, it is immediately exploited by aggressively "fighting through." The platoon must use all available fire support and exploit all available cover and concealment to avoid needless exposure of its troops to the enemy while maintaining forward momentum.

2. **Actions on Contact:**

a. By using the proper movement techniques, the platoon should make contact with one squad, leaving the platoon (-) free to support the squad in contact. The squad which makes first contact makes every effort to "fight through" the enemy it encounters by using fire and maneuver. Members of the squad maneuver singly, by buddy teams, or by fire teams as the terrain and enemy situation dictate. Soldiers fire and maneuver completely through the enemy position if possible, moving by short rushes from one covered position to the next, minimizing exposure (2 to 3 sec).

b. If the squad cannot overcome the enemy, its effort to do so gives the platoon leader information on the enemy's strength and disposition. He will then employ his other squads and "fight through" at the platoon level by maneuvering one or two squads forward under the overwatching fire of his remaining squad(s), his key weapons, and all the fire support he can get through his FO and his company commander.

c. As the platoon maneuvers against the enemy, its leader continuously reports to the company commander. If a platoon develops a situation in which it cannot overcome the resistance, the platoon may become an overwatch for a continuation of the attack by the entire company, or take such other action as directed by the company commander.

d. Included in the platoon leader's orders may be instructions to:

(1) The lead squad to maneuver against the enemy resistance supported by other elements of the platoon, or to hold in position and overwatch.

(2) The leaders of the 2d and 3d squads to overwatch the lead squad or to move along a specified route, deploy in an assault position he selects, and assault on his signal.

(3) The FIST FO to get all the indirect fire he can on the enemy position (objective) and on nearby positions from which the enemy can shoot at his platoon as it attacks. Shift that fire to adjacent positions as the platoon advances:

3. **Reports:** Make frequent reports of the platoon's progress to the company commander. Make them accurate and in time to be useful.

4. **The Assault:**

a. The assault is a technique used to make the final move under fire to the enemy position and destroy it. The assault is characterized by noise and confusion, and it usually moves forward through the actions of men or teams who exploit terrain and enemy weaknesses in their immediate areas.

b. As the platoon deploys and moves through the assault position, supporting fire should increase to maximum rate. Machineguns may be deployed in the vicinity of the assault position to provide continuous supporting fire. As they close with the enemy, elements of the platoon may alternate as overwatch and maneuver elements.

c. Assaulting troops move as close to supporting fire as possible. The platoon leader requests that supporting fire be shifted forward as the platoon advances. As fire is shifted, men in the assaulting element deliver intense small-arms fire, throw hand grenades, and close with and kill the enemy. The assault continues until the entire position is cleared of resistance.

d. To close with the enemy, the overwatch element must suppress the enemy fire. This is done by blocking the enemy's vision by smoke and by shooting at him with sufficient accuracy and volume to drive him from his firing positions and weapons' sights. The enemy will probably continue to fire, but with inaccuracy and ineffectiveness.

e. The assaulting troops avoid or move quickly through enemy fire which is not completely suppressed. When the enemy fire is suppressed, you can maneuver toward enemy positions without taking excessive casualties. The assaulting element seeks to concentrate against the enemy flank, rear, or other weak point. As the enemy may try to reinforce points under assault, use fire to fix the enemy so that he cannot reinforce the weak point. Direct fire may suppress the enemy, but will not keep him from redeploying along interconnecting trenches. In this case, airburst indirect fire is required. The enemy must be fixed by suppressive fire.

f. Leaders can seldom predict the amount of control they will have during the assault. The noise and confusion of the assault require orders to be given by example and direct contact.

5. **Fighting in Restrictive Terrain:**

a. In extremely rugged terrain and in areas which are heavily fortified or which have a high density of obstacles, the fire of the platoon may be severely restricted.

b. In restrictive terrain, the platoon may task organize into:

--**A MANEUVER ELEMENT,** to close with and destroy the enemy.

--**AN OVERWATCH ELEMENT,** to suppress and fix the enemy by fire.

--**A BREACHING ELEMENT** (when required), to clear or mark a path through enemy obstacles for the assault element.

c. Enemy positions may be in trenches, buildings, or fortified bunkers. Most restrictive areas require the same general techniques:

-Organize into maneuver, overwatch, and (if necessary) breaching elements.

-Maintain control by seizing one objective at a time.

-After you seize an objective, secure it with an element and continue the assault with the rest of the platoon.

6. **Common Tasks:** Three of the most common tasks which face the platoon in restrictive terrain are to:

-- CLEAR A TRENCH SYSTEM

-- KNOCK OUT BUNKERS

-- CLEAR BUILDINGS

a. Clearing a Trench System.

(1) Trench systems allow the defender freedom to move his troops from one defensive position to another. A system usually has two or more main trenches with connecting secondary trenches. Each trench is narrow and has fighting positions or bunkers constructed at intervals along its length.

(2) Because one trench supports the other, the enemy can continue to fire on the maneuver element, even after the first trench is secure.

(3) The platoon normally assaults a trench as part of a larger force; its objective is a specific section or point in the trench. The platoon leader assigns missions to accomplish these tasks:

-- PENETRATE THE TRENCH SYSTEM

-- HOLD THE INITIAL TRENCH

-- CLEAR THE TRENCH SYSTEM

(4) In the assault of a trench, use --

- **KEY WEAPONS** against the fighting positions and bunkers to destroy and suppress the enemy's fire.

- **GRENADE LAUNCHERS** to fire into the trench during the assault.

- **HAND GRENADES** just prior to entering the tench and after entry, to clear enemy positions.

- **FLAME WEAPONS** to clear the trench and help destroy bunkers.

(5) On entering the trench, one element secures the penetrated point. That element covers the rear, while the trench is cleared by buddy teams of two or three men each.

TRENCHES SHOULD BE:

- CLEARED IN ONLY ONE DIRECTION.

- CLEARED ALONG THE MAIN TRENCH, LEAVING AN ELEMENT TO HOLD EACH CONNECTING TRENCH.

- CLEARED ONLY AS MUCH AS THE UNIT CAN HOLD AGAINST COUNTERATTACK.

(6) Each bunker in the system must be cleared in succession.

b. Knocking Out Bunkers.

(1) The enemy also uses bunkers in built-up areas in conjuction with buildings and trenches. The techniques for clearing bunkers and buildings are the same. The assault of a bunker in a trench system and the assault of a bunker in a fortified area are the same.

(2) Whenever possible, use fire support such as artillery or airstrikes to destroy bunkers. When available, the combat engineer vehicle can neutralize fortified positions and bunkers. When the platoon must assault a bunker --

-- Approach it from its blind side.

-- Have part of the platoon shoot into the entrance, ports, and other openings, while the rest of the platoon closes on it with grenades, flame weapons, or demolitions to destroy it.

c. Clearing Building:

(1) Built-up areas (such as farm complexes, villages, industrial sites, cities) may become objectives. The rifle platoon may have the mission of seizing a farm complex or a section of buildings in a larger built-up area.

(2) Plans to clear buildings will provide for:

- Organizing the platoon into an assault element(s), overwatch element(s), and breaching element(s) (as required).

- Isolating the objective by all available direct and indirect fire.

- Seizing a foothold or entry into the building(s).

- Clearing the building(s) in the objective.

(3) Attack by using:

- ASSAULT ELEMENT

- OVERWATCH ELEMENT

-BREACHING ELEMENT (IF REQUIRED)

(4) The MANEUVER ELEMENT consisting of riflemen, demolition men, and flamethrowers:

- ASSAULTS TO GAIN A FOOTHOLD IN THE BUILDINGS.

- CLEARS THE BUILDINGS IN THE OBJECTIVE AREA.

(5) The OVERWATCH ELEMENT consisting of automatic riflemen, grenadiers, machineguns, APCs, and attached tanks and other direct fire weapons:

- SHOOTS SUPPRESSIVE FIRE FOR THE MANEUVER (ASSAULT) ELEMENT.

- SECURES CLEARED PARTS OF THE BUILDING (OBJECTIVE).

- REINFORCES THE MENAEUVER ELEMENT AS NECESSARY.

(6) To Clear a Building:

- Enter at the highest point possible. Use ladders, drainpipes, vines, or grappling hooks. APCs may be used for movement between buildings, or movement may be from roof to roof when buildings are close together.

- When enemy fire prevents entry at upper levels, create new entrances with tanks, APCs, demolitions, or antiarmor weapons.

- Do not enter by a door or a window unless you can fire heavy weapons into it to destroy any mines and kill enemy infantry protecting these entrances.

- Work from the top of the building to the bottom. Even when a building must be entered on the ground floor, proceed to the top and clear down.

- Use two- or three-man teams to clear rooms and hallways.

- The breaching force must breach obstacles or use demolitions to open entry points in buildings for the assaulting maneuver element.

- To clear rooms, one man throws in a grenade, waits for the explosion, and enters the room. A second man enters and, coverd by the first, searches the room. When you can't use the doorway, create a new door by blowing a hole i n the wall with demolitions. To clear a room before entry, one team fires through the door or wall while another team fires through the floor or ceiling.

- If movement is restricted to the ground:

- Move from one doorway to another, always hugging walls, or any other available structure.

- Avoid crossing open streets, alleys, and vacant lots; crawl under windows; and be careful if you cross in front of doors.

REFERENCES:

FM 7-7, The Mechanized Platoon and Squad, Sep 77 (chap 4, sec IV, pages 4-33 thru 4-43)

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5750

PREPARE AND ISSUE AN ORAL PLATOON DEFENSIVE OPERATION ORDER

CONDITIONS:

You are the platoon sergeant/acting platoon leader of an infantry platoon. Your company is presently located in an assembly area and you have just received an operation order for the defense from your company commander. Given any available pocket-size reference card (such as the Infantry Leader's Reference Card, GTA 7-1-27; or Small Unit Leader's Card (Infantry), GTA 21-2-9).

STANDARDS:

Within 30 minutes, develop a clear and concise oral platoon order for the defense and issue it to your squad leaders. The order must be issued, insuring squad leaders understand their mission and specific coordinating instructions which apply to them. As a minimum, the order must contain the following items properly placed in the five paragraph format:

1. The mission of the company.

2. The mission of the platoon.

3. The mission of each squad, to include specific areas of responsibility and provisions for security.

4. Location for machineguns and medium antitank weapons.

5. The order and route of march to the defensive area.

6. Critical signal instructions.

7. Location of platoon and company command posts.

PERFORMANCE MEASURES:

1. As a platoon sergeant/acting platoon leader, you are responsible for keeping your men informed through your squad leaders. The platoon order is one of the primary methods of doing this. Generally, your platoon order will be based on the operation order given to you by your company commander. It must be altered to delete information that does not concern your platoon and to add sufficient detail to allow proper planning by your squad leaders. Your oral platoon order should follow the same basic five paragraph format used in the company order:

OPERATION ORDER (Explanation)

1. **SITUATION:** This paragraph contains all available information concerning the enemy and friendly situations:

a. Enemy forces: Any available information such as strengh, weaknesses, probable courses of action, weather, and terrain.

b. Friendly forces: All available information concerning the mission of next higher and adjacent forces.

c. Attachments and detachments: Information concerning any units that have been attached to or detached from the platoon.

2. **MISSION:** A clear, concise statement of the task that must be accomplished by the platoon.

3. **EXECUTION:** Contains the mission for each rifle squad and attached element (if any). This paragraph also contains any special instructions that apply to a specific squad or to the platoon as a whole, and the plan of fire support.

4. **SERVICE SUPPORT:** Administrative details to include ammunition supply, ration resupply, and the evacuation of casualties.

5. **COMMAND AND SIGNAL:** Communications instructions to include visual signals, radio frequencies and callsigns, the platoon leader's and company commander's location during the operation.

2. In preparing your platoon order look for those items in the company order which you must alter to fit the platoon's mission. For example, if paragraphs 2 and 3 of the company order are given as:

"2. **MISSION:** Company A defends by 251400 Jun from FL 140810 to FL 160810.

"3. **EXECUTION:** The company will defend employing 1st Platoon on the left, 2d Platoon on the right, and 3d Platoon in reserve...."

As 2d Platoon leader (acting), you might alter your paragraphs 2 and 3 as follows:

"2. **MISSION:** 2d Platoon defends by 251400 Jun from FL 159810 to FL 160810.

"3. **EXECUTION:** We will defend our sector with 1st Squad on the left, 2d Squad in the center, and 3d Squad on the right. 1st Squad leader, your squad will occupy from...."

3. Your paragraph 1 should contain the mission of the company which was stated in paragraph 2 of the company operation order. Your paragraphs 4 and 5 will be similar to paragraphs 4 and 5 of the company order, but narrowed down to apply only to your platoon. For example, if paragraph 4 of the company order gives you the location of the battalion field trains, your platoon order will probably not contain that information because it does not directly affect your squads. Your responsibility as a platoon sergeant/acting platoon leader is to give your men the information that pertains to them. The five paragraph order format should be used as a checklist to prevent your omitting important information. It is not all-inclusive, however, and may be modified as necessary.

4. Whenever possible, you should give your order to your squad leaders from a vantage point on or near the ground to be defended. From such a point, you can orient your squad leaders by pointing out important terrain features. However, many times this will not be possible, and you will have to sketch the terrain on the ground. Terrain models are easy to construct, and they allow the leader to relate his order to terrain features.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 2, sec III, pages 2-11 thru 2-18)
FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5761

DESIGNATE PRIMARY, ALTERNATE, AND SUPPLEMENTARY FIGHTING POSITIONS FOR KEY WEAPONS

CONDITIONS:

You are the platoon sergeant/acting platoon leader of a platoon that is preparing to defend as part of a larger force. You have just been assigned your platoon's sector of responsibility.

STANDARDS:

Within 30 minutes, designate primary, alternate, and supplementary positions for your antiarmor weapons and machineguns to:

1. Cover the most likely armor avenues of approach into the platoon area by MAWs (HAWs if attached) from the primary positions.

2. Cover the most likely dismounted avenues of approach into the platoon area with M60 machineguns (and caliber .50 in mechanized units) from the primary positions, with emphasis on protection for the antiarmor positions.

3. Provide coverage of the same sectors of fire from alternate positions.

4. Provide coverage of armor and dismounted avenues of approach into the platoon area, from supplementary positions, that cannot be covered from the primary or alternate positions. This coverage includes approaches into the flanks or rear of the platoon area.

5. Take maximum advantage of all available natural cover and concealment and weapons' capabilities.

PERFORMANCE MEASURES:

1. The platoon leader normally selects the exact location for his machineguns, Dragons, any attached crew-served weapons, and APCs (if mechanized). The successful accomplishment of the platoon's mission depends greatly on the proper positioning of these weapons to obtain their maximum sustained firepower. You must make use of all available cover and concealment to provide these weapons with maximum protection from enemy observation and fire. The enemy will concentrate his efforts on finding and destroying these crew-served weapons because of their tremendous volume of destructive firepower. Primary, alternate, and supplementary positions must be selected for your entire platoon, but your machineguns and antiarmor weapons are most critical (figure 1).

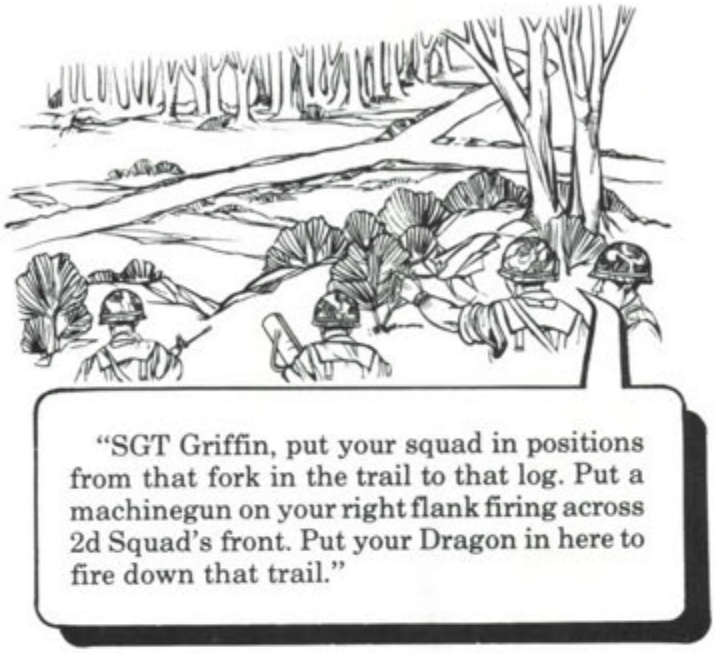


Figure 1.

a. Primary position - the position within the platoon sector from which the crew-served weapon can best perform its mission (figure 2).

b. Alternate position - a position to be occupied when the primary position can no longer be manned and from which the same sector of fire can be covered (figure 2).

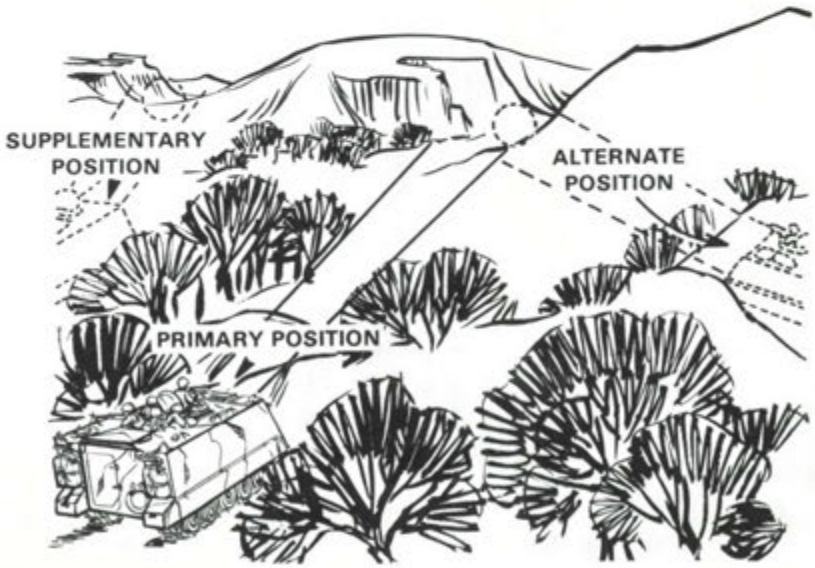


Figure 2.

c. Supplementary position - a position that provides the best location for the accomplishment of a task that cannot be accomplished from the primary or alternate positions, such as, providing mutual support to adjacent platoons or defending against an attack from a different direction (figure 2).

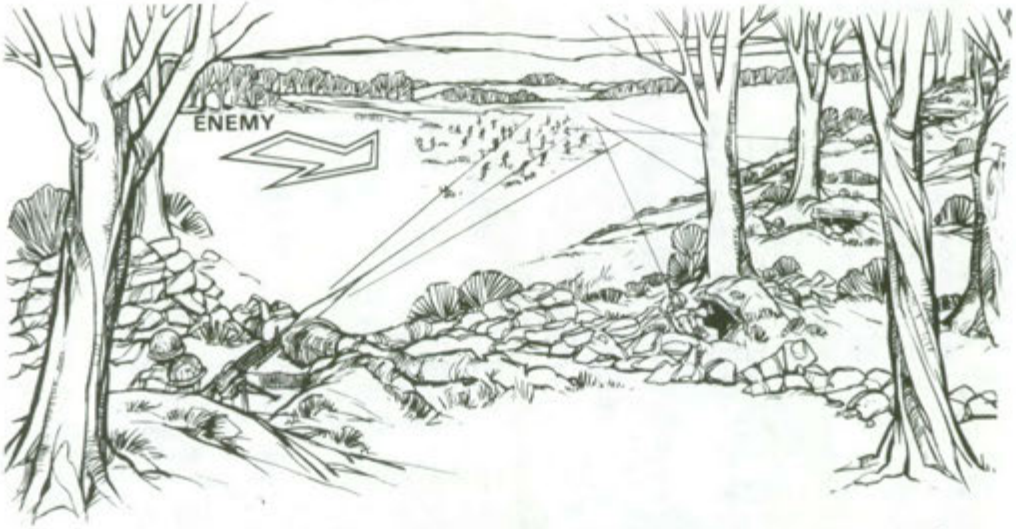
2. Position your key weapons where they have both cover and concealment, and good fields of fire. Strive to put them where their fires will be overlapping, integrated, and mutually supporting. Position them so that their fire will be heavier on the avenues of approach that the enemy will most likely use. The weapons placed on the flanks of your position must be tied in with the adjacent unit fires to prevent gaps (figure 3).

Figure 3.

a. Cover. Even when natural cover is available, it usually must be complemented by properly prepared positions. As cover is sometimes sparse, you must be skillful in selecting positions so that all natural cover is used to the maximum extent. When no natural cover exists, well-prepared positions will protect your men and weapons from enemy fire.

b. Concealment. The enemy's greatest effort will be toward locating the weapons which hold up his attack. Therefore, clever use of terrain and camouflage is mandatory to deceive the enemy. The best foliage for concealment is alive and natural, for even at night, dead foliage can be detected by electronic sensors.

3. Machineguns. These are the platoon's key weapons for defense against a dismounted infantry assault and for suppressing unprotected enemy direct fire weapons. Position your machineguns laterally across the front so you can have overlapping, mutually supporting bands of fire and, where the terrain allows, final protective fires (FPF). Machinegun fire is most effective when it hits the long axis of the enemy assault formation with the long axis of its beaten zone (figure 4). When you can, position machineguns in pairs to fire final protective lines (FPL) parallel to one another. Each machinegun should be assigned:



This flanking and enfilade fire should surprise the enemy by hitting him from an unexpected direction.

Figure 4.

a. A primary and secondary sector of fire.

b. An FPL or a principal direction of fire (PDF).

c. At least one alternate position.

d. Supplementary positions which give depth to the defense, provide mutual support to adjacent platoons, and/or meet an attack from a different direction.

4. Medium Antitank Weapon (MAW). Antiarmor weapons are key to the platoon's defense against a tank threat. Consider the following when employing these weapons.

a. Dispose laterally and in depth to cover a designated armor kill zone. This keeps them from being hit by enemy fire directed at a single point or area.

b. Position to deliver surprise fire. Do this by using the terrain to get maximum use of cover, concealment, and fields of fire to hit the enemy from an unexpected direction (flank or rear).

c. Control centrally. Enemy fire may cause antiarmor weapons to move to alternate positions or to supplementary positions to meet an attack from another direction. Coordinate their fire to provide a timely massing of fire at the critical point. When Dragon positions are selected, consider that:

(1) The missile must be at least 33 centimeters (13 inches) above the ground.

(2) Obstacles that could detonate the missile, snag its fins or wire, or interfere with its guidance must be cleared. Don't fire across powerlines.

(3) The cover and concealment hiding one of these weapons must also hide its launch signature from the front. A rise in the ground that covers and conceals both the weapon and its signature is best.

(4) Minimum range for the Dragon is 65 meters.

(5) Position the Dragon so targets will not move behind obstacles before the missile strikes. This is important because when a vehicle is engaged from the flank it may move a few hundred meters before the missile strikes it. If you can see no obstacles in your field of view through the sight, then it is clear to launch a missile within that area to a target moving at right angles to your line of sight (figure 5).

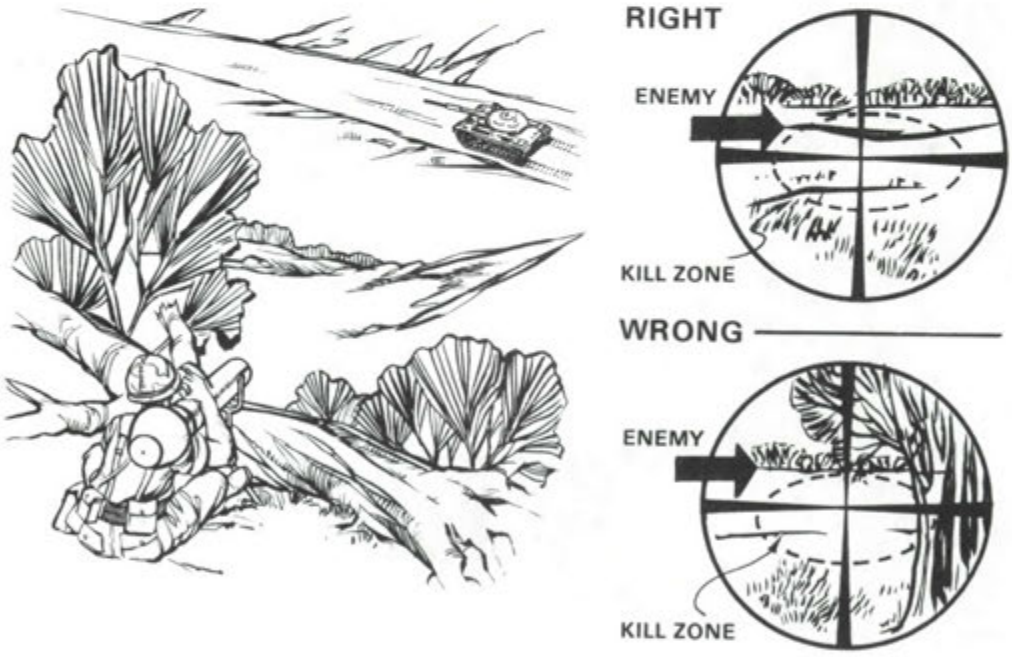


Figure 5.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, sec IV, page 5-23 thru 5-32)
FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5770

PREPARE A PLATOON DEFENSIVE FIRE PLAN

CONDITIONS:

As the platoon sergeant/acting platoon leader of a platoon in a defensive position, you have been instructed to prepare a defensive fire plan for your sector. Given a mortar final protective fire (FPF) assigned to the platoon; overlay paper, map, and pencils; and assignment of crew-served and medium antitank weapons positions.

STANDARDS:

On overlay paper, show the following:

1. Each squad's defensive position.

2. Each machinegun position in the platoon and the final protective line (FPL) or principal direction of fire (PDF) for each.

3. A primary and secondary sector of fire for each medium antitank weapon (MAW) assigned to the platoon.

4. At least two target reference points (TRP).

5. A suitable location for the mortar FPF in front of the platoon positions. FPF should be no farther than 200 meters in front of the platoon positions.

6. The location of major obstacles in the platoon area.

7. Indirect fire target locations in front of, on, and behind the platoon positions.

PERFORMANCE MEASURES:

1. **The Platoon Defensive Fire Plan (figure 1).**

a. The platoon defensive fire plan assists the company commander in preparing his company fire plan.

b. It also assists the platoon leader in shifting fires within the platoon sector without having to move around to determine which weapon can fire into a certain area. If a portion of the platoon area is threatened, the platoon leader can consult the fire plan and quickly determine which weapons can cover the threatened area, and from which positions they can do so. The platoon leader can then direct (by radio, voice, or SOP signals) their fires be shifted to the threatened area, or he can instruct them to move to alternate or supplementary positions, if necessary.

NOTE: The parts of the platoon defensive fire plan described below are the minimum items necessary to make the plan meaningful. Your unit SOP or commander may require more detail. In other instances, a sketch without a target list may be acceptable.

c. A platoon defensive fire plan consists of an overlay drawn to scale and a target list for indirect fires. The overlay should show the platoon sector, squad positions, machinegun and medium antitank weapons positions, FPLs or PDF for each machinegun, primary and secondary sectors of fire for each MAW, TRPs, indirect fire target locations, and the FPF location.

2. **Machineguns.**

a. Machineguns are assigned primary and secondary sectors of fire, as appropriate. Within the primary sector, the gunner may be assigned an FPL or a PDF, depending on the amount of grazing fire possible. No FPLs or PDFs are assigned to the secondary sector of fire.

b. The primary and secondary sectors of fire are shown on the sketch.

3. **Medium Antitank Weapons.** Each MAW is normally assigned a primary position, and one or more alternate firing positions to cover the primary sector of fire. In addition, each MAW may have supplementary firing positions to cover other sections of fire. Only primary positions with primary and secondary sectors of fire are shown on the sketch.

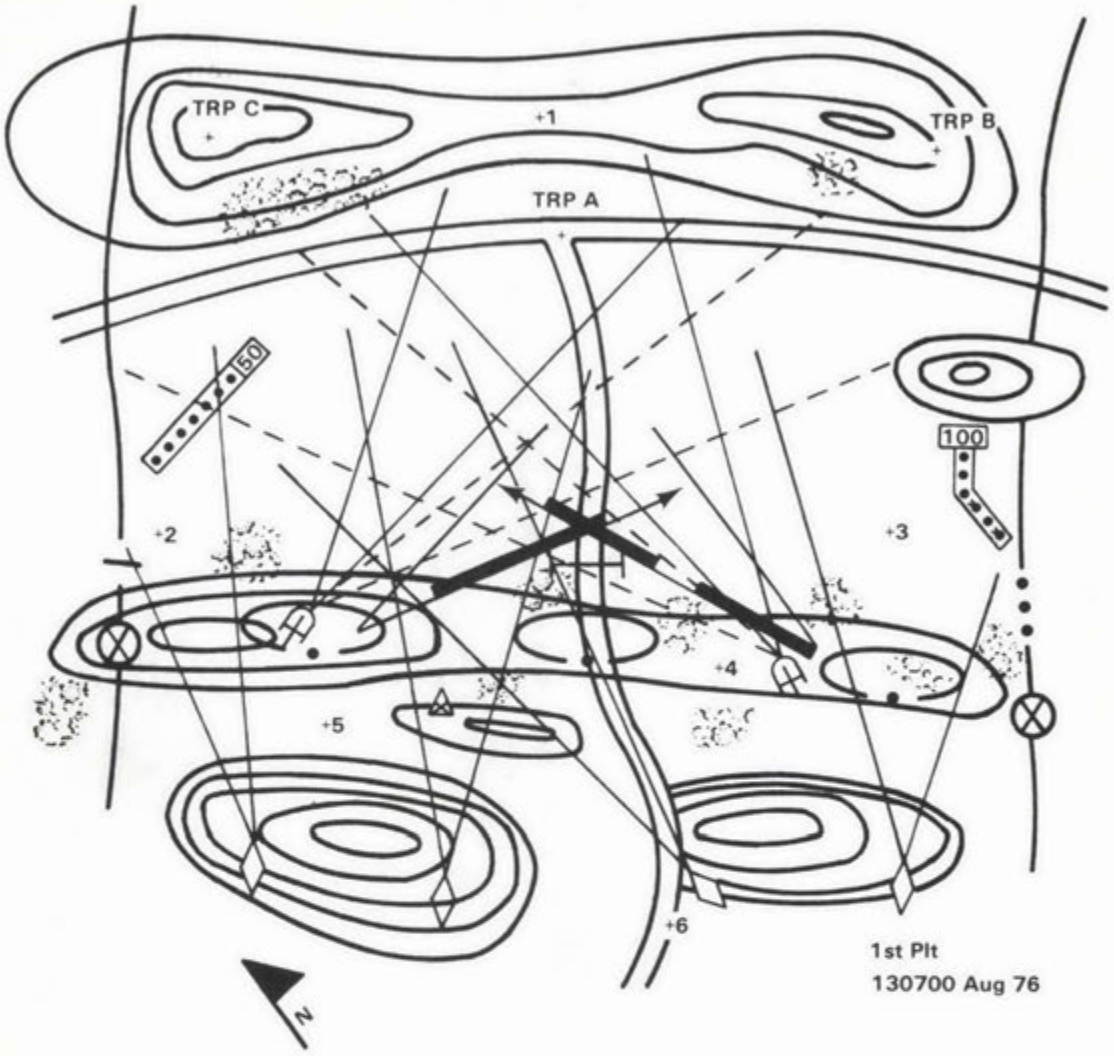
4. **TRPs.** Either lettered or numbered, TRPs plotted on an overlay will aid in fire control and help to identify locations of targets. TRPs should be plotted on easily recognizable manmade objects or terrain features within your platoon area. If these TRPs are to be used to aid in the control of mortar and artillery fire, then they must be coordinated with the forward observer.

5. **FPFs.** If the platoon has been allocated an FPF, it should be positioned across the most dangerous avenue of approach no farther than 200 meters forward of the platoon position. The company commander has final authority over placing artillery FPFs assigned, but he may ask for the platoon leader's recommendation.

6. **Obstacles.** Any obstacle in your platoon area (stream, defile, dense woods, buildings, etc.) should be noted on the overlay.

7. **Indirect Fire Targets.** Indirect fire targets (mortar and artillery) should be plotted in front of, on, and behind the platoon position. Initially, they will be simply numbered since the actual target numbers will be assigned later. The location and number of each target is shown on the overlay. Additional information is given in the target list which is usually below the overlay.

NOTE: The sample fire plan in figure 1 incorporates all of the points listed above.



TRP	DESCRIPTION	LOCATION	TARGET NO.	REMARKS
A	RJ	QL170471	AB	
B	HILL	QL173475	AB	
C	HILLTOP	QL168473	AB	
1	SADDLE	QL170478	AB	
2	OPEN AREA	QL173461	AB	
3	OPEN AREA	QL168461	AB	
4	SADDLE	QL171459	AB	
5	OPEN AREA	QL169457	AB	
6	ROAD	QL170453	AB	

Figure 1. Sample fire plan.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squads, Sep 77 (chap 5, sec IV, pages 5-23 thru 5-33)
FM 7-8, The Infantry Platoon and Squads (TBP)

TASK NUMBER: 071-326-5775

COORDINATE WITH ADJACENT PLATOONS

CONDITIONS:

In a field environment, as a platoon sergeant/acting platoon leader, participating as part of a larger element in an offensive or defensive operation.

STANDARDS:

Coordinate with adjacent platoons well enough to:

1. Insure that no gaps exist between your platoon and an adjacent platoon.

2. Insure that the fires of your platoon and an adjacent platoon are interlocking.

3. Insure that movement routes, in the offense, will allow mutual support by fire and/or maneuver.

PERFORMANCE MEASURES:

1. After receiving the company order for an offensive or defensive operation and during your planning phase, you must consider coordination with adjacent platoons. If you receive the order while all other platoon leaders are present, take that opportunity to coordinate as much as possible to avoid time-consuming delays later in the operation. While many of the details that must be coordinated will vary with the situation, essential items must always be coordinated.

2. In the offense, you must coordinate:

a. Lateral distance between all attacking elements.

b. Movement routes to insure that mutual support by fire and/or maneuver can be maintained between the lead elements.

c. Visual signals, such as arm-and-hand signals and pyrotechnics.

d. Radio call signs.

3. In the defense, you must coordinate to insure: no gaps, fires interlock and are mutually supporting. Information coordinated includes:

a. Location of positions (primary, alternate and supplementary).

b. Location of key weapons.

c. Sectors of fire.

d. Deadspace between units.

e. Location of OPs.

f. Signals.

g. Patrols and ambushes (size, type, time of departure and return, routes).

h. Location and types of obstacles.

4. If a final protective fire is allocated to the platoon area, it must be coordinated with the FIST FO. It must be integrated into the fire plan for the platoon.

REFERENCE:

FM 7-8, The Infantry Platoon and Squad (TBP)

TASK NUMBER: 071-326-5780

DIRECT PLATOON FIRES IN THE DEFENSE

CONDITIONS:

You are the acting platoon leader of a platoon which is defending against an attacking enemy force.

STANDARDS:

1. Control the opening of initial fire.
2. Control the rate and distribution of fire.
3. Shift fires to the most dangerous targets, as required.
4. Halt platoon fires, as required.

PERFORMANCE MEASURES:

1. When the enemy attacks, your platoon will hold its position and will not withdraw except on order of the company commander. A successful defense depends on each element accomplishing its mission. When attacked, you must:

a. Control the platoon's fire, to include the opening of initial fire, shifting of fire to the most dangerous targets, and fire discipline.

b. Identify targets and request indirect fire to suppress or destroy them.

c. Shift men and weapons within the platoon position, as required.

d. Keep the company commander informed.

2. Controlling the opening of initial fire is done in stages, based, in part, upon the effective range of the weapons available. A typical sequence might be:

WEAPON	RANGE
Indirect fire	1,000 meters (plus)
Dragon	1,000 meters
M60 MG	1,100 meters
M16	300 meters
M203	300 meters
LAW	200 meters

3. When an enemy force attacks, hold your platoon's small-arms fire until the force comes within effective rifle range (300 meters), or when it reaches a spot on the ground (a road, a stream, or an open area) designated by the company commander as a fire-at-will line. Tell your squad leaders to open fire when the enemy reaches that line. If there is no fire-at-will line, you may establish one for your platoon, or for each separate squad, depending on the terrain. This line will assist you in placing effective surprise fire on the attacker. (The same procedure applies to antiarmor fires although the effective range will vary.)

4. The priority of targets is determined by type weapon:

WEAPON	PRIMARY TARGET
Dragons	Tanks/APCs
LAWs	APCs/tanks
Rifles	Infantry
Machineguns	Infantry
Grenade Launchers	Infantry/APCs

5. If the enemy assault hits only part of the platoon front, unengaged squads should shift their fires to that area. The team leaders and squad leaders who are unengaged must guard against enemy movement in their own sectors.

6. Riflemen must be disciplined in the use of automatic fire. Experience confirms that semiautomatic fire is more effective than automatic fire. You must insure that your men understand that the most effective way to cover a target is by using systematic, semiautomatic fire—selective firing, making every shot count.

7. You must have a simple and effective means of controlling the fires of your platoon to insure that your frontage is properly covered.

a. Standing operating procedures (SOP). SOPs are actions that your squad leaders and platoon members perform automatically without command. Their use eliminates many commands and simplifies your job of control, but they must be well understood by all members and thoroughly rehearsed during training.

b. Wire. When you have the time and equipment available, wire is an excellent means of communicating instructions to your squad leaders and key crew-served weapons. Remember, however, that wire is easily broken by artillery, small arms, grenades, etc., so you must insure that you have a back-up plan.

c. Radio. Use of your squad radios will assist you in controlling your platoon during the battle. Insure, however, that you have an alternate plan in case of jamming or radio failure.

d. Oral. This is an effective method of control unless the squad leaders are too far away or the noise of battle makes it impossible to hear.

e. Prearranged signals. These are either visual or sound signals such as pyrotechnics or blasts on a whistle. These signals should be included in the company or platoon SOP and must be clearly understood by all platoon members.

f. Arm-and-hand signals. This is an effective method of control when the squad leaders can see you.

g. Personal contact. In many situations, you will have to move from squad leader to squad leader to issue instructions.

h. Passing orders from man to man. This is an effective method when the order is simple and time is not critical.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, pages 5-23 thru 5-36)
FM 7-8, The Infantry Platoon and Squads (TBP)
FM 71-1, The Tank and Mechanized Infantry and Company Team, Sep 77, (app D, page D-1)

TASK NUMBER: 071-326-3007

DETERMINE TECHNIQUES OF MOVEMENT FOR MECHANIZED INFANTRY PLATOON

CONDITIONS:

As the platoon sergeant/acting platoon leader of a mechanized infantry platoon conducting movement to contact.

STANDARDS:

Determine and implement platoon movement technique well enough to:

1. Properly employ the correct movement technique, dependent upon the likelihood of enemy contact.

2. Insure proper dispersion is maintained between vehicles so that contact is made with the smallest force possible.

3. Be able to support the lead element by fire, maintain positive control, and achieve simplicity in organization and control.

PERFORMANCE MEASURES:

The mechanized infantry platoon moves mounted until forced to dismount. It adjusts its technique of mounted movement to the likelihood of making contact with the enemy.

LIKELIHOOD OF CONTACT	TECHNIQUE OF MOVEMENT
Not Likely	**Traveling**
Possible	**Traveling Overwatch**
Expected	**Bounding Overwatch**

When using any of the three techniques of movement, terrain driving should be used, especially when contact is possible or expected. The platoon should use a route which affords the best use of available cover and concealment. The following terrain driving rules will reduce exposure to effective enemy fire:

1. **Use all available cover and concealment.**

2. **Never skyline.**

3. **Don't move directly forward from a defilade firing position.**

4. **Cross open areas quickly.**

a. Traveling. Use the traveling technique (figure 1) when speed is important and contact with the enemy is not likely. The platoon moves on a column axis, staggered laterally, with intervals of 50 meters to 100 meters between carriers, terrain permitting. As contact is not likely and speed is necessary, the platoon leader normally rides in the lead vehicle where he can best control movement. The platoon sergeant rides in the third carrier from which he can see the platoon leader, see the last carrier, and help control the trailing squads.

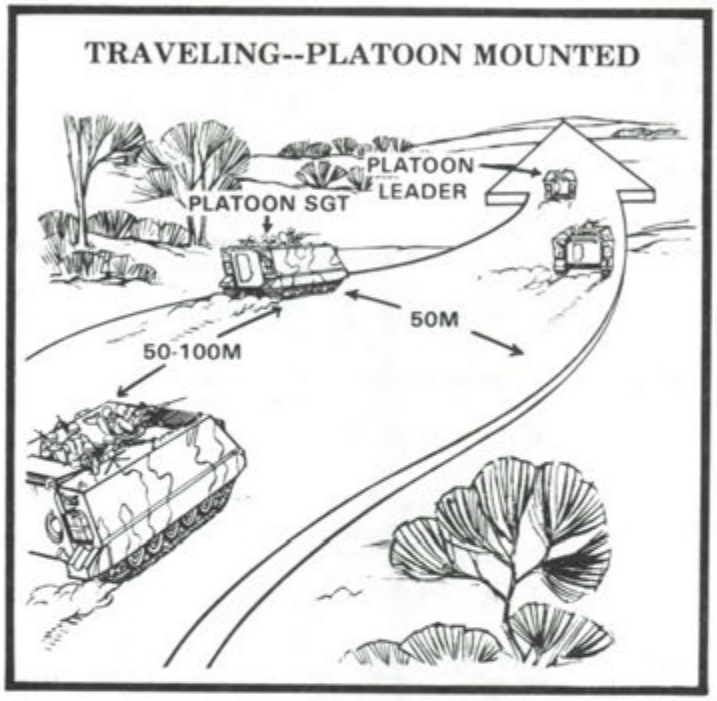


Figure 1.

b. Traveling Overwatch: Use the traveling overwatch technique (figure 2) when the likelihood of enemy contact is possible, but not expected. Precautionary measures are justified, but speed is desirable. The distance between the lead APC and platoon leader (second APC) is from 100 meters to a maximum of 400 meters, and the distance between other APCs is from 50 to 100 meters. These distances will vary based on terrain, visibility, and the requirement to support the lead APC by fire and/or maneuver. The distance between the lead APC and the platoon (-) must be enough so that fire directed at the lead APC will not prevent the platoon (-) from supporting it. Movement is continuous and maximum use is made of natural cover and concealment. Therefore, this is not a fixed "formation." The actual positioning of vehicles and distances between them will vary considerably. The platoon (-) keys its movements on the lead squad and will vary its rate of movement as required to maintain a proper distance. The lead squad may reduce its rate of movement to allow the platoon (-) to reduce the interval when visual contact may be lost. This technique lets the platoon find the enemy with the lead squad only, leaving the platoon (-) free to support the lead squad by fire and/or to maneuver against the enemy if contact is made.

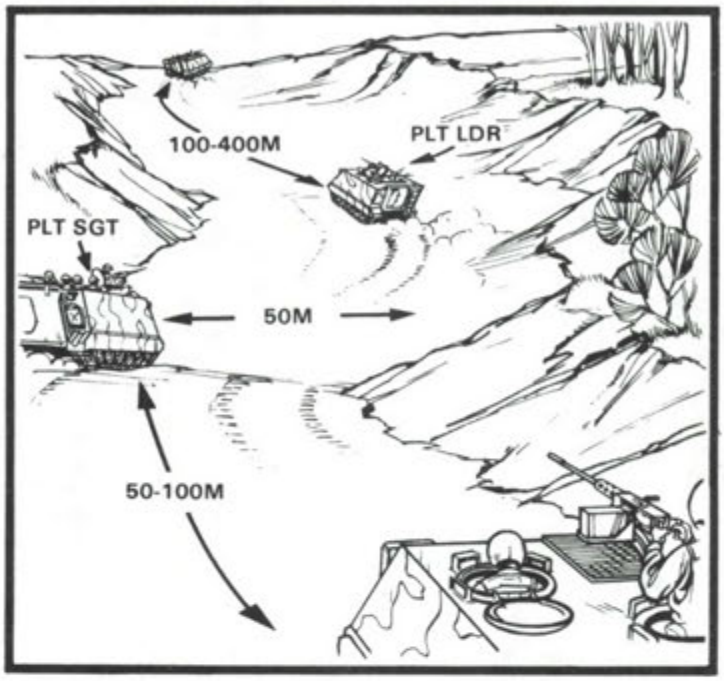


Figure 2.

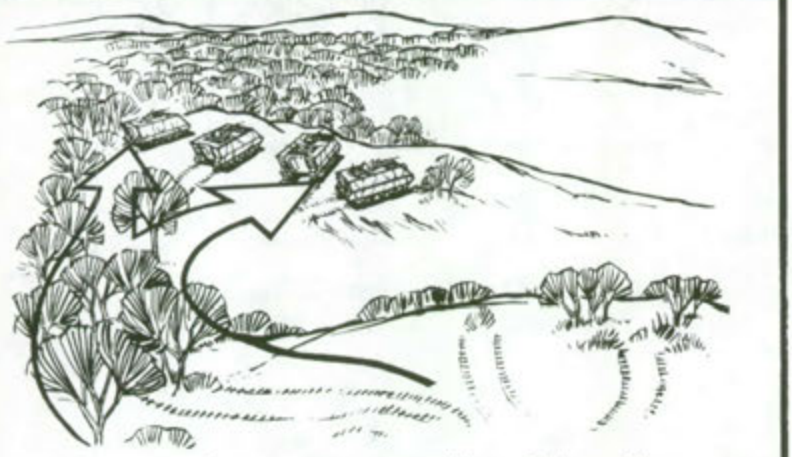
c. Bounding Overwatch: Use bounding overwatch (figure 3) when contact is expected. The basic pattern is as follows:

(1) The Platoon (-). The platoon (-) covers the forward progress of the bounding squad from a covered and concealed overwatch position offering observation and fields of fire. It can immediately support the bounding squad by fire and/or maneuver if it makes contact. Part or all of the platoon (-) may be dismounted if required to support most effectively the bounding squad.

(2) The Bounding Squad. If contact with the enemy is made, it normally will be by this single squad as it moves to and secures a position from which the platoon (-) will be able to overwatch the next bound. The length of each bound is closely tied to terrain and the ability of the platoon (-) to cover the squad as it moves to and occupies the new position. When it occupies the new position, the bounding squad dismounts personnel, if required, to provide security or better observation, or to man weapons. If the new position is relatively open, the bounding squad may not have to dismount to secure the area. It stays mounted and each man in the cargo hatch is given a sector to observe. As soon as the bounding squad secures the position, the rest of the platoon moves forward and the process is repeated.

1

One squad bounds, platoon (-) overwatches.



2

Bounding squad secures next position, platoon (-) moves forward, platoon leader issues order for next bound.

3

One squad bounds, platoon (-) overwatches.

Figure 3.

SUMMARY OF THE BASIC CONSIDERATIONS FOR MOVEMENT

1. Make maximum use of all available cover and concealment.

2. Move on a column axis. Remember that there are no fixed movement "formations." Along the column axis, the platoon as a whole, as well as individual vehicles, moves so as to use all available cover and concealment.

3. Make initial enemy contact with a single squad.

4. Insure positive control by maintaining visual contact and issuing clear, complete orders.

5. Maximize the mobility of the APC (because bounding overwatch is the slowest technique of movement, use it only when absolutely necessary).

6. When in the bounding overwatch, always have at least one squad in position to fire and/or maneuver in support of the lead squad.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 3, pages 3-5 thru 3-9)

TASK NUMBER: 071-326-3008

CONTROL PLATOON APCs IN THE DEFENSE

CONDITIONS:

In a tactical environment, given the carrier team of a mechanized infantry platoon and an order from your platoon leader to position the carrier team in defensive positions covering a designated avenue of approach.

STANDARDS:

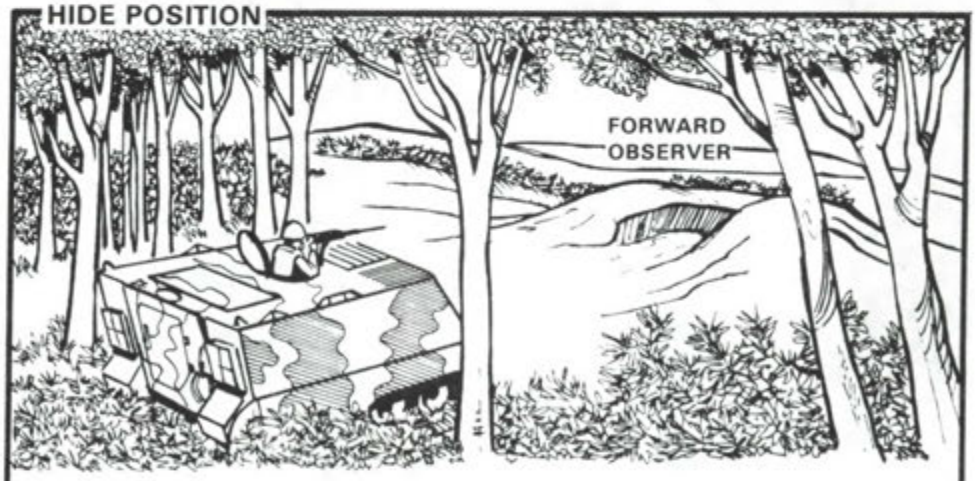
1. Determine the best tactical position or combination of positions for each APC in your platoon so that each has cover, concealment, and a good field of fire, and best supports the platoon in accomplishing its mission.

2. Supervise and control the occupation of the defensive position IAW the performance measures below.

PERFORMANCE MEASURES:

1. The tactical positions for APCs are:

a. Hide. The vehicle is completely covered and concealed. However, fields of fire are not available to the caliber .50 MG or Dragon (figure 1).



A completely covered and concealed position from which the vehicle must move to shoot.

Figure 1.

b. Hull-Down. The vehicle is covered from the enemy but clear fields of fire are available for either the MG or Dragon (figure 2).

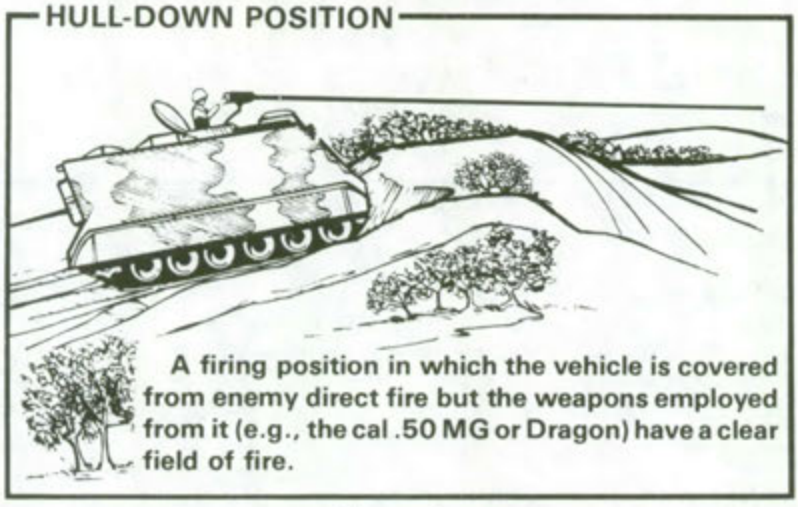


Figure 2.

2. Selection and occupation of positions:

a. Be careful not to destroy camouflage when moving into an area. Pick vehicle positions before moving into the area, then move the vehicles into positions. Remove or camouflage track marks to decrease the chance of detection by aerial observation (figure 3).

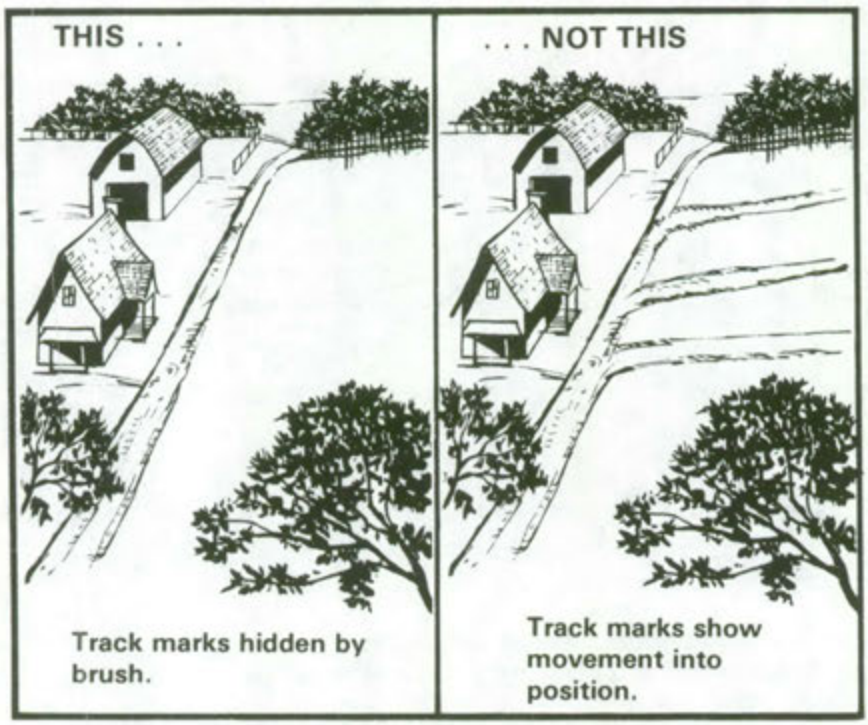


Figure 3.

b. Insure carrier team can support the maneuver element by fire.

c. Carrier team should be able to rapidly rejoin the maneuver element using covered and concealed routes.

d. Position APCs on terrain which takes maximum advantage of the longer range fires of both the Dragon and the caliber .50 MG.

e. Ideally, targets should be engaged from hull-down firing positions. However, if a hull-down position is not available, the APC should occupy a hide position with an observer placed forward. When a target approaches, the APC is quickly moved to a firing position from which it can best shoot the target. After firing, the APC may quickly move to an alternate or hide position to evade counterfire (figure 4 and 5).

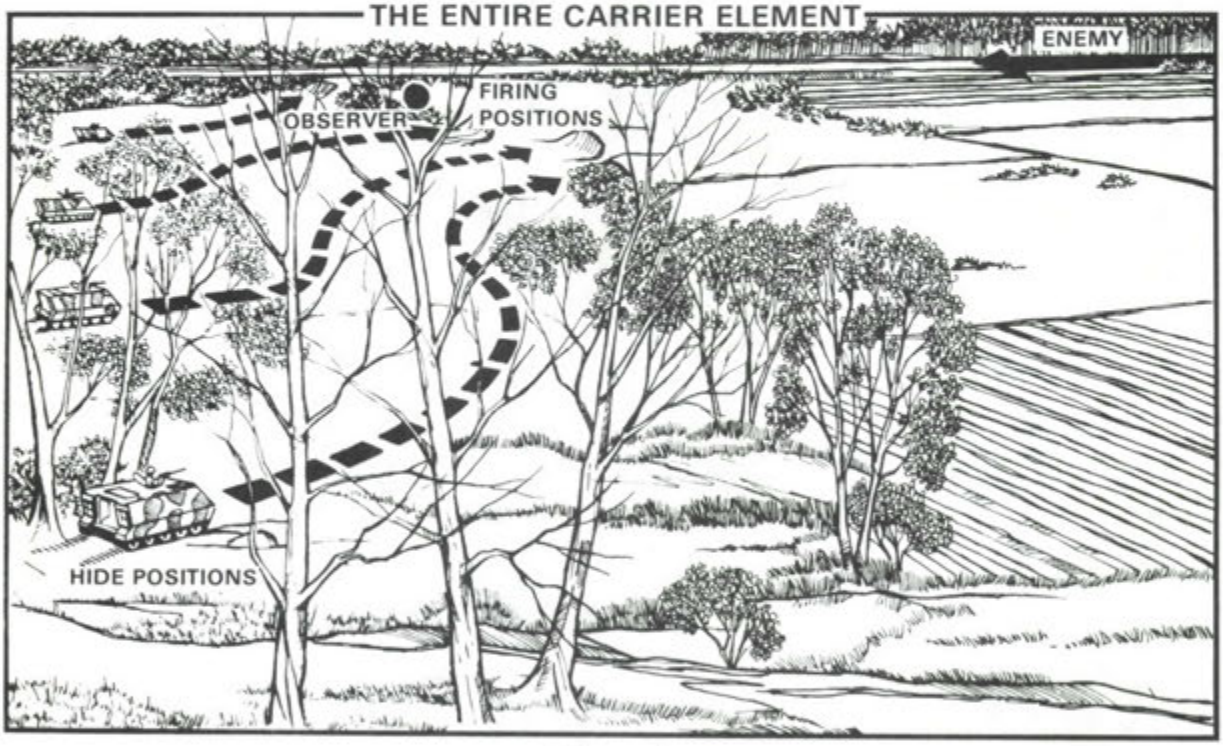


Figure 4.

f. Plan for the preparation and occupation of alternate and supplementary positions as designated by the platoon leader. Care must be taken to select and recon covered and concealed routes to these locations.

g. Plan and coordinate both direct and indirect fires. Assign sectors of fire to each carrier team and insure that accurate range cards are constructed. Plan use of all available indirect fires in your sector through the company fire support team.

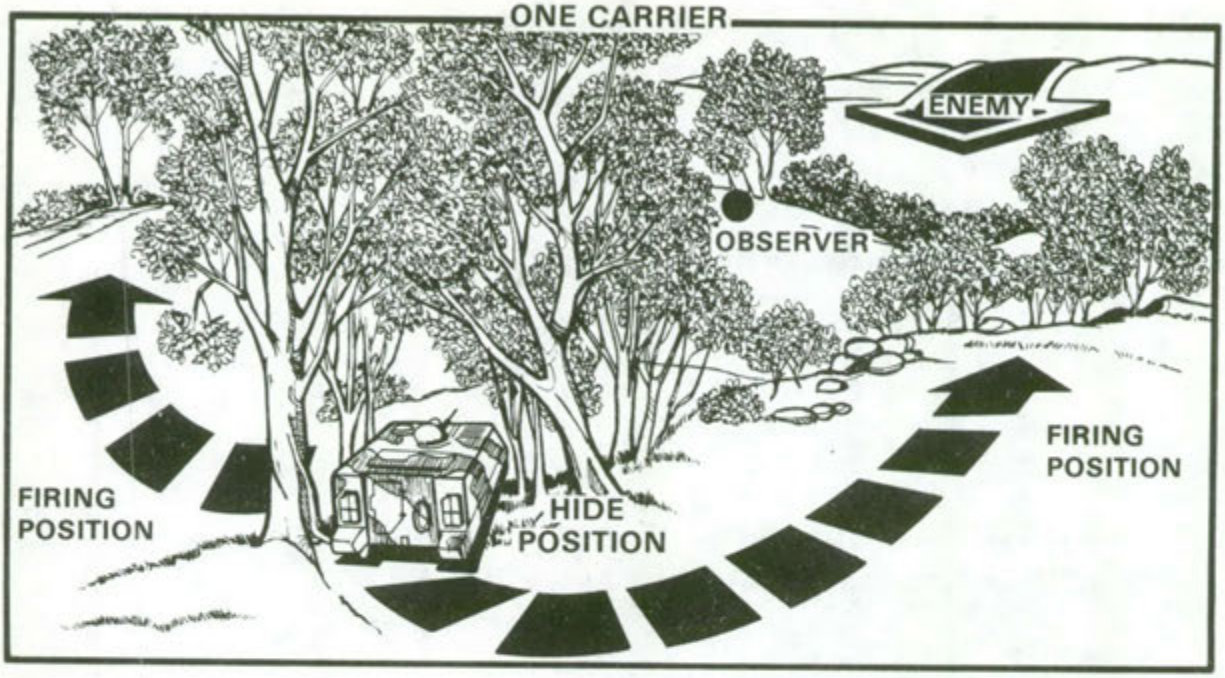


Figure 5.

h. Use reliable means to communicate with your observers and with the remainder of the platoon to insure timely and effective engagement of targets. Check your communications periodically to be sure they will work when you need them.

REFERENCES:

FM 7-7, The Mechanized Infantry Platoon and Squad, Sep 77 (chap 5, pages 5-17 thru 5-22)

CHAPTER 2

LIGHT WEAPONS INFANTRYMAN

SECTION VIII

OPERATIONS

TASK SUMMARIES

TASK NUMBER: 071-332-5000

PREPARE AN OPERATION OVERLAY

CONDITIONS:

During battalion combat operations, CPX, FTX, or a contingency in peacetime, given a complete copy of an OPORD your unit is to execute, commander's S3's guidance (to include time available for preparation), overlay paper, tape, map of operational area, colored pencils (red, black, blue, green, yellow), No. 2 pencil, coordinate scale, and appropriate symbols.

STANDARDS:

Within the time specified by the commander, the overlay must be prepared using the appropriate overlay symbols and techniques as outlined in the performance measures below.

PERFORMANCE MEASURES:

1. **General.** Overlay techniques involve the use of military symbols to portray in a condensed form the plans, orders, and information concerning a military situation/operation.

2. **Relationship of overlay to written portion.** See task: **Prepare, Assemble, and Distribute an Operation Plan/Operation Order/ Annex.**

3. **Orientation.**

a. Orient the overlay material over the map area to be annotated and, if possible, attach it to the map temporarily with tape.

b. Trace the grid intersections nearest the opposite corners of the overlay and label each with the proper grid coordinates (figure 1).

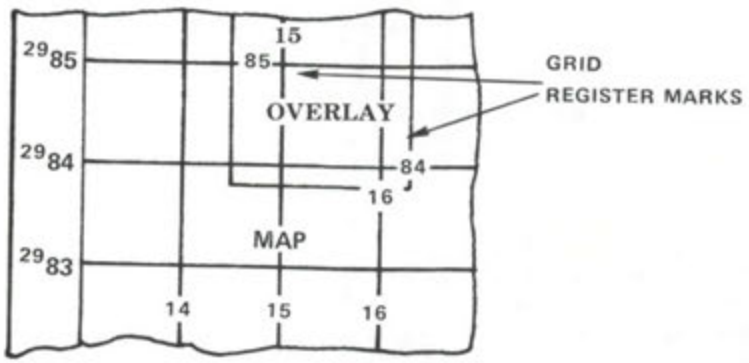


Figure 1. Registering the overlay.

4. **Plotting of new detail.** Use colored pencils or markers in standard colors when available to plot any detail (para 3-2, FM 21-30); otherwise, plot the activities you wish to show with a pen or pencil that makes a lasting mark without cutting the overlay. Use standard military symbols where possible. When nonstandard symbols are invented by the author, they must be identified on the edge of the overlay. Show only that detail with which the document is directly concerned.

5. **Classification.** See task: **Prepare, Assemble, and Distribute an Operation Plan/Operation Order/Annex.**

6. **Overlay techniques.**

a. Use of Solid and Broken Lines. When the location of a unit installation or coordinating detail (for example, line of departure or boundary) is in effect and will continue, or is effective by the order being prepared, the appropriate symbol is shown by solid lines. The symbol indicating any proposed or future location, or coordinating detail to become effective at a later time, will be shown by broken lines. An exception to this rule: **the No Fire Line (NFL) is always a dashed line.**

b. Boundaries. Boundaries show areas of responsibility. In the offense, these are referred to as **zones of action.** In the defense and retrograde operations, they are referred to as **sectors of responsibility.** When described orally, lateral boundaries are described from rear to front in the offense and from front to rear in the defense and retrograde.

(1) Rear boundaries.

(a) Rear boundaries are used when the area of responsibility of forward units must be precisely defined. When a rear boundary is not delineated, the rear limit of a unit's area of responsibility is determined by visualizing a rear boundary drawn (preferably along a natural terrain feature) generally parallel to the front, and connecting at the rearward limit of the unit's lateral boundaries.

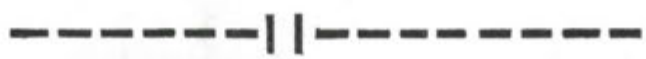
(b) If a rear boundary is shown, the size indication along the boundary corresponds to the lower unit. Arm or branch are shown when required to prevent confusion.

EXAMPLE: 

(2) Lateral boundaries.

(a) Desirably, lateral boundaries are drawn along terrain features easily recognizable on the ground, and are situated, if possible, so that key terrain features, avenues of approach, and rivers are wholly inclusive to one unit. They are shown by a solid line if presently in effect or made effective by the order being prepared. Their use is based on the techniques and tactics peculiar to the type of tactical operation in which they are used.

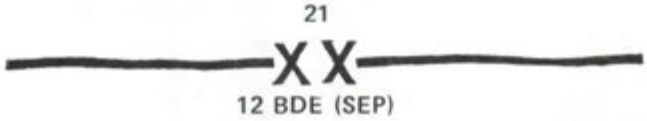
(b) Future or proposed boundaries are shown by a broken line and labeled to indicate the effective time, if appropriate.

EXAMPLE: 

(c) A symbol is placed on the boundary to show size and designation of the highest units that share the boundary.

(d) When showing lateral boundaries for units of unequal size, the symbol of the higher unit is shown and the designation of the lower is given completely to show its size.

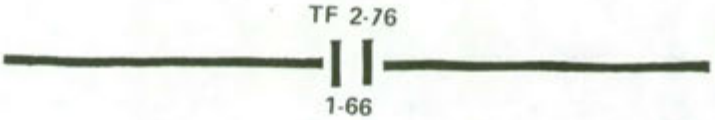
EXAMPLE: Boundary between 21st Inf Div and 12th Inf Bde (Separate).



(3) On overlays or sketches accompanying written or oral orders that specify task organization:

(a) Unit designations on battalion boundaries will indicate the numerical designation. If the battalion is organized into a task force, the letters "TF" will precede the numerical designation. A unit symbol is identified as a task force by placing the symbol ⌐¬ over the unit size designation (⊠). Company boundaries will be labeled with the appropriate letter unless the company is organized into a team. In the latter case, the boundary will be labeled with the abbreviation "TM" and the letter designation or a code name. On other boundaries, only the unit designations for clarity are required. Branch designations may be added when necessary for clarity. When unequal size units have a lateral boundary in common, the designation of the smaller unit is spelled out.

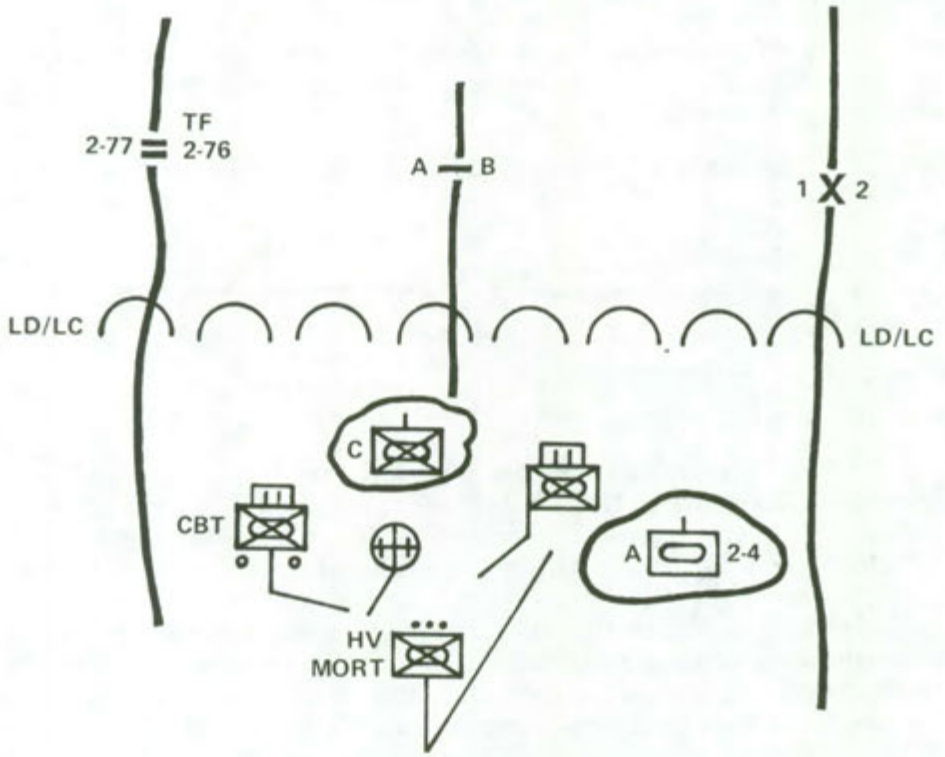
EXAMPLE: Boundary between a task force under the control of the commander of the 2d Bn (Mech), 76th Infantry (TF-2-76) and the 1st Bn, 66th Inf.



EXAMPLE: Boundary between a team under control of the commander of A/22-77 (TM A) and B/2-77.

(b) Since the parent unit designated is shown on boundaries, organic subordinate unit and activity symbols within these boundaries need not indicate the parent unit.

EXAMPLE:



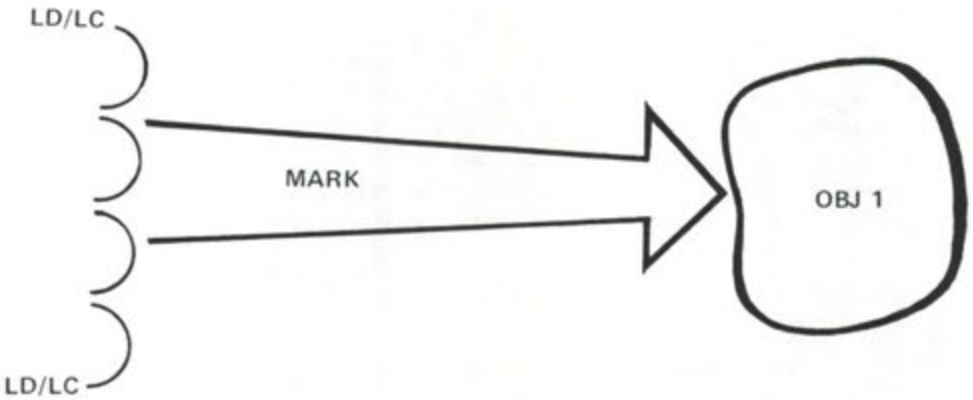
c. Axis of Advance.

(1) An axis of advance arrow should extend only as far as this form of control is essential to the overall plan. Normally, it is depicted from the LD to the objective following an avenue of approach. It indicates that the commander may maneuver his forces and place his fires freely to either side of the axis, to avoid obstacles, to engage the enemy, or to bypass enemy forces of such strength that could not threaten his security or jeopardize the accomplishment of his mission. The commander insures that such deviation does not interfere with adjacent units, that his unit remains oriented on the objective, and that the location and size of the bypassed enemy forces are reported to higher headquarters. Boundaries may be assigned as an additional control measure when using the axis of advance if the situation so dictates.

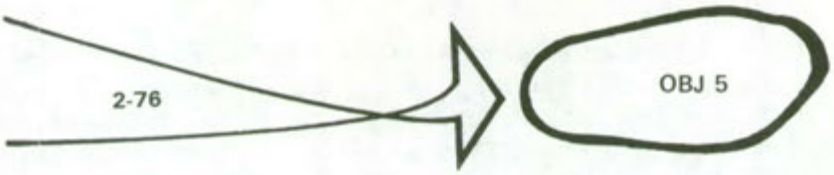
(2) A commander need not employ his unit in a single column on his assigned axis; he may designate the assigned axis as the axis of advance for one maneuver unit and designate an additional axis for another maneuver unit, or he may designate two axes of advance following, generally, the assigned axis. Care must be exercised in assigning additional axes to minimize the possibility of interference with adjacent units.

(3) In armor and mechanized operations, an axis of advance is most frequently used against light, disorganized or discontinuous enemy resistance, such as may be encountered in the exploitation or pursuit, and where the need for a closely coordinated attack does not exist.

(4) The technique of depicting an axis of advance is shown below. The axes of advance is identified by either a code name or unit designation.



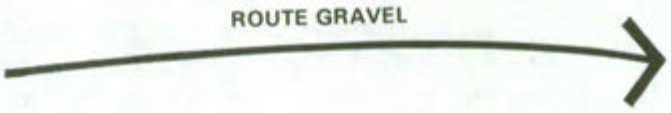
(5) To differentiate between a ground axis of advance and an air assault axis of advance, a twist is placed in the shaft of the open arrow, symbolic of a propeller.



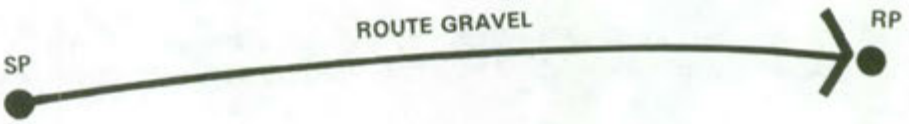
d. Route of March.

(1) Arrows are used to show route of march. They should be labeled with the word "ROUTE" and a code name or unit designation.

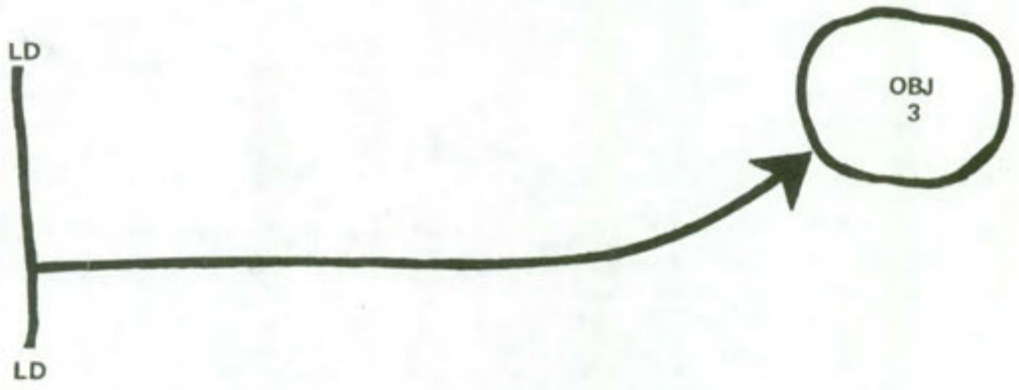
(2) A route of march will usually be designated for short tactical moves.



(3) If start points (SP) and release points (RP) are used in conjunction with a route of march, the following graphic portrayal will apply:

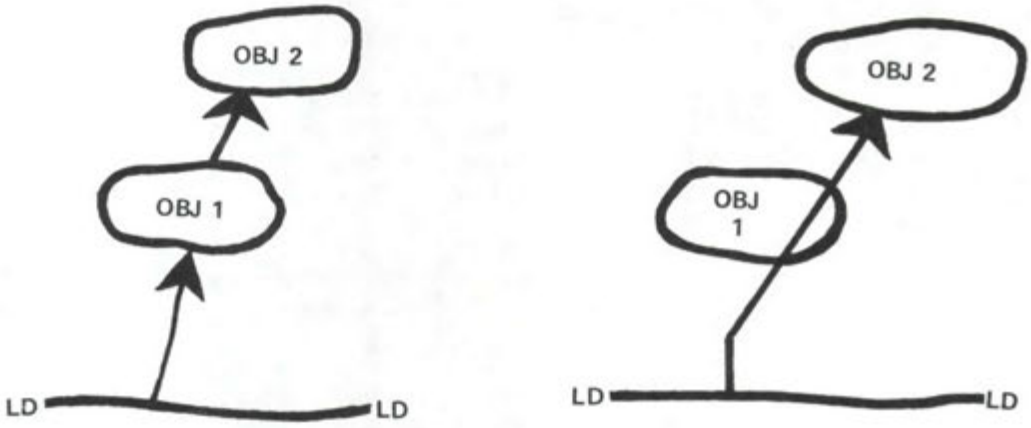


e. Direction of Attack Arrows. This control measure is used when the commander desires to specify the direction in which the center of mass of a subordinate unit must move in an attack to insure the accomplishment of a closely coordinated plan of maneuver (for example, in a night attack or counterattack). A direction of attack arrow should extend from the line of departure to the objective and is not labeled.



(1) The arrow should be used only where necessary because it restricts the maneuver of the subordinate unit.

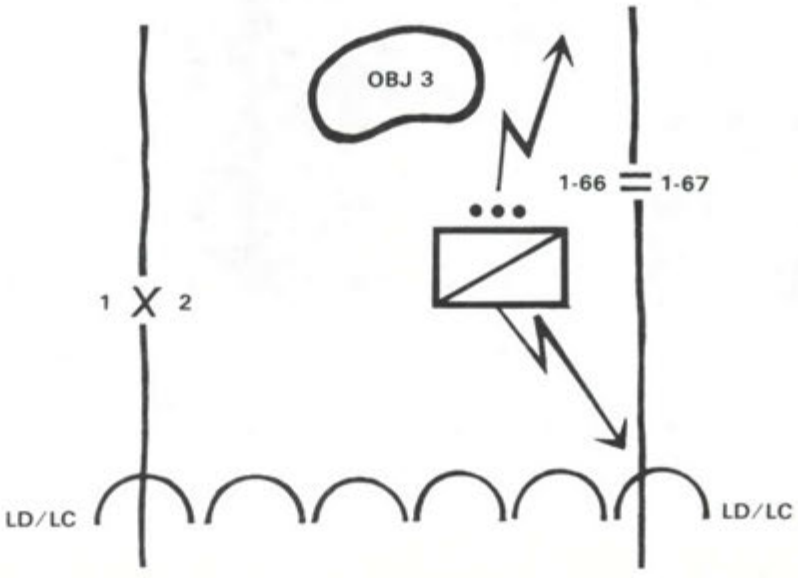
(2) When a unit is directed to seize successive objectives with its main attack along a certain line, either one arrow extending through the objectives to the final objective or a series of arrows connecting the objectives may be used.



(3) The size of the arrow does not indicate whether the subordinate unit is making the main or a supporting attack for the command as a whole.

f. Graphic Portrayal of Units Assigned a Security Mission.

(1) To show the general location of a unit with a security mission, arrows indicate generally the terrain over which the unit will operate and the farthest extension of its mission.



(2) The primary security mission will normally be depicted on an operation overlay. Secondary or proposed missions will not be depicted on an overlay.

g. Graphic Portrayal of Supply Routes.

(1) The main supply route (MSR) is defined as: "The route(s) designated within an area of operations upon which the bulk of traffic flows in support of military operations." **NOTE: The term is not used below division level.**

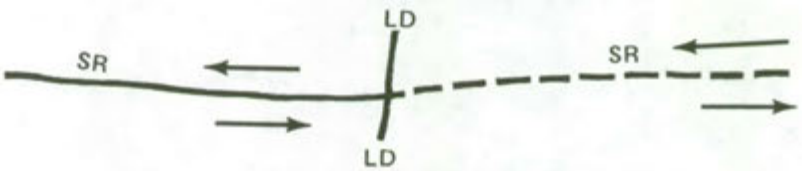
(a) In the defense, division will extend the MSR forward to the brigade trains. The brigade's supply route (SR) will extend from the brigade trains to the battalion trains. The battalion's SR will extend from the battalion trains to a point at the rear of the forward company defense sectors.

(b) In the offense, the proposed SR may be shown forward to the objective, or as far as the S4 can visualize the combat service support for the operation. Forward of the LD, it is shown as a broken line.

(2) The symbols to be used by division, brigade, and battalion to depict the MSR are as follows:

Division Main Supply Route (MSR)

Brigade/Battalion Supply Route (SR) (OFFENSIVE ACTION)



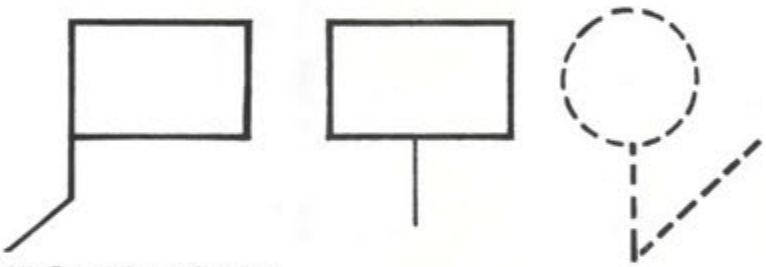
(3) At battalion and brigade level, combat service support facilities may be depicted on the operation overlay or their locations disseminated by the S4, as appropriate.

h. Graphic Portrayal of a Unit Location.

(1) To show the location of a unit on a overlay, the symbol should be drawn so that the center of the symbol corresponds with the coordinates at which the unit is located.

(2) To show the location of a trains area, observation post, or a logistical activity, the center of the symbol also should correspond with the coordinates at which the element is located.

(3) The offset technique is used for clarity when space precludes normal placement of symbols. Offset staffs may be "bent" as required. The offset staff is dashed for future or proposed locations. Offset staffs extend vertically from the bottom center of the symbol (except for Cps) and the end of the offset staff indicates exact locations of CPs and aid stations and **center of mass** for other units of installations. The staff for a CP symbol is always located on the left edge.



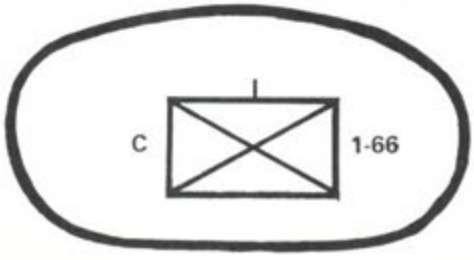
(4) Location of units.

(a) The locations of attacking units are normally indicated by boundaries (and CP symbols when the locations of the CPs are known) or by unit symbols.

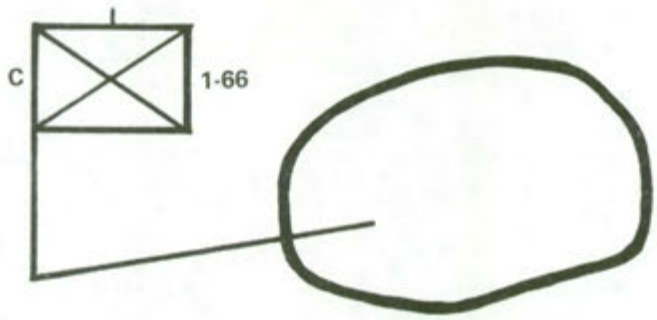
(b) The location of the reserve is indicated on the operation overlay by an assembly area symbol and by a CP or unit symbol.

(c) Graphic representation of reserve in the offense:

-1. Reserve location, C/1-66.



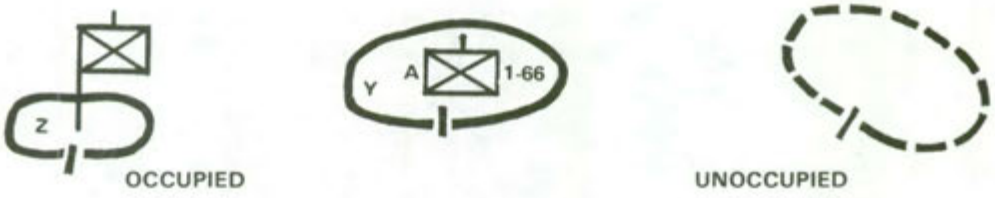
-2. Command post, C/1-66 (reported).



(d) Reserve units of a force assigned a defense position or battle position are normally shown by a line enclosing the area occupied or to be occupied, i.e., a "goose egg." These positions may be numbered or lettered for convenient reference.

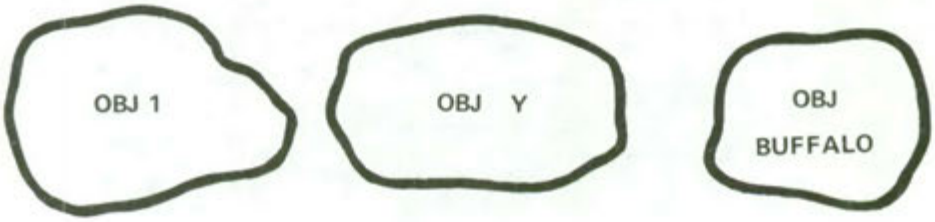
(e) Occupied and unoccupied company assembly area (reserve location):

(f) Occupied and unoccupied reserve company battle position:



i. Objective(s).

(1) Each objective is identified by the abbreviation "OBJ" and a number, letter, or name designation.

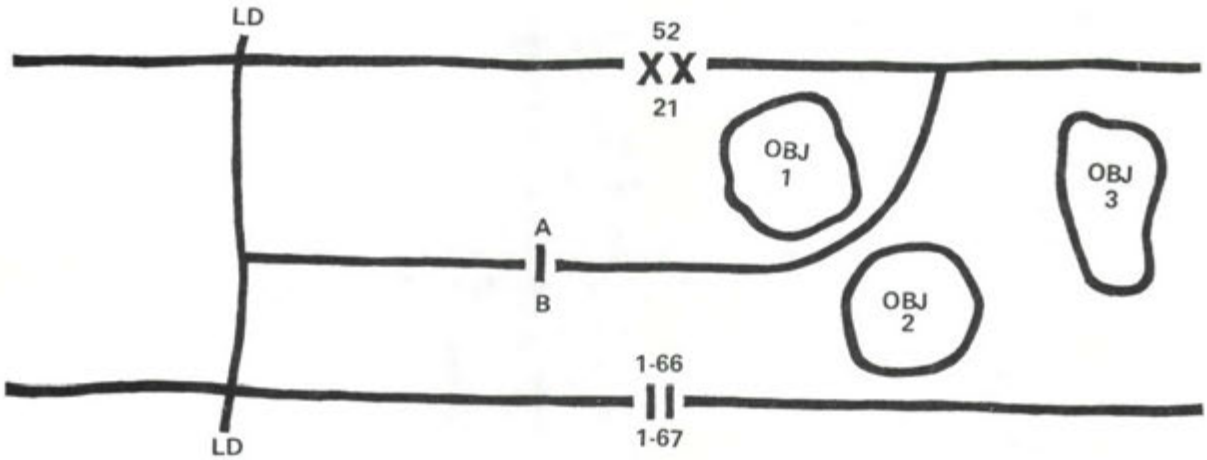


(2) An objective assigned by higher headquarters may be given entirely to one subordinate unit or it may be divided. If divided, the objective may be shown graphically as separate objectives and numbered accordingly, or it may be divided into two objectives by a boundary line.

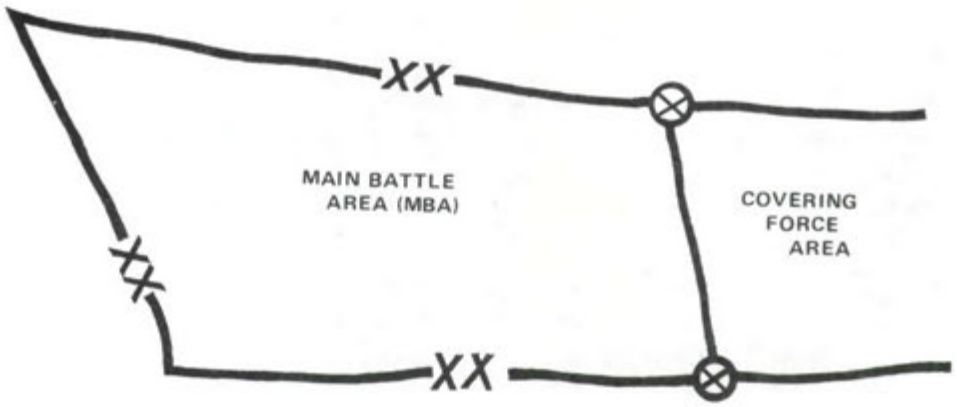
j. Pinching Out a Unit.

(1) This type operation is indicated by drawing the boundary across the front of the unit, usually along a well-defined terrain feature such as a stream, ridge, or highway.

(2) The following example indicates that Co A will be pinched out after seizing Obj 1; Co B will seize Obj 2 and continue the attack to seize Obj 3.



k. Defensive Battlefield. The defensive battlefield is organized into the covering force area and the main battle area.



l. Control Measures.

(1) Line of departure. The line of departure (LD) serves as a control measure to coordinate the advance of the attacking units. Desirable characteristics:

(a) Clearly defined on the ground and on the map.

(b) Approximately perpendicular to the direction of attack.

(c) Under control of friendly units.

(d) The LD is marked on **both** ends.

(2) Line of contact.

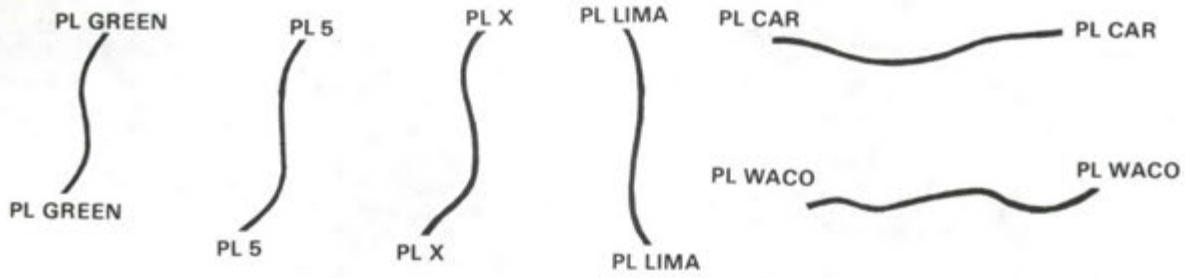
(a) When units are in contact with the enemy, the front line will be shown as a series of arcs and the ends of the arced line will be labeled "LC."

(b) If the line of contact is used as a line of departure, it will be marked "LD/LC."

(c) If the line of contact is not used, the line of departure will be shown by a solid line marked "LD."

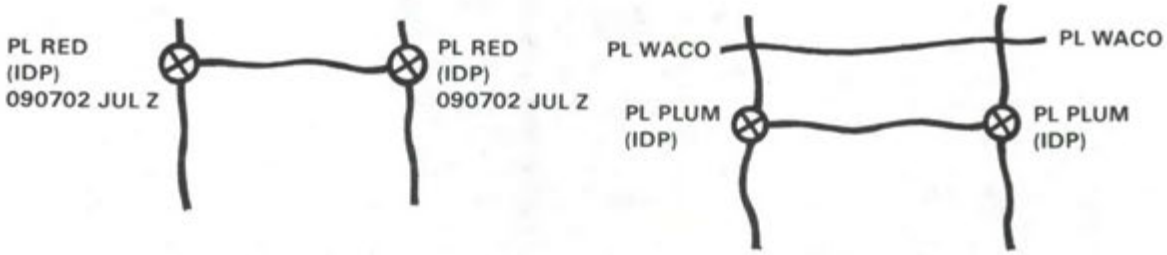
(3) Phase line(s) (PL). Phase lines are used to control progress of units and for reference in issuing orders or receiving reports. They should be easily recognized terrain features normally perpendicular to the direction of advance. A PL is also used to control fires, unit movement, and even limit the advance of attacking elements. Units report the arrival or clearance at a phase line but do not halt unless ordered to do so. PLs are drawn as a solid line with the letters PL at each end of the line or where appropriate to allow easy identification. A PL is identified further by a number, letter, or code name (which can be phonetic letters, colors, flowers, cars, or any code system) under or beside the PL abbreviation.

EXAMPLE: Phase Line(s)



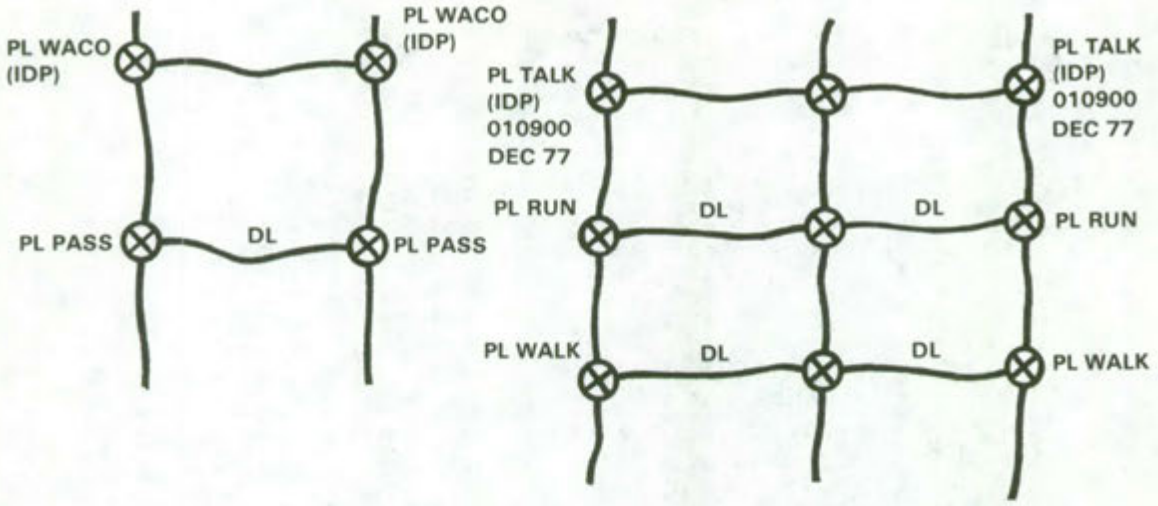
(4) Initial delay position (IDP). An IDP is that location at which a delaying action will begin, trading space for time. The delay sector is defined by boundaries. The initial and all subsequent delay positions can be related to as a time-phased FEBA. The initial and subsequent delay positions are specified and PLs may be used to report the progress of the battle. The enemy is held forward of delay lines until the specified time or until permission is granted to withdraw. The initial and successive delay positions are shown on boundaries by coordination points with a solid line between them. Although most IDPs are given a code name, they may have a number, letter, or a variety of code names. The letter abbreviation (IDP) can be to the flank (when at the flank it is in parentheses) of the coordination symbol or on the line itself. It will have its time phase indicated in date-time group fashion having a two-digit day and four-digit hour, both connected. The month indicator can be a three-letter type or completely spelled out, depending upon the desires of the commander. The letters "IDP" should be placed in parentheses between the line code name/letter number and the date-time group.

EXAMPLE: Initial Delay Position



(5) Delay lines (DL). These indicate a location at which a succeeding delay position is to be located. Delay positions (other than initial) are drawn the same with the exception that the letter abbreviation would be "DL" along the line and none would be placed to the flanks at the coordinating points.

(6) Coordinating points.



(a) Coordinating points are designated on boundaries as specific points for coordination of fires and maneuver between adjacent units. They are indicated whenever a boundary crosses the FEBA and should be indicated whenever a boundary crosses the covering force. Coordinating points are also used where DLs and internal boundaries intersect.

(b) Coordinating points should be located at some terrain feature easily recognizable both on the ground and on a map. Their location on a boundary indicates the general trace of the FEBA, covering force, or delay line (DL) as visualized by the commander who designates them.

(c) The symbol for a coordinating point is: ⊗ The symbol is labeled as appropriate.

(7) Checkpoints. Checkpoints, shown graphically by a circle with a number, letter, or code word inside, are easily recognizable terrain features or objects such as crossroads, churches, long buildings, stream junctions, hills, bridges, and railroad crossings. These may be selected throughout the area of operation. By reference to these points, the subordinate commander may rapidly and accurately report his location, or the higher commander may designate objectives, boundaries, assembly areas, phase lines, etc., to his subordinate commanders (example: (3)).

(8) Contact points. Contact points, shown graphically by numbered squares, are designated at points between units where the commander desires the units to make physical contact. Contact points may also be used to delineate areas of responsibility in specific localities when boundaries are obviously unsuitable; e.g., between elements of a flank guard (example: [2]).

(9) Passage point (PP). A passage point, shown graphically by squares with the letters "PP" and the number or letter designation of the passage point within the squad (example: PP 1), may be designated along the LD or the FEBA of the unit being passed through. The passage point(s) will be located where the commander desires subordinate units to actually pass.

(10) Linkup points. A linkup point should be an easily identifiable point on the ground and map that will be used to facilitate the joining, connecting, or reconnecting of elements of a unit or units. They are used when two or more Army elements are to join each other, when Army and sister service elements are to join each other, and when Army/sister service and allied elements are to join each other. The linkup is an operation in itself and may be conducted as part of an airborne or airmobile operation, an attack to assist in the breakout of an encircled force, on an attack to join an infiltrating force. The battalion would participate in a linkup as part of a larger force, or it may conduct a linkup within its own resources. Symbols for linkup points are a circle with a dot in the center. A number, letter, or name/code name is placed near the symbol in such a manner so as to insure it is refering to that symbol.

EXAMPLE: Linkup Points

(11) Point(s) of departure are normally shown along the LD for night attacks. They are graphically portrayed as a square continuing "PD" with a letter, number, or code name below. Center of mass of the symbol is its location.

REFERENCES:

FM 21-30, Military Symbols, May 70 (pages 4-1 thru 4-22, para 4-1 thru 4-30)
FM 71-2, The Tank and Mechanized Infantry Battalion Task Force, Jun 77 (app N)

TASK NUMBER: 071-332-5001

PREPARE, ASSEMBLE, AND DISTRIBUTE AN OPERATION PLAN/OPERATION ORDER/ANNEX

CONDITIONS:

During battalion combat operations, CPX, FTX or peacetime contingency, given all items of information necessary for a basic five-paragraph operation order and selected annexes, appendixes, and tabs; classification of annexes/appendixes and items of information; name of S3 and commander; downgrading instructions for classified items; oral instructions (including time available) from the commander/S3; pencil or typewriter; paper; chapter 1 and annexes D and F, FM 101-5, Staff Officer's Field Manual.

STANDARDS:

1. Within the time specified by the commander's guidance, items must be correctly sequenced into the basic five-paragraph operation order.

2. Annexes and appendixes must be properly labeled and sequenced.

3. The operation order/operation plan:

a. Must follow format specified in FM 101-5, Staff Officer's Field Manual.

b. Must possess correct classification and downgrading instructions.

c. Must be properly authenticated.

d. Must contain correct distribution instructions.

e. Must be completed and distributed in time to allow the accomplishment of the mission.

PERFORMANCE MEASURES:

1. **Operation orders.** Written operation orders or plans always follow a prescribed format which contains a classification, heading, body, and ending as outlined in figure 4. The elements of the format are discussed in subsequent paragraphs.

a. **Classification.** Operation orders or plans are classified in accordance with appropriate regulations. For training purposes, when there is no actual classification, the word "Classification," enclosed in parentheses and underlined, is shown at the top and bottom of each page of the order, to confirm that the classification was not inadvertently omitted.

OPERATION ORDER/PLAN FORMAT
(Based on STANAG 2014, 3d Edition)

(Classification)

(Changes from oral orders)

HEADING

Copy No_____of_____copies
Issuing headquarters
Location of CP
Date/Time Group
Message Reference No.

OPORD No./OPLAN No. (Code Name)

Reference:

Time Zone Used Throughout the Order:

Figure 1. Heading OPORD.

b. **Heading.**

(1) Reference to oral orders. A reference to oral orders is made whenever oral orders have previously been issued for an operation and the written order is published to either confirm or change the oral order. If there was no oral order, no statement is made. In the case of no change, the statement will appear as "(No change from oral orders)." If there is a change, a statement such as "(No change from oral orders, except paragraphs 1c, 3b, c and e)" will be used. **Entries of this type are always enclosed in parentheses.**

(2) Copy No_____of_____copies. The issuing headquarters assigns a copy number to each copy of a written order (or plan). A record is maintained, showing the number of the specific copy(s) issued to each addressee. The copy number is entered by hand when the copies are ready for distribution (also see paragraph 6 below).

(3) Issuing headquarters. The official designation of the organization issuing the order is always shown; e.g., "1st Bn, 66th Inf," or "TF 2-76," etc.

(4) Location of CP. The location (CP location) of the headquarters issuing the order is identified by coordinates (lettered prefix followed by a six-digit grid coordinate). The name of the town or place will normally be included (if applicable) and the name of the country may be included. Example: "NA698432 (BITBURG, GERMANY)."

(5) Date-time group. The date-time group consists of six digits, followed by the time zone designator, month, and year. Example: "061030R Sep 80." The date-time group is the date and time the order is effective, unless otherwise stated in "Coordinating Instructions." Furthermore, it is the date-time attachments and detachments are effective, unless otherwise stated in "Task Organization"; paragraph 1c, "Attachments and Detachments"; or paragraph 3, "Coordinating Instructions."

(6) Message reference number. The message reference number consists of letters or numbers, or a combination of letters and numbers which permit the order to be acknowledged in the clear, using the message reference number. These letters and/or numbers should in no way refer to the fact that it is connected with an OPORD. Therefore, it is not advisable to have any continuity or similarity between the message reference numbers of successive orders nor should there by any association with any numbering system used by the unit message center in its distribution. The message reference number may be assigned by the S3 or a block of reference numbers may be assigned by higher headquarters, normally as part of the CEOI. All annexes and appendixes issued at the same time as the basic order and having the same distribution will bear the same message reference number as the basic order. Annexes and appendixes not issued at the same time as the basic order or having a different distribution will contain a message reference number **different** from the basic order. Examples of possible message references are: "BQR, 4826" or RF28." Acknowledgement may be made as follows: "This is R26. I acknowledge BQR, over."

(7) Title and number of orders or plans.

(a) Orders. Operation orders of an organization are numbered consecutively during the period of a calendar year. If two or more are issued on the same day, they are given consecutive numbers, e.g., OPORD 24, OPORD 25, etc.

(b) Plans. Operation plans are normally numbered consecutively during the calendar year and assigned a code name. When executed, the order of execution will specify the operation order number, e.g., "OPLAN 3 (COBRA) is OPORD 5 effective 070800R July." Normally the time of execution or H-hour would also be specified.

(8) Reference. The reference designates the map, sketch, or aerial photograph required for the operation. The country or geographical area, the map series, the scale, the name or number of sheets, and edition number

are given in sufficient detail to identify the exact reference used in preparation of the order. EXAMPLE: Reference Map, POLAND, Series M550, 1:50,000 PIESDA Sheet (7062), Edition I.

(9) Time zone used throughout the order. This item is always listed. The time zone letter designator is spelled out in capital letters, e.g., "ROMEO." The time zone letter designator need not be repeated in the body and ending of the operation order.

BODY

Task Organization:

1. SITUATION
   a. Enemy Forces.
   b. Friendly Forces.
   c. Attachments and Detachments.
   d. Assumptions.*
2. MISSION
3. EXECUTION
   a. Concept of Operation.
   b.
   c.
   d.
   —.

   Coordinating Instructions. (Always the last subparagraph.)
4. SERVICE SUPPORT
5. COMMAND AND SIGNAL
   a. Signal.
   b. Command.

Used only in an operation plan.

Figure 2. Body OPORD.

c. **Body.** The body consists of the task organization and five main paragraphs with each given a heading. These headings are written in capital letters. All major subparagraphs are also given headings.

(1) Task organization. The task organization indicates the tactical groupings resulting from the commander's internal organization for combat, the command relationship among the various tactical components, and the names or titles assigned to these groups, when applicable.

Example brigade task organization: (1st Bde, 57th Inf Div (Mech))

Task Org:

TF 2-79	TF 2-80	2-81 MECH
2-79 (-) B/2-6 Armor 1/C/2-23 Cav (OPCON) 1/C/57 Engr (DS)	2-80 (-) C/2-6 Armor 2/C/57 Engr (DS)	

TF ATLAS	Bde Con
2-6 Armor (-) A/2-79 C/2-80	C/2-23 Cav (-) (OPCON) 7-52 FA (DS) B/157 Avn Bn (OPCON) C/57 Engr (DS)

(a) Tactical groupings. The tactical groupings resulting from the commander's reinforcing, cross-attaching, and internal reorganizing are listed to reflect the initial organization for the conduct of a specific operation. The major subordinate units of the force issuing the order are normally listed alphabetically or numerically, depending on the level -- battalion or brigade -- in the same sequence established for paragraph 3: largest command headquarters, infantry, infantry (mech), airmobile infantry, airborne infantry, and armor. A control paragraph will also be shown as appropriate: "Bde Con" or "TF Con." Generally, only the combat and combat support elements are shown in the task organization at brigade and battalion level.

(b) Command relationships. Organic, attached, operational control (OPCON), and supporting units are indicated in the task organization as follows:

-1. Organic or attached elements are listed without any parenthetical expression. Identification of attached elements is indented and listed under the unit to which they are attached. A detachment of a major subordinate element is indicated by the use of a minus sign (-). Organic or attached elements may be shown further attached, OPCON, or in support of subordinate elements.

-2. Operational control elements are indicated with a parenthetical expression (OPCON). OPCON units may further be shown OPCON or in support of subordinate elements.

-3. Only supporting units that have been directed by higher headquarters to provide DS to the unit headquarters issuing the order (issuing unit) or that have been further directed to provide DS to subordinate elements of the issuing unit are shown in the task organization at battalion level. Supporting units providing GS and artillery units providing reinforcing and GS-reinforcing fires are not shown in the task organization. Reinforcing and GS-reinforcing artillery units will be placed

in paragraph 1b, "Friendly Forces," of the operation order/plan. Units providing DS will be qualified with a parenthetical term "(DS)" which denotes a command relationship of support between the supported and the DS unit and the degree of support that will be provided. The term "(DS)" in task organization does not denote a mission assignment to the supporting unit; mission assignment will be made in the next higher headquarters order and may be included in the appropriate annex to the issuing unit order/plan, e.g., engineer, fire support, barrier, etc. However, a supporting unit which is to provide DS will not be given a separate subparagraph in paragraph 3 of the issuing unit because these units remain under command of their parent units.

Task Org: (2d Bn, 76 Inf (Mech))

A/2-76 (-)
AT Sec

C/2-76

TF Con
1/A/52 Engr (DS)

B/2-76

TM ARMOR
A/2-4 Armor
1/A/2-76

(c) Names, titles and/or designations.

-1. Names, titles, and/or designations which are assigned to task forces/teams and are to be used during an operation are indicated in the task organization. To insure accuracy, the unit designations in the task organization are somewhat more precise than those required throughout the remainder of the order. Names or titles assigned to task forces/teams are used throughout the order; however, alphabetical or numerical designations of units may be abbreviated when used elsewhere in the order.

Example: (2d Bn, 76 Inf (Mech))

TM ALPHA
A/2-76 (-)
1/C/2-4 Armor

TM STRIKE
B/2-76
2/C/2-4 Armor

C/2-76 (-)

TM CLAW
C/2-4 Armor (-)
3/A/2-76
1/C/2-76

TF Con

NOTE: In the example above, 2-4 Armor is identified by branch, whereas 2-76 Mech is not. This is done to preclude misunderstanding about the branch/type/capability of nonorganic units.

-2. If desired, the rank and name of a task force/team commander may be shown parenthetically following the title. This is not a common practice, and is generally restricted to a task force/team comprising more than one major subordinate maneuver element, where a question would arise regarding identification of the commander, e.g., a task force comprising two battalions and commanded by a brigade XO.

(d) Considerations for task organization.

-1. When the issuing headquarters (supported unit) establishes a further command relationship, it is indicated in the task organization. The supported commander cannot assign a command relationship which is more restrictive than that received from higher headquarters, e.g., a unit in DS cannot further be attached or placed under OPCON.

-2. Organic units performing normal support/security missions (i.e., headquarters and headquarters company, combat support company, and subordinate elements such as the scout platoon, recon platoon, heavy mortar platoon, Redeye section, aviation section, and organic combat service support elements) are not included in the task organization, unless elements of these units are further attached or placed in DS of subordinate units, or detached from the issuing headquarters. In this case, they may be listed for the purpose of accounting for forces. Omission of these units from the task organization implies that they are performing their normal role. This will normally be the case. In the event these type units are performing a unique mission (combat) directly under battalion/TF control, they may be shown in task organization.

-3. The use of "(-)" in the task organization indicates that a unit has detached one or more of its major subordinate elements. The use of "(-)" in the task organization also denotes that a unit under OPCON of one headquarters has placed one or more of its subordinate elements under OPCON of another headquarters. The detached or OPCON element would then be shown in an attached or OPCON status under another unit within the task organization or listed in paragraph 1c, "Attachments and Detachments," if detached from the headquarters issuing the order. Similarly, since attached and OPCON units are listed under their control headquarters, the use of "(+)" is not necessary.

-4. When the task organization is lengthy and complex, it may be appended as an annex and referenced in the "Task Organization" of the order.

-5. It is not necessary to repeat task organization matters already known by subordinates. When minor adjustments (not more than two) to the present task organization are involved, only the changes themselves need be specified. For example, if the only change to the existing task organization for the operation is detaching the 1st Platoon from A/2-4 Armor and attaching it to A/2-76 (-), thus forming a company team which will be named "TM ALPHA," the task organization may be shown as follows:

OPORD Example:

Task Org: No change, except 1/A/2-4 Armor attached to A/2-76 (-) (Tm ALPHA).

(2) SITUATION. Paragraph 1 of the operation order has three subparagraphs which are entitled "Enemy Forces." "Friendly Forces." and "Attachments and Detachments." In operations plans a fourth subparagraph, entitled "Assumptions," is added. Paragraph 1 gives a brief description of the general situation so that subordinate commanders will understand the current situation. It is devoted exclusively to information and contains no orders.

(a) Paragraph 1a, "Enemy Forces."

-1. Paragraph 1a contains information of the enemy necessary for the accomplishment of the mission or consists of a reference to the method and/or document in which the information was disseminated. Normally, the S2 will, as a matter of routine, provide such information to subordinates by means of an intelligence summary (INTSUM), rather than wait until an OPORD is published. When an order is published, if subordinates have already received the enemy information pertinent to the operation, paragraph 1a consists of a reference to the method and/or document in which the information was disseminated. Since an INTSUM is normally prepared at regular intervals or as prescribed by unit SOP, and because it is desired that the recipient of an OPORD keep abreast of the current enemy situation as portrayed in each new INTSUM, reference to a specific INTSUM by number is generally avoided and the phrase "Current INTSUM" is used.

-2. When the information of the enemy which is to be included in the order is lengthy, it may be appended as an Intelligence Annex. Reference can be made to the annex and INTSUM in paragraph 1a.

-3. When it is desirable or necessary to include information of the enemy in the order, this information is given in the following sequence:

-a. Items pertaining to the enemy situation (composition, disposition, location, movement, morale, strength, status of supply).

-b. Enemy capabilities.

-c. Enemy's most probable course(s) of action.

(b) Paragraph 1b, "Friendly Forces." Paragraph 1b contains information concerning missions of higher, adjacent, supporting, and reinforcing units. Information should be limited to that which the subordinate commanders need to know to accomplish their assigned missions. These units are listed in the following sequence:

-1. Higher unit (as a minimum, the mission of the next higher unit).

-2. Adjacent units (listed in sequence: left, right, front, rear, as applicable).

-3. Supporting/reinforcing units (FA, ADA, others in any order).

-4. Since units providing DS to the issuing headquarters are listed in the task organization, they need not be repeated in paragraph 1b. One of the purposes of paragraph 1b is to portray those units which are providing support or reinforcement which is in addition to the support that is normally present. Units which are reinforcing or GS-reinforcing are listed in paragraph 1b. It would also be appropriate to list units which are in DS of the next higher headquarters. For example, artillery and engineer units in DS of a brigade provide a support advantage to the maneuver battalions attached to the brigade which is above the normal degree of support available, and, consequently, they would be listed in paragraph 1b of the battalion's operation orders. Organic divisional support units normally employed in GS of the division are not mentioned at brigade and lower levels since their employment in this role provides no unusual, distinct support advantage to brigades and subordinate commands.

(c) Paragraph 1c, "Attachments and Detachments." This paragraph contains lists of those units attached to or detached from the issuing unit for the operation concerned, to include any existing attachments remaining in effect. The effective time of the attachment or detachment **is** indicated when it is **other than** the time indicated in the heading of the order or in the task organization. When all attachments and detachments are clearly depicted in the task organization, this subparagraph will only make reference to "Task Organization." Reference to the task organization and a listing of an attachment and/or detachment may be combined if the attachment/detachment is occurring at a time which precludes convenient inclusion in the task organization.

Example:

c. Attachments and Detachments.

(1) Task Organization.
(2) 1-1 Armor attached effective 161000 Nov.
(3) B/1-21 Cav released from attachment effective 161800 Nov.
(4) 1-68 Inf detached to 2d Bde effective 1708000 Nov.

(d) Paragraph 1d, "Assumptions." An operation plan will always contain assumptions. These are the commander's assumptions and are used as a basis for developing the plan. For example, a counterattack plan would include an assumed penetration. The assumed penetration is normally shown graphically or stated in paragraph 1d along with other assumptions establishing conditions upon which the plan is based.

When information normally listed in paragraph 1 is known by subordinates, it is unnecessary to repeat these items. Only reference to changes or confirmation of items that remain unchanged should be made.

Example:

1. SITUATION.

a. Enemy Forces. Annex A (Intelligence).

b. Friendly Forces.

(1) 1st Bde attacks 070600 Dec to seize high ground vic BONN (NA6740); prep to continue attack east.

(2) 2-77 Mech attacks 070600 Dec to seize high ground vic HILL 1124 (NA6643); prep to continue attack east.

(3) 2-23 Cav screens bde south flank from NA624390 to NA673387.

(4) 7-50 FA DS 1st Bde.

(5) 7-53 FA GSR to 7-50 FA.

(6) Tac air and engr spt. No change.

c. Attachments and Detachments. Task Org.

NOTE: This example depicts that the tac air and engineer support are the same as for the preceding operation and this information is known by subordinates.

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(3) MISSION. Paragraph 2, the mission, is a clear, concise statement normally containing the WHO, WHAT, WHEN, and as appropriate the WHY and WHERE as taken from the higher headquarters order or as deduced by the commander and restated in his planning guidance to his staff. The HOW (unit or units making the main attack, formation, and other amplifications) more properly belongs in paragraph 3a, "Concept of Operation." The mission is stated in full, even if shown on the operation overlay; it must be able to stand alone without reliance on an overlay or schematic and will make no reference to "objectives." Paragraph 2 **never** has subparagraphs.

OPORD Example: (MISSION STATEMENT)

1st Bde attacks 100600 Mar to seize high ground vicinity Hills 972 (NA7642) - 1025 (NA7943); prepare to continue the attack north.

NOTE: The WHY in the defense mission statement is normally inferred by the WHAT, i.e., to retain or defend the high ground, key terrain, or areas specified by the coordinates.

(4) EXECUTION. Paragraph 3 contains the concept of operation, missions and tasks for each element of the command (organic, attached, or under OPCON) which will execute a tactical role in carrying out the unit's mission, and coordination instructions pertaining to the conduct of the operation.

(a) Paragraph 3a, "Concept of Operation." This paragraph states in brief the commander's tactical plan. It describes the scheme of maneuver and plan of fire support including nuclear fires, if applicable (as taken from the commander's decision and concept to his staff or developed during staff planning). Although brief, this subparagraph is stated in sufficient detail to insure appropriate action by subordinates in the absence of specific instructions.

(b) Paragraph 3a may be divided into two subparagraphs: (1) describing the scheme of maneuver and (2) covering the plan of fire support. Further, when it is concluded that the operation is to be executed in two or more distinct phases, the "Concept of Operation" will be prepared in subparagraphs describing each phase. Each phase is designated, e.g., Phase I, Phase II, etc. The requirement for dividing paragraph 3a is determined by the S3 upon considering the details and complexity of the operation and the need for clarity.

(c) The scheme of maneuver portion of paragraph 3a contains statements of the placement and movement of major maneuver elements and provides principal missions to each of these elements. In essence, it is the commander's decision (from his estimate of the situation), modified as necessary by appropriate reference to its graphic portrayal on the operation overlay (if applicable).

(d) In an attack OPORD, the scheme of maneuver portion specifies the elements making the main and supporting attack (when the commander has designated a main and supporting attack), assigns objectives to the attacking elements, and designates the element(s) in reserve, to include its primary mission.

(e) In a defense OPORD, the scheme of maneuver portion specifies the units occupying the FEBA (left to right) and designates the reserve and the position(s) to be occupied by the reserve.

(f) The fire support portion of paragraph 3a contains a brief summary of the fire support which will complement the scheme of maneuver. It will include, as applicable, the following items: nuclear rounds

assigned to complement the scheme of maneuver, held in reserve or on call, shown by number, type, yield, target, time, and duration, as applicable; nonnuclear preparation starting time and duration (attack); allocation of final protective fires (FPF) (defense); priority of fires; special fires (e.g., chemical, smoke, etc); tactical air support; and reference to the fire support annex.

NOTE: Reference will be made to appropriate annexes that are to be distributed to subordinate units. Annexes will be referred to in the body of the order at the first place that the subordinate commanders need be made aware of their existence. An operation overlay and fire support annex, when issued, are two annexes normally referred to in the concept of operation of a written operation order. Reference to the operation overlay will be placed on the same line and immediately following "Concept of Operation." Reference to the fire support annex will be the last item within the concept of operation paragraph.

(g) Task assignments to security forces are written using the imperative to "screen," "guard," "cover," or "provide rear area security." Since missions to security forces cannot be clearly described graphically, they must be stated in the written portion of the order.

(h) The sequence of listing units in paragraph 3 is indicated below. Within each major branch grouping (Infantry, Armor, and Artillery), units are placed in order, first by size (battalions, companies, platoons), then, within like-size units, by numerical or alphabetical designation, as applicable. Task Forces and teams are listed by reference to their official numerical/alphabetical designation although their temporary name/title is used.

-1. Largest command headquarters/combined arms command. For example, if a task force comprises two or more battalion (company) size units and is under command of the XO — constituting a higher level headquarters than a battalion (company)—it would be listed first. The size of the headquarters is the determining factor, not the number of maneuver elements subordinate to the headquarters.

- o Infantry units.
- o Armor units. List tank units first, then cavalry units.
- o Reconnaissance/scout platoon.
- o Heavy mortar platoon.
- o Antitank platoon.
- o Redeye section.

-2. Any other units performing a straight combat mission, listed in alphabetical sequence by branch. (For example, an engineer platoon with a combat mission, rather than its normal support mission.)

-3. Artillery units. List field artillery units first, then air defense artillery units.

-4. Other elements providing combat support, listed in alphabetical sequence by branch. (For example, aviation or engineer.)

(i) Those units indicated above which are not in a specific unit's task organization are simply omitted from the sequence. For example, recon/scout platoon, heavy mortar platoon, Redeye section, and AT platoon are rarely found at brigade level; therefore, they are omitted from the sequence of units at that level.

(j) Headquarters and headquarters company/combat support company and their subordinate elements, such as communications platoon, ground surveillance section (battalion), aviation section (brigade), and combat service support elements, are not assigned a mission subparagraph unless elements of these units are given a special tactical mission.

(k) Combat support company would appear in battalion/TF task organization if the combat support company headquarters were used as a tactical control headquarters and assigned a specific tactical mission, to include contingency missions. Under these circumstances, combat support company would also be assigned a subparagraph within paragraph 3, and would be listed in sequence after all lettered infantry companies but before any infantry platoons that might be operating under battalion/TF control.

(l) The final subparagraph of paragraph 3 is entitled, "Coordinating Instructions," and contains tactical instructions and details of coordination (other than signal items) applicable to two or more elements of the command. When there are no coordinating instructions, the word "None" will be placed after the heading. Coordinating instructions may include:

-1. Essential elements of information (brigade and higher levels) or specific orders for information (normally battalion and lower levels) of an intelligence nature.

NOTE: The order is only one method the S2 uses to disseminate EEI (brigade and higher) or orders for information (battalion). Absence of these items in the order does not mean the S2 is not disseminating this information.

-2. Any counterintelligence measures not a matter of SOP (except signal counterintelligence).

-3. Restrictions on the use of nuclear weapons.

-4. Troop safety instructions, if different from SOP, e.g., operation/exposure guide (OEG).

-5. Effective time of attachment or detachment of units within the issuing headquarters organization, when such times are different from the effective time of the order and are not included in the task organization.

-6. References to annexes not mentioned elsewhere in the body of the order.

-7. Time, date, or condition when the order or plan becomes effective, if the order or plan is not effective on receipt. For example, in OPLANs, the subparagraph would include the phrase: "Effective for planning upon receipt; for execution on order."

-8. Reference to nuclear allocation in the Nuclear Fire Support Appendix to the Fire Support Annex when necessary for clarity (brigade or higher levels only).

(5) SERVICE SUPPORT. Combat service support procedures at brigade and battalion are usually routine and covered by SOP. Therefore, an administrative/logistics order is normally not required. Since the division's administrative/logistics orders are distributed down only to brigade level, reference to this in paragraph 4 of a brigade order will normally suffice. At brigade and battalion levels, pertinent information on current and projected locations of administrative and logistical installations and facilities will normally be shown graphically on the operation overlay. Other administrative or logistical information may be disseminated by means other than an OPORD; therefore, paragraph 4 of the OPORD at this level generally does not contain lengthy administrative or logistical instructions. When required by the nature of the operation and details involved, paragraph 4 may contain subparagraphs as necessary, following the sequence (including paragraph headings) corresponding to the administrative/logistic order.

(6) COMMAND AND SIGNAL. Paragraph 5 contains two subparagraphs, "Signal" and "Command," in that sequence.

(a) Paragraph 5a should contain, as a minimum, the index of the effective communication-electronics operation instructions (CEOI) to be in effect. Any special instructions relating to signal communications, such as instructions on the use of radios or pyrotechnics, or restrictions on the employment of any means of communications, should be placed in the subparagraph.

(b) Paragraph 5b will include the location of the CP of the issuing unit (if not shown graphically) and the location of the command group; e.g., "Cdr will follow the main attack" or "Cdr will be located at OP #1." It may include instructions to select and report locations of CPs of the subordinate units and the location of the CP of the next higher headquarters. Designation of an alternate CP may be entered in this paragraph if it is different than stated in the SOP.

d. **Ending.** *The ending of the order consists of the acknowledgement instructions, signature of the commander, authentication (when required), list of annexes (if any), and the distribution listing.*

ENDING

Acknowledgement Instructions:

Commander's Last Name
Commander's Rank

Authentication: **

Annexes:

Distribution:

(Classification)

***Used only when applicable.*

Figure 3. Ending of OPORD.

(1) Acknowledgement instructions. These instructions are placed under the final subparagraph of the body. They have no paragraph designation (number or letter); they stand by themselves. They may contain detailed acknowledgement instructions or simply the word "Acknowledge". Acknowledgement is rendered using the message reference number (see paragraph 4b(6)), unless otherwise directed. Acknowledgement of the order means that the order has been received and understood.

(2) Signature of commander. The original copy (No. 1) of a written order will bear the commander's signature (last name only) or that of his designated representative (which is the S3/G3), written above the printed or typed last name (with or without initials) and rank. This copy is retained in the unit files as a matter of record.

(3) Authentication. Although the commander's signature block (as specified above) appears on all copies, his designated representative would sign in the same manner under the word OFFICIAL: -- that is, over his last name and rank (no initials are used). The commander's signature or his representative's permits automatic reproduction of the order (or annex issued separately). If the commander's signature is used only on the original, the S3's signature is required on all subsequent copies.

OPERATION ORDER/PLAN FORMAT
(Based on STANAG 2014, 3d Edition)

EXAMPLE OF COMPLETE OPORD/PLAN

HEADING

(Classification)

(Changes from oral orders)

Copy No of copies
Issuing Headquarters
Location of CP
Date/Time Group
Message Reference No.

OPORD No./OPLAN No. (Code Name)

Reference:

Time Zone Used Throughout the Order:

BODY

Task Organization:

1. SITUATION
   a. Enemy Forces.
   b. Friendly Forces.
   c. Attachments and Detachments.
   d. Assumptions.*

2. MISSION
3. EXECUTION
   a. Concept of Operation.
   b.
   c.
   d

   —. Coordinating Instructions. (Always the last subparagraph.)

4. SERVICE SUPPORT

5. COMMAND AND SIGNAL
   a. Signal.
   b. Command

ENDING

Acknowledgement Instructions.

Commander's Last Name
Commander's Rank

Authentication: **

Annexes:

Distribution:

(Classification)

*Used only in an operation plan.
**Used only when applicable.

Figure 4. Example of complete OPORD/PLAN.

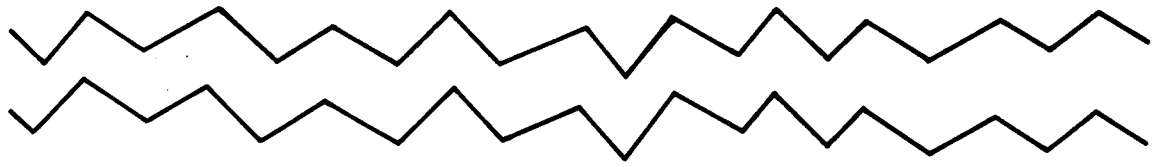
(CLASSIFICATION)

ANNEX B (INTELLIGENCE) to OPLAN 6-78 (FLYING TIGER)

REFERENCES: Maps: JOG, Series 1501, Edition 1, Sheet NJ (G) 51-8; Edition 2, Sheets NJ (G) 51-4, NJ (G) 51-1, NJ (G) 52-5, Scale 1:250,000; Map Series L572, Edition 1, Sheets 2823I, 2824II, 2825III, 2923I, 2923IX, 2924I, 2924II, 2924III, 2924IV, 2925II, 2925III, 3023I, 3023IV, 3024I, 3024II, 3024III, 3024IV, 3025III, Scale 1:50,000.

Time Zone Used Throughout the Plan: SIERRA.

1. SUMMARY OF ENEMY SITUATION. (Appendix 1 (Situation Overlay)) On 6 June, the Chosonians launched a full-scale, coordinated attack against Samil with an estimated six rifle divisions and two tank divisions. The surprise attack was extremely successful, especially in the eastern mountainous region.



7. REPORTS AND DISTRIBUTION.

All elements will submit spot intelligence reports, per SOP, to the next higher headquarters when contact with the enemy forces has been made and/or when information of intelligence value becomes available.

8. MISCELLANEOUS INSTRUCTIONS. None.*

Appendixes: 1 - Situation Overlay (omitted for this figure)
2 - Aerial Reconnaissance and Surveillance (omitted for this figure)
3 - Essential Elements of Friendly Information (omitted for this figure)

*If there are none, this paragraph should be omitted.

(CLASSIFICATION)

Figure 5.

3. **Annexes.** Annexes are those supporting documents attached to the order/plan, or distributed at a later time, to amplify and supplement the instructions in the order/plan. All annexes to operation orders/plans that are to be distributed are listed by letter and title. When there is only one annex listed, the word "Annex" is used. When the annex is to be issued later, the parenthetical phrase "(to be issued)" should follow the title of the annex. If there are no annexes, this term will be omitted.

a. Annexes that have a wider distribution than the basic order, or are to be issued separately from the basic order, must have suitable identification with respect to the basic order and bear the same heading and ending as the basic order except for the title of the annex and the message reference number (figure 4).

b. Annexes are issued to all units or agencies whose actions are affected by information or instructions contained in them. Detailed information included in an annex need not be covered in the order. As previously noted, each annex should be mentioned the first place in the body of the order where it is desired to call subordinates' attention to the information contained in the annex.

c. Maps, sketches, or overlays frequently are used as annexes. When the written portion of a plan or order is placed directly on map or overlay, the map or overlay then becomes the plan or order itself, and is not an annex.

4. **Distribution.** This indicates to whom the order is distributed. Frequently, use of a distribution code, as established by the unit SOP, will be sufficient. A combination of a distribution code and listing of units not included by the code may be used. STANAG 2014, 3d Edition, states, "when orders are to be distributed either to a unit of a nationality other than that of the issuing headquarters or to a NATO command, the distribution list normally will be given in full."

5. **Operation Plans.** Operation plans are published for future or anticipated operations when no specific time is established for their execution. When the time of execution is established and the operation order executed, they become operation orders. The standard form and techniques used in preparing operation orders are applicable to the operation plan with these exceptions:

a. The title of an OPLAN contains a code name as well as a number (see figure 4).

b. Paragraph 1, "SITUATION," on an OPLAN has an additional subparagraph, 1d entitled "Assumptions."

REFERENCES:

FM 30-5, Combat Intelligence
FM 101-5, Staff Officer's Field Manual, Staff Organization, and Procedure

TASK NUMBER: 071-332-5002

PREPARE A FRAGMENTARY ORDER

CONDITIONS:

During combat operations, CPX and FTX, given a complete copy of an OPORD which your unit is presently executing, pencil or typewriter, an up-to-date situation map, copies of joint messageform DD Form 173 or other form as prescribed by your unit SOP, and commander's or S3's guidance to include as a minimum: organizational changes applicable to your unit and its subordinate units, changes to coordinating instructions, and time available for preparation.

STANDARDS:

1. Within the time specified by the commander's or S3's guidance, complete the messageform format as applicable to your organization:

a. Indicate that the order is from the commander.

b. Address the order to the commander of each unit/element directly involved by the specified supplemental information or changes to the OPORD.

c. Send the order as "information" to all other major subordinate unit/element commanders.

d. Cite the same classification as for the OPORD.

e. As your subject, correctly reference the OPORD.

2. In the body of the order:

a. Use the words "no change" to omit elements of the original OPORD which have not changed.

b. Briefly and accurately provide the supplemental information and make the operational changes as specified by your commander.

c. Require acknowledgment.

3. Submit the draft to your S3 for review/approval for dispatch.

PERFORMANCE MEASURES:

1. **A fragmentary order provides brief, specific, and timely instruction without loss of clarity.** Elements normally found in a complete OPORD may be omitted but specified as **"no change"** when these elements have not changed, are not essential to the mission, might delay or

complicate transmission, or are unavailable or incomplete at the time of issue.

2. **The content of a frag order usually consists of changes to:**

a. Task Organization - Any attachment or detachment of units.

b. Situation - Any changes in the enemy or friendly situations.

c. Orders to Subordinate Units - Any changes in mission of a unit.

d. Fire Support - Any changes in the priorities of fires assigned to maneuver units.

e. Coordinating Instructions - Information that applies to two or more units.

NOTE: This is only one way to prepare a frag order. Your unit SOP may differ.

3. **Fragmentary orders provide pertinent extracts from more detailed orders.** They provide instructions:

a. As they are developed.

b. When the complete order is not developed.

c. To commanders who do not require the complete order; or, more often, provide timely changes to existing orders.

4. **Fragmentary orders are appropriate at all levels of command** whenever their use can save time or effort. An example of a fragmentary order is shown in figure 1.

JOINT MESSAGEFORM						SECURITY CLASSIFICATION (Classification)		
PAGE	DRAFTER OR RELEASER TIME	PRECEDENCE ACT	PRECEDENCE INFO	LMF	CLASS	CIC	FOR MESSAGE CENTER/COMMUNICATIONS CENTER ONLY DATE – TIME	MONTH YR
1 OF 1	171105Z	PP	PP				171415Z	JUN
BOOK	MESSAGE HANDLING INSTRUCTIONS							

FROM: CDR52 MECH DIV//USAAD-HD//

TO: CDR1ST BDE//USAAD-FB//
CDR2D BDE//USAAD-SB//
CDRDIV ARTY//USAAD-DA//

* * *

INFO: CDR1ST (US) CORPS//USACO-HD//
CDR23D ARMD DIV//USAMD-HD//

* * *

(Classification)

USAAD–HD

Subj: Change to OPORD 11 (U)

A. AB12 OPORD 11 ( )

1. ( ) Change in task org; TF 1–13 atch 3d Bde.

2. ( ) En force est to be 1 tk regt delaying adv 2d Bde.

3. ( ) 3d Bde: bypass 2d Bde on north, atk 171530 June to secure obj 1. One SRC/1KT rd asgd.

4. ( ) Div Arty: 1–13 FA DS 3d Bde.

5. ( ) New 52d Mech Div–23d Armd Div bdry: pres 1st Bde–3d Bde, 23d Armd Div, bdry west of PL CEDAR; and PL CEDAR (autobahn excl) northeast to RJ at MC705563; the railroad to MC792708.

6. (U) Acknowledge.

6 5 4 3 2 1 0

DISTR:

0

J. E. WYATT, MAJ, ASST G3,
USAAD-HT HAWK 33

A.J. MILLER, JR., LTC, G3, USAAD-HT HAWK 34

SIGNATURE | (CLASSIFICATION)

DD FORM 173

Figure 1. Fragmentary Order.

REFERENCES:

None

TASK NUMBER: 071-332-5020

ESTABLISH AND MAINTAIN S3 WORKBOOK

CONDITIONS:

As an assistant or operations sergeant, given the SITREP format, pencil, journal file, written or oral orders, messages, conference reports, scissors, spot reports, and a loose-leaf notebook.

STANDARDS:

1. Establish and maintain the S3 workbook following the prescribed format.

2. Insure that the workbook has been kept current and obsolete items have been removed or deleted.

3. Insure that information from incoming messages and reports has been entered in the workbook under appropriate heading and cross-referenced.

4. Insure that each entry in the workbook based on an incoming message includes a reference to the journal serial number.

5. Insure that written remarks concerning informal evaluation of the information have been made.

PERFORMANCE MEASURES:

1. Workbooks are ready references for use in conducting current operations and in preparing reports. A staff section workbook is an index collection of information obtained from written or oral orders, messages, journal entries, and conferences. There is no firm format for the S3 workbook; however, the format of the SITREP (app H, FM 101-5) facilitates the recording of operational information.

2. The S3 continually receives and provides information, prepares and submits reports and recommendations, and prepares plans. In accomplishing these tasks, you are concerned with a great amount of detail. To keep track of these details, you and members of your section must make pertinent written notes for use as reference.

3. Maintain the S3 workbook, to insure that notes are organized and easily found:

a. Establish a workbook (usually consists of a single pad or loose-leaf notebook) indexed so that notes can be classified according to subject and easily referred to.

b. Make all pertinent notes in appropriate section of this single workbook.

NOTE: Since a great deal of the content of these notes may be classified information, the workbook facilitates the security handling of recorded items.

4. The type of information which might be entered in the workbook is:

a. Notes of things to accomplish.

b. Items to be included in next situation report.

c. Items to be included in the next combat after-action report/ operational reports - lessons learned.

d. Items requiring command emphasis.

5. The workbook is a temporary and informal record. When action is completed on an item, line out entry.

a. Destroy a page of the workbook that has been filled and all entries lined out.

b. Indicate information entered in the workbook that is obtained from the journal by preceding the entry with the journal item number, source, and time to be used for a ready cross-reference.

6. The format for the S3 workbook will usually vary according to the type activity (tactical or nontactical) the unit is involved in and the S3's desires. Figure 1 shows a sample workbook form indexed to facilitate preparation of the situation report and combat after-action report/operational reports-lessons learned during tactical operations.

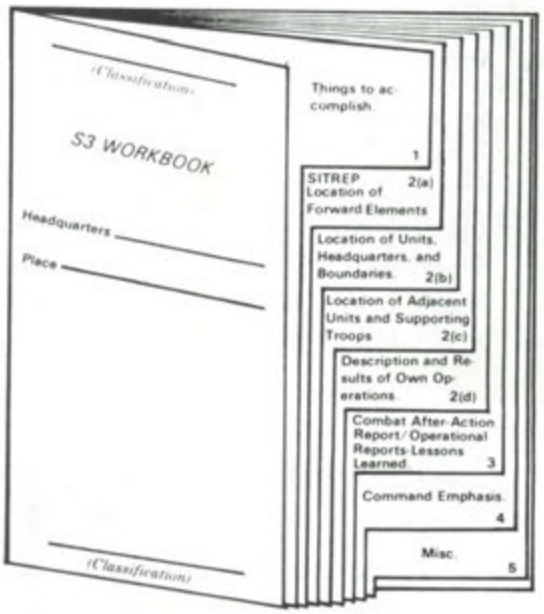


Figure 1. S3 Workbook.

REFERENCES:

FM 101-5, Staff Officer's Field Manual, Staff Organization and Procedure, Jul 72 (chap 2, page 2-7, para 2-16d)

TASK NUMBER: 071-332-5021

PREPARE/UPDATE ENEMY/FRIENDLY SITUATION MAP

CONDITIONS:

During combat operations, CPXs or FTXs, given a mounted acetate-covered mapboard, any standard scale military map, grease pencils (red, black, blue, green, yellow), coordinate scale, spot reports, situation reports, current up-to-date S2 and S3 workbooks, complete copy of battalion operation order which the unit is presently executing, and FM 21-30, Military Symbols.

STANDARDS:

1. Within 30 minutes:

a. Post all available locations/traces of friendly and/or enemy units/elements to within 50 meters.

b. Post critical points and tactical/fire support control measures to within 25 meters.

2. Upon receipt of situation and spot reports, post information within 5 minutes to the same degree of accuracy as above.

PERFORMANCE MEASURES:

1. The situation map is a graphic representation of the known enemy situation, and the current tactical, administrative, and logistical situation of the unit.

2. Maintenance of the situation map at brigade and battalion levels is usually a joint S2/S3 action while at higher levels a separate situation map is maintained by each section. The friendly situation is basically the responsibility of the S3 while the enemy situation is basically the responsibility of the S2. During operations, personnel from either section may plot friendly or enemy entries on the situation map and perform other processing functions (figure 1).

3. The situation map provides a basis for comparison of the enemy situation against the friendly situation. Whenever possible, both the situation map and S2 and S3 workbooks will be maintained. However, in a fast-moving situation when the volume of messages is such that both cannot be maintained effectively, priority should be given to keeping the situation map current.

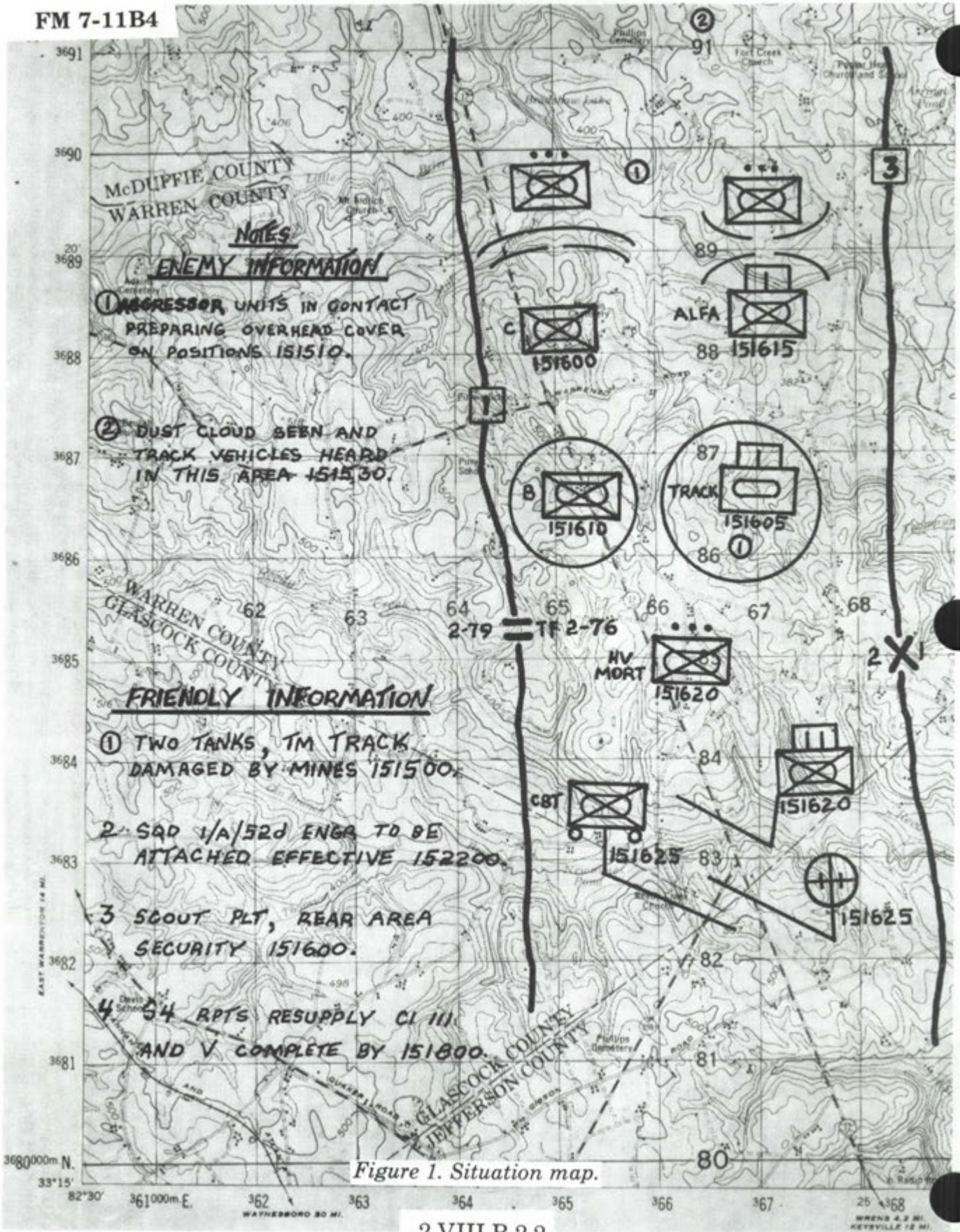


Figure 1. Situation map.

4. The situation maps also serve as a basis for the preparation of overlays necessary to clarify reports required by higher headquarters. To be of value:

a. The posting must be accurate.

b. The information is up-to-date, and all entries easily read.

c. Conventional signs and symbols are used.

d. The time at which a particular situation existed is indicated by employing the six-digit date/time group in conjunction with the graphic symbol (figure 1).

5. Action of interest to the unit occurring off the present map sheet and information which does not lend itself to graphic representation or is not consistent with brevity is posted on the margin in the form of notes. This is shown by placing a circled number on the map at the place the action occurred and then explaining the number in the margin (figure 1).

6. The amount of information shown on a situation map will vary with different situations and individual commanders. The minimum information that should be shown is as follows:

a. Own situation, to include disposition of units one echelon lower. Enemy information, to include disposition of units two echelons lower.

b. Friendly units, to include the command post; location and size of reserves available to the next higher command, if known.

c. Friendly units of like size immediately adjacent. (The disposition of their major subordinate elements when it is desirable.)

REFERENCES:

FM 21-30, Military Symbols, May 70 (chap 3, pages 3-1 thru 3-18, para 3-1 thru 3-11)
FM 30-5, Combat Intelligence, Feb 71 (chap 5, pages 5-4 thru 5-6, para 5-6)
FM 101-5, Staff Officer's Field Manual, Jul 72 (app D, pages D-20 and D-21, para 4c)

TASK NUMBER: 071-332-5022

PREPARE SITUATION REPORT (SITREP)

CONDITIONS:

Given a copy of your next higher headquarters SOP for recurring reports, S3 workbook, staff journal, current operation order, overlays appropriate to operations, file copies of previously submitted SITREPs, the S2/S4 portions of the SITREP, and time available for preparation.

STANDARDS:

1. Within the time specified by the next higher headquarters SOP, items must be correctly sequenced into the basic five-paragraph SITREP format (omitting subparagraphs not applicable).

2. Annexes and overlays (if used) must be properly labeled and sequenced.

3. The SITREP:

a. Must possess correct classification and downgrading instructions.

b. Must be properly authenticated.

c. Must contain correct distribution instructions.

d. Must be completed and distributed in accordance with the next higher headquarters SOP.

PERFORMANCE MEASURES:

The operational situation report (SITREP) is the means of reporting the operational situation as required by the next headquarters.

1. It is a recurring type report in that it is submitted one or more times daily in a prescribed format. (See figures 1 and 2 for format).

2. Requirements for submitting the SITREP are prescribed in the higher headquarters SOP and specify an "as of time" and a time the report is due at higher headquarters.

3. The S3 has primary staff responsibility for the preparation of this report. Other staff officers contribute to its preparation by providing the S3 with details to be included from their respective areas of interest. For example, the S2 would provide the enemy information (paragraph 1) and the S4 information pertaining to administration (paragraph 3).

4. Full use of traces/overlays should be made for clarity and brevity of the report.

5. When the SITREP is sent by radio (voice or RATT), it should be confirmed in writing.

6. Prescribed format sequence is used, but subparagraphs not applicable are omitted.

7. Commander's Evaluation, paragraph 5, is completed when directed by higher authority.

(Based on STANAG No 2020, Operational Situation Reports)

FROM: Cdr, 2d Bn (Mech), 76th Inf
TO: Cdr, 1st Bde, 52d Inf Div (Mech)

SITREP 15: Period 120600A to 121800A Jul. ENEMY: No change enemy locations or identifications. Periodic hostile shelling of Bn area. Patrol approximately 30 men attacked Tm B at 12100A Jul. 3 enemy KIA, 3WIA. Aggressor most probable course of action is to attack within 24 hours with present committed forces. OWN SITUATION: Bn continues defense MEAD River. No change in location and dispositions. Tm B repulsed enemy patrol with no casualties. Bn reconnaissance patrol returned 121700A Jul, negative contact. ADMINISTRATION: Normal. RADIATION STATUS: 70% RS-2, 30% RS-1.

Figure 1. Sample situation report in message form.

Figure 2. (Based on STANAG No 2020, Operational Situation Reports)

(Note: Omit Subparagraphs Not Applicable)

(Classification)

Copy no_____ of _____ copies
Issuing headquarters
Place of issue (may be in code)
Date-time group of signature
Message reference number

SITUATION REPORT NO _____

Period covered: (date and time to date and time).

References: Maps (series number, sheet(s), edition, scale).

1. ENEMY
   a. Units in contact.
   b. Enemy reserves that can affect local situation.
   c. Brief description of enemy activity during period covered by report.
   d. Brief estimate of enemy strength, materiel means, morale, and his probable knowledge of our situation.
   e. Conclusions covering courses of action open to enemy.

2. OWN SITUATION
   a. Location of forward elements.
   b. Location of units, headquarters, and boundaries.
   c. Location of adjacent units and supporting troops.
   d. Brief description and results of operations during period of report.
   e. Noneffective units.

3. ADMINISTRATION
General statement of the administrative situation, if other than normal, as it directly affects the tactical situation.

4. GENERAL
Information not covered elsewhere.

5. COMMANDER'S EVALUATION
To be completed when directed by higher authority.

Authentication: _____
Commander

Annexes:

Distribution:

(Classification)

Figure 2. Sample situation report in detailed written form.

REFERENCES:

FM 101-5, Staff Officer's Field Manual, Staff Organization and Procedures, Jul 72 (app H, page H-35 and H-36)

TASK NUMBER: 071-332-5030

PREPARE ROAD MOVEMENT GRAPH

CONDITIONS:

As a battalion operations sergeant, given graph paper, a convenient graph scale, a starting point (SP) to include clearance time, a release point (RP) to include arrival time (AT) and clearance time (CT) at the RP, distance to be moved in kilometers, rate of march, location of critical points (rest halts, checkpoints, etc.), halt time, pass time (PST), and length-of-column (LGTHCOLM).

STANDARDS:

Within the time specified by the commander's guidance, prepare the graph so that anyone familiar with the use of a road movement graph can determine where the beginning and end of the march column should be at any given time or when the beginning and end of the column will be at a given location along the route of march.

PERFORMANCE MEASURES:

1. A road movement graph is a time-distance diagram used in planning, preparing, or checking road movement tables, and controlling marches. It shows the approximate location at a specified time of the head or tail of each serial, provided the road movement proceeds as scheduled. The vertical scale to the left, with point of origin at the bottom, serves as a distance scale in kilometers and should show the relative locations along the route of critical points where coordination of the movement is required.

2. A serial is represented graphically by drawing a line to represent the movement of the head of the serial and a line to represent the movement of the tail of the serial. The lines are parallel and are drawn with a slope that represents the rate of march (at 25 kilomters on the vertical to 1 hour on the horizontal scale).

3. To prepare a road movement graph, the following setps are applicable (figures 1 and 2). (The times and distances used are for explanation only.)

a. Designate the lower left corner of the graph sheet as the SP time (1225 hrs), or an earlier even hour before the march is to begin. Select a convenient scale (one vertical square = 2 km, one horizontal square = 10 min) and plot the hours available in sequence from left to right on the horizontal axis (1000 hrs thru 2100 hrs).

b. Determine the distance to be moved in kilometers (136 km). Indicate the SP at the lower left corner of the graph sheet, and using an appropriate scale, plot the number of kilometers on the vertical scale from the SP (0 km, Augusta) to the release point (RP) (136 km, Fargo). Indicate the location of critical points (rest halts, checkpoints, etc.) on the vertical scale.

c. At the proper distance from the start point, draw a horizontal line indicating the location of the RP. Indicate the hour when the movement must be completed (2005 hrs) by a vertical line. Plot lines representing route restrictions, if any, at the proper distance and times on the graph.

d. Determine the pass time (60 min) of foot and/or motor elements in the column.

NOTE: If not given, simplified formulas for length-of-column (LGTHCOLMs and PSTs) foot and/or motor may be used (see figure 2).

e. Starting at the SP at the specified hour (1225 hrs), plot the movement of the head of the leading element (left vertical line). If the motors move at a blackout rate of 24 km per hour, at 30 minutes they will have moved 12 kilometers; at 1 hour, 24 kilometers, etc. Plot the trace of the lead vehicles to the RP.

(1) The last vehicle will cross the SP one "pass time" (60 min) after the first vehicles. Measure this time on the graph and plot the trace of the last vehicle of the element (right vertical line).

(2) The lines describing the head and tail of a serial are parallel (head of column on left and tail of column on the right).

(3) Indicate the time subsequent serials (foot or motor) reach the SP, and plot the traces of the head and tail.

(4) Check to see that the plan complies with all restrictions and orders.

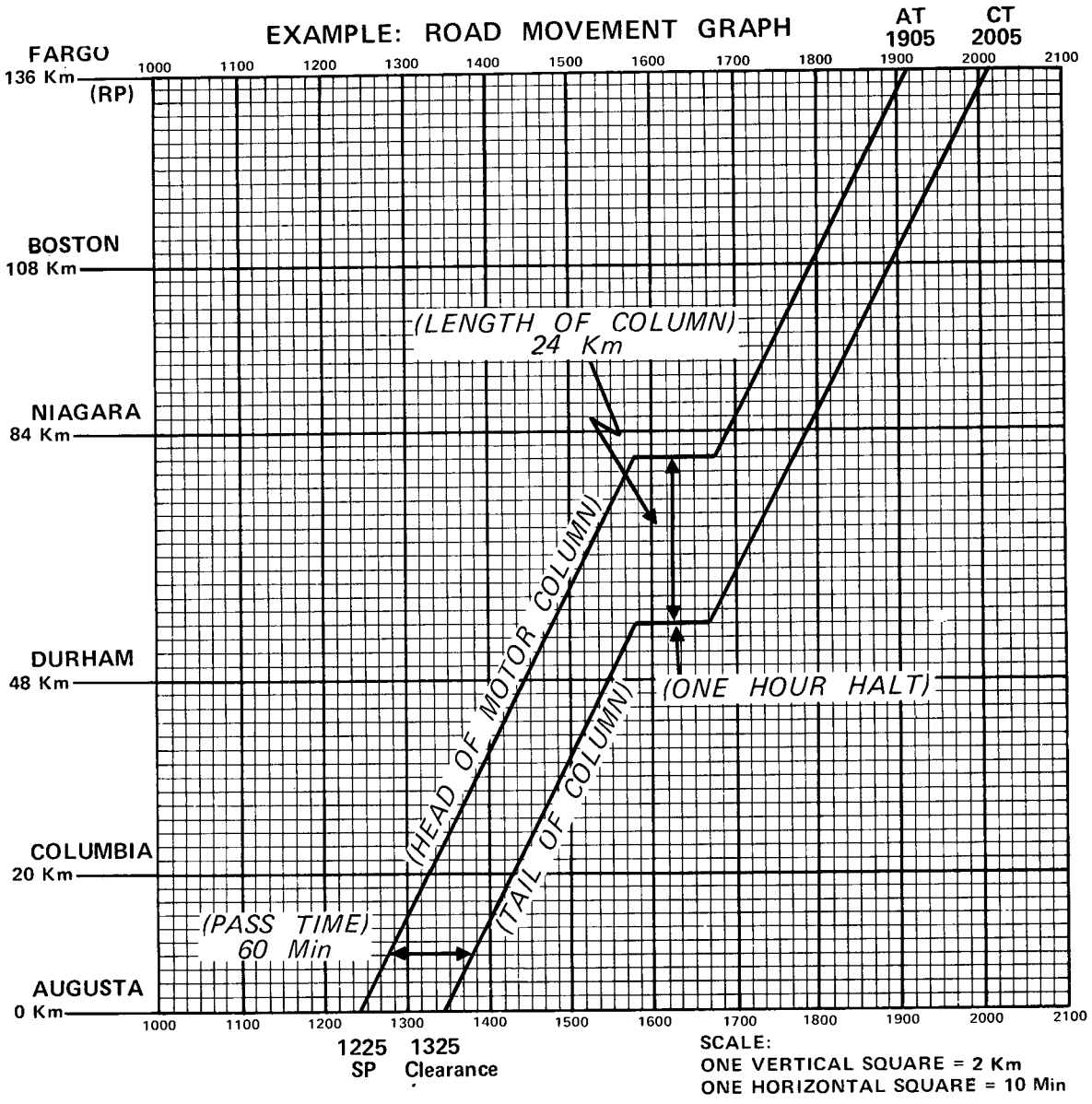


Figure 1. Road movement graph.

PASS TIME (PST) OF FOOT COLUMNS

Multiply length of column (LGTHCOLM) by factor for rate of march.

PST (minutes) = (LGTHCOLM x Factor)

Select factor from table below

Rate (kmph)	Factor
4.0	.0150
3.2	.0187
2.4	.0250
1.6	.0375

LENGTH OF COLUMN (LGTHCOLM) OF FOOT TROOPS

Multiply number of men by factor for formation and add the total distance of the gaps between units.

LGTHCOLM (meters) = (No of men x Factor) 1 Column gaps

Select factor from table below

Formation	2m/Man	5m/Man
Single File	2.4	5.4
Column of Two's	1.2	2.7

PASS TIME (PST) OF MOTOR COLUMN

(Time required to pass given point)

Multiply the LGTHCOLM in kilometers by 60; divide by the speed of the column.(1)

$$\text{PST (min)} = \frac{\text{LGTHCOLM (km)} \times 60}{\text{Rate (kmph)}}$$

The following can be used to determine an approximation of PST: (2)(3)

PST (min) = No of veh x 0.08 (one march unit in close column)
= No of veh x 0.18 (two or more march units (a serial) in close column)
= No of veh x 0.20 (one march unit in open column)
= No of veh x 0.30 (two or more march units (a serial) in open column)

NOTES:
1. Extra time allowance must be added if not included in the unit SOP formations.
2. Open column figures are standard for a density of 12 vpk and a rate of 24 kmph; etc. column density is 48 vpk at 16 kmph.
3. March units consist of approximately 30 veh.

Figure 2. March formulas.

LENGTH OF COLUMN (LGTHCOLM) OF VEHICLES

(This is the sum of the lengths of the veh, the distance between veh, and the distance between march elements)

Divide the no of vehicles by the density of vehicle per km. Add this to the quotient of the time gaps multiplied by the rate (kmph) divided by 60.

$$\text{LGTHCOLM} = \frac{\text{No of veh}}{\text{Density (vpk)}} + \frac{\text{Time gaps (min) x Rate (kmph)}}{60}$$

The following can be used to determine an approximation of LGTHCOLM: (2)

LGTHCOLM (km) = No of veh x .02 (one march unit in close column)
= No of veh x .04 (two or more march units (a serial) in close column)
= No of veh x .08 (one march unit in open column)
= No of veh x .12 (two or more march units (a serial) in open column)

NOTES: 1. In close column, a 15-min time gap occupies 4 km LGTHCOLM: in open column, a 15 min time gap occupies 6 km LGTHCOLM.
2. Open column figures are standard for a density of 12 vpk and rate of 24 kmph; close column density 48 vpk at a rate of 16 kmph.

Figure 2. March formulas (continued).

REFERENCES:

FM 101-10-1, Organizational, Technical, and Logistical Data, Unclassified Data, Jul 76 (chap 4, sec III, pages 4-12 thru 4-14, para 4-7 thru 4-10)

TASK NUMBER: 071-332-5040

PREPARE AIR MOVEMENT PLAN

CONDITIONS:

As an operations sergeant, given commander and/or S3 guidance, mission to be accomplished, subordinate units' basic planning guides, pencil, type aircraft allocated/cargo carrying characteristics, type load worksheet format, air loading table format, personnel manifest format, air movement table format, and aircraft load summary.

STANDARDS:

As a minimum, you must insure that:

1. All TOE equipment and all non-TOE equipment/material needed to accomplish the assigned mission is included in the loading plan.

2. The load is designed to facilitate the unloading of equipment/material in priority of need to accomplish the assigned mission.

3. Loading plan recognizes integrity of section/units.

4. Load is properly distributed by weight.

5. Vehicles do not exceed configurations and weight limitations for the type of aircraft specified for movement (if applicable).

PERFORMANCE MEASURES:

1. **Air Movement.** A movement by air may be in conjunction with an airborne operation or may be an administrative move. The technical considerations for either a tactical or administrative air movement are generally the same. However, in an airborne operation the tactical plan is the overriding consideration. The air movement plan is formulated to conform to the tactical plan as far as practicable. In administrative air movements, efficient use of available airlift is usually paramount. The tactical and administrative aspects of air movement planning are contained in FM 57-1 and TM 55-450-15.

2. **Planning Considerations.** The following planning considerations are used for joint airborne operations and airmobile operations.

a. **Mission.** The air movement plan must support the mission to be accomplished. This will affect the selection of troops, equipment, and supplies to be moved.

b. **Availability of Aircraft.** The number and type of aircraft available will affect the time required to complete the movement. The division of the force by echelon will also depend on the aircraft available.

c. **Unit Integrity.** Whenever possible, unit integrity should be maintained. In an airborne operation, the task organization dictates maintaining tactical integrity. In administrative air movements, unit integrity is sacrificed to make maximum use of the allowable cargo load of each aircraft.

d. **Distribution of Key Personnel and Equipment.** Key personnel are distributed among the aircraft so that the loss of one aircraft does not destroy the command structure of a unit. Key items, such as crew-served weapons, command vehicles, and communications equipment, are also distributed among different aircraft. This is referred to as "cross loading."

e. **Self-Sufficiency of Each Plan Load.** Whenever possible, every towed load is accompanied by its prime mover. Crews are loaded with their vehicles and crew-served weapons. Component parts accompany major items of equipment in the same aircraft. Ammunition is carried for each weapon. Sufficient personnel must accompany each aircraft to unload cargo at the destination.

f. **Full Use of Airlift Capability.** Each aircraft is loaded to take full advantage of its allowable cargo load, so far as is consistent with the mission.

3. **Planning Steps.**

a. **General Considerations.** Although the air movement plan should be based on tactical considerations, modifications are often necessary because of the type and number of aircraft available. In large scale operations, there are seldom sufficient aircraft to fly the entire force in one lift. Therefore, it is often necessary to airlift the force by shuttle movements. In order for the planning staff to determine aircraft requirements, information must be provided by subordinate units concerning the troops and equipment to be airlifted. For airborne operations, much of the planning is contained in the unit standing operating procedures (SOP).

b. **Organization.** Once the task organization has been established, the force is organized into assault, follow-up, and rear echelons based on the tactical plan.

4. **Weights of the Personnel.**

a. For airmobile operations and tactical airlifts, the standard weights for individuals as shown below are used. These weights take into consideration the weight of the man plus his combat equipment and his share of TOE equipment that is hand-carried.

(1) Aircraft crewman - 200 pounds.

(2) Combat-equipped soldier - 240 pounds.

(3) Litter patient - 250 pounds.

(4) Parachutist - 260 pounds.

b. Each plane load is manifested. In airmobile operations, manifests should be kept as simple as possible. For example, the manifest could be a sheet from the squad leader's notebook listing the men and equipment loaded into his aircraft. In joint operations, the Army unit is responsible for manifesting its loads according to Air Force instructions. Local agreements may be made between the two services to use other types of manifests such as the automated printouts, addressograph sheets, load lists, or airline tickets.

5. **Cargo-Carrying Characteristics.** Personnel responsible for preparing the loading plans for an air movement must be familiar with the types and characteristics of aircraft available. The aircraft cargo-carrying characteristics listed below must be considered in planning air moves.

a. Allowable cargo load.

b. Size and location of the cargo door.

c. Height of the cargo floor above the ground.

d. Size and shape of the cargo compartment and its limiting features.

e. Strength of the floor.

f. Location and strength of cargo tiedown fittings.

g. Location, number, and type of troop seats.

h. Forward and aft cargo center of gravity limits.

i. Organic loading aids available, e.g, ramps, winches, hoists, and elevators.

6. **Gross Weight Limitations.** One of the means for insuring that an aircraft is safe to fly is to control its gross weight. The maximum gross weight of an aircraft is governed either by the structural limitation of the airframe, or by performance. Two factors which affect the maximum gross weight are:

a. **Meteorological Conditions.** The load-carrying capability of fixed-wing aircraft and helicopters decreases with increases of altitude, humidity, and temperature.

b. **Departure and Arrival Airfield.** The length, condition, and altitude of the runway may limit the gross weight of an airplane. The runway may limit not only the takeoff weight at the departure airfield, but also the landing weight at the destination. The gross weight of helicopters may depend on the presence of cleared approaches to a landing site.

7. **Allowable Cargo Load.** The responsibility for computing the allowable cargo load of an aircraft is NOT that of the ground unit. The air movement planner is provided this information by the airlift unit, either Army aviation or the Air Force, as applicable. The planner must realize what factors affect allowable cargo loads, so that he may be flexible in his planning.

8. **Determining Aircraft Requirement.** There are three methods of determining aircraft requirement: weight, space, and type load method.

a. **Weight Method.**

(1) The weight method is used for **estimating aircraft requirements** to transport large amounts of supplies, general cargo, and personnel. This method is based on the assumption that total weight, not volume, is the determining factor.

(2) To compute the aircraft required, divide the gross weight of the cargo by the allowable cargo load of the aircraft to be used.

(3) Example: A planning officer is required to compute the number of C-130 aircraft needed to transport a task force on a particular mission. The announced allowable cargo load of each C-130 is 27,600 pounds. From the basic planning guides submitted by subordinate headquarters, a total troop and cargo weight of 1,256,868 pounds is computed. To determine the number of aircraft required, divide the total weight by the allowable cargo load:

$$\text{Number of C-130's needed} = \frac{1{,}256{,}868}{27{,}600} = 45.5 \text{ or } 46 \text{ C-130's.}$$

b. **Type load method.** This method required consideration of the following:

(1) The principles of safe loading.

(2) The allowable cargo load, weight and balance characteristics, size of cargo compartment, and any special restrictions for each type aircraft to be used.

(3) Number and weight of personnel and equipment to be loaded.

(4) Weight and dimension data of items to be loaded.

(5) In computing type loads and ascertaining limitations of certain loads, the best method is the use of scale-drawn templates of loads and floor diagrams. These assist the planner in determining possible arrangements of cargo and the effects of space limitations within a given cargo space. TM 55-450-15 contains floor plans of the cargo compartments for both Air Force and Army aircraft.

(6) Upon determination of the task organization and completion of the basic planning guide, the data on personnel and equipment is then translated into terms of aircraft loads. This is accomplished by establishing type loads composed of a specific number of troops and equipment and loading out the unit insofar as possible within these types. Once type loads have been developed, they must be coordinated and approved by representatives of the U.S. Air Force or U.S. Army airlift commander tasked to support the mission.

(a) By considering the above data and through the use of the type load worksheet, aircraft requirements for units can then be determined.

(b) Example: Determine the number of C-130 aircraft needed to transport a rifle company in an air landed mission. The announced allowable cargo load is 26,000 pounds.

-1. The following items are to be moved: (Personnel and equipment in the advance party and follow-up echelon are not included.)

ITEM	WEIGHT (EACH)
186 Personnel	240 lbs
4 ea ¼-T Trk	3,073 lbs
6 ea ¼-T Tlr	1,065 lbs
3 ea ¾-T Trk	7,417 lbs
3 ea ¾-T Tlr	2,840 lbs
2 ea ¼-T Trk (TOW)	3,085 lbs
2 ea ¼-T Trk (MSL)	2,841 lbs
1 ea ¾-T Trk (Redeye)	7,417 lbs

NOTE: Figures include personnel and equipment of attachments accompanying the assault echelon.

-2. Organize the items to be moved into type loads as follows:

C-130 Aircraft Type Loads
(ACL 26,000 lbs)

Type Load I (A-1)

29 Personnel	6,960 lbs
2 ea ¼-T Trk	6,146 lbs
2 ea ¼-T Tlr	2,130 lbs
	15,236 lbs

Type Load II (A-2)

35 Personnel	8,400 lbs
1 ea ¼-T Trk	3,073 lbs
1 ea ¼-T Tlr	1,065 lbs
1 ea ¾-T Trk	7,417 lbs
1 ea ¾-T Tlr	2,840 lbs
	22,795 lbs

Type Load III (A-3)

33 Personnel	7,920 lbs
2 ea ¾-T Trk	14,837 lbs
1 ea ¾-T Tlr	2,840 lbs
	25,594 lbs

Type Load IV (A-4)

26 Personnel	6,240 lbs
1 ea ¼-T Trk (TOW)	3,085 lbs
1 ea ¼-T Trk (MSL)	2,841 lbs
1 ea ¼-T Tlr	1,065 lbs
	13,231 lbs

Type Load V (A-5)

28 Personnel	6,720 lbs
1 ea ¼-T Trk	3,073 lbs
1 ea ¼-T Tlr	1,065 lbs
1 ea ¾-T Trk	7,417 lbs
1 ea ¾-T Tlr	2,840 lbs
	21,115 lbs

Type Load VI (A-6)

35 Personnel	8,400 lbs
1 ea ¼-T Trk (TOW)	3,085 lbs
1 ea ¼-T Trk (MSL)	2,841 lbs
1 ea ¼-T Tlr	1,065 lbs
	15,391 lbs

-3. By inspection, the number of C-130 aircraft required is:

Type I	1
Type II	1
Type III	1
Type IV	1
Type V	1
Type VI	1
Total	6

Therefore, six C-130's are required under the stated conditions.

NOTE: See figure 2 for an example of a type load worksheet.

c. **Space Method.**

(1) The space method is a desirable method for rapidly computing aircraft requirements for small unit airmoible operations for personnel, weapons, ammunition, and vehicles since the process provides a safety factor. The majority of the computations remain constant and overall planning time is decreased.

(2) A space is defined as the weight of a fully combat-equipped soldier and is used as a denominator to convert the weight of major items of equipment and accompanying supplies into a common factor. A space is considered to be 240 pounds.

(3) In converting weight to spaces, consider only whole or half spaces by carrying fractions to the next higher half or whole space; for example; 10.1 = 10.5, 11.6 = 12.0.

(4) Convert major items of equipment such as vehicles, trailers, or heavy weapons into spaces by dividing the weight of each item by 240. If two or more items of the same type are to be transported, multiply the spaces required for a single item by the number of items. Convert additional assault supplies not carried by the individual soldier into spaces by dividing their total weight by 240.

(5) To determine the number of spaces each aircraft can provide, divide the allowable cargo load by 240. In converting allowable cargo loads to spaces, consider only half or whole spaces. Fractions will be reduced to the next lower half or whole space; for example, 22.8 = 22.5; 24.3 = 24.

Example: Determine the number of UH-1D/H helicopters required to lift the assault elements of a rifle company as shown on the planning worksheet.

Unit	Persons	SUPPLIES		MAJOR ITEMS OF EQUIPMENT				
		Weight	Spaces	Item	Weight (ea)	Spaces	No.	Total Spaces
Co A	150	2,000	8.5	¼-ton truck	2,780 lbs	12.0	5	60
				TOW w/4 missiles	389 lbs	2.0	2	4
				¼-ton trailer	1,065 lbs	4.5	3	13.5
TOTAL	150		8.5					77.5

Total Co A = 236 spaces.

Allowable cargo load, UH-1D, for 50 nautical mile radius = 2,600 lbs.

$\frac{2600}{240}$ = 10.8 or 10.5 spaces.

Aircraft required = $\frac{236}{10.5}$ = 22.5, or 23 helicopters required.

(6) When using the space method, insure that the weight of each piece of equipment is within the allowable cargo load of the aircraft to be used. For example, the ¼-ton truck cited above requires 12 spaces, but it cannot be transported by six UH-1D/H helicopters because of ACL limitations. This reduces the helicopters required to 17 and requires you to find another means of transport for the five ¼-ton trucks.

9. **Air Movement Planning Formats.** The planning sequence for an air movement is as follows:

a. The basic planning guide is prepared at company level.

b. Basic planning guides are consolidated at battalion and higher level.

c. Aircraft requirements are determined, aircraft are requested, and allocated.

d. The air movement table, prepared jointly between the Air Force and Army, is distributed as part of the air movement annex to the battalion operation order.

e. Based on the air movement table, the type load worksheet, and the unit basic planning guide, the unit air loading table is prepared.

f. Personnel and cargo are manifested based on information found in the airloading table and then outloading begins.

10. **Basic Planning Guide.** The basic planning guide reflects the exact organization of the preparing unit in terms of personnel, vehicles, equipment, and supplies. It serves as a basis for preparation of a consolidated basic planning guide at higher headquarters. In its consolidated state, it serves as the basis for the preparation of type loads and initial determination by the weight method of aircraft requirements. It is initiated at company level and consolidated at battalion level and higher. Figure 1 is a sample basic planning guide for a rifle company including normal attachments.

11. **Type Load Worksheet** (figure 2).

a. Purpose. This worksheet is used at company or battalion level to organize the unit into plane-loads. It may be used either to determine aircraft requirements or to assist in allocating aircraft to subordinate units.

b. Explanation.

(1) Type loads are made up for each type aircraft, keeping within the announced allowable cargo load. If time and circumstances permit, these loads are identified with a Roman numeral for easy reference.

(2) From the basic planning guide, list all equipment, personnel, and cargo to be moved. List this information on the first line.

(3) Select a type load and enter the appropriate number of personnel and items of equipment.

(4) Subtract line 2 from line 1 to keep a running balance of items to be loaded.

(5) Continue to organize type loads until the entire unit is loaded. A sum of the "Number of Aircraft" column gives the total number of aircraft required to lift the unit.

12. **Air Movement Table** (figure 3).

a. Purpose. The air movement table is prepared jointly by the combat unit and airlift commanders. Included as part of the operation order, it prescribes the allocation of the aircraft to the organization of the Army units to be lifted. It further designates the number and type of aircraft in each serial and specifies the departure site, time of loading, stations and takeoff times, and destination for each serial. It is the most complete time schedule for the air movement phase of the operation.

b. Explanation of the Air Movement Table.

(1) Heading. This gives the time period of the operation and the time zone of the times appearing in the body of the form.

(2) Column A through O are self-explanatory.

13. **Air Loading Table** (figure 4).

a. Purpose. This format is a data sheet used by Army unit commanders. It may be transmitted to the Air Force commander for information. The table lists the load that goes into each aircraft. Normally, it is completed at company level and forwarded to battalion headquarters. Certain information that goes on it, such as the serial designation and airlift unit, is obtained from the air movement table.

b. Detailed Explanation of the Airloading Table.

(1) Heading. The headquarters of the unit preparing the format will complete the heading.

(2) Serial number. The same serial number as given in the air movement table for the unit preparing the format.

(3) Airlift unit. The same as given in the air movement table.

(4) Chalk number of aircraft. A number is chalked on the aircraft at the departure site for identification purposes. All aircraft in each serial are numbered consecutively. If two or more serials are departing from the same departure site, the chalk numbers will run consecutively from the first aircraft in the first serial to the last aircraft in the last serial.

(5) Ground unit. The same as given in the air movement table.

(6) Aircraft load. The items of equipment and the number of personnel loaded in the aircraft will be listed in this column.

(7) Remarks. The weight of equipment, personnel, and any notations to be made will be listed in this column.

14. **Passenger Manifest** (figure 5). The passenger (personnel) manifest is a record of each individual on the aircraft by name, rank, and social security number. It is based on the information contained in the airloading table. The senior Army member in each planeload is responsible for the accuracy of the manifest. A separate form is made for each aircraft, and copies normally are distributed as follows:

a. Aircraft commander.

b. Planeload commander.

c. Base operations.

d. Departure airfield control officer.

e. Arrival airfield control group.

15. **Planning Worksheet** (figure 6).

a. Planning worksheets are prepared at company level, as time permits, to facilitate air movement planning in airmobile operations. This form reflects troops and equipment to be airlifted and the number of spaces required to lift both. The aircraft requirements are determined by totaling the spaces required by the unit and dividing this total by the space capability of the aircraft being used.

(1) The planning worksheet is divided into the following parts:

(a) Heading. The heading identifies the unit preparing the form and may also contain information pertaining to the operation itself.

(b) Body. The body is divided into two sections which are the unit identification, personnel, and additional supplies section and the major items of equipment section.

-1. Unit Identification, Personnel, and Additional Supplies Section:

Column Number 1. This column is used to identify the unit being transported.

Column Number 2. This column is used to identify the number of personnel being transported.

Column Numbers 3 and 4. The weight of additional supplies and the number of spaces required to transport these supplies are placed in these columns.

-2. Major items of equipment section:

Columns 5 through 7. These columns are used for major items of equipment. Column 5 is used to give the exact description of the major item of equipment being transported. Column 6 is used to give the exact weight of each of the items described in Column 5. Column 7 is used to reflect the exact number of spaces necessary to transport each piece of equipment described in Column 5.

Column Number 8. This column reflects the NUMBER of items in Column 5 that are to be airlifted.

Column Number 9. This column reflects the total spaces required to transport all of the items described in Column 5.

BP1L03

BASIC PLANNING GUIDE	HEADQUARTERS								OPERATION									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
ORGANIZATION	PERSONNEL								VEHICLES, EQUIPMENT, AND SUPPLY									REMARKS
	ASSAULT ECHELON				FOLLOW-UP ECHELON		REAR ECHELON	IN-EFFECTIVES	TYPE	ASSAULT ECHELON				FOLLOW-UP ECHELON		REAR ECHELON		
	PARACHUTE AIRDROP		AIRLAND							AIRDROP		AIRLAND						
	TOTAL NO	WT	TOTAL NO	WT	TOTAL NO	WT	TOTAL NO	TOTAL NO		NO	WT	NO	WT	NO	WT	NO	WT	
Co A, 1-66			167	40,800	2	480	None	None	¼ T Trk ¾ T Trk ¼ T Tlr ¾ T Tlr 2½ T Trk 1½ T Tlr			2 3 2 3	6,146 22,251 2,130 8,520	 1 1	 17,880 5,400	None	None	XO & driver w/ 1¼ T Trk and Tlr accompany adv party armorer & Co Clk in follow-up echelon
Attachments FO Tm, 1-45 FA			3	720					¼ T Trk ¼ T Trk			1 1	3,073 1,065					
FO Tm, 4.2-in Mort			2	480					¼ T Trk ¼ T Trk			1 1	3,073 1,065					
AT Sqd			8	1,920					¼ T Trk (TOW) ¼ T Trk (MSL) ¼ T Tlr			2 2 2	6,170 5,642 2,130					
Redeye Tm			2	480					¾ T Trk			1	7,417					
Co Mess Tm					7	1,680			2½ T Trk 1½ T Tlr					1 1	17,880 5,400			Co mess team in follow-up echelon
Co Aidmen			4	960														
TOTALS			186	44,640	9	2,160						21	68,682	4	46,560			

Figure 1. Basic planning guide.

TYPE LOAD WORKSHEET			HEADQUARTERS: 1st Bn, 66th Inf Schofield Barracks, Hawaii								OPERATION						DATE			
TYPE LOAD	PERS	CARGO	VEHICLES								TRAILERS						OTHER			NUMBER OF AIR-CRAFT
			¼ T	¾ T	2½ T	5 T					¼ T	¾ T	1½ T	1½ TW			¼ TW TOW	¼ T TOW MSL	¾ T Red-eye	
	186		4	3	2	0					6	3	1	1			2	2	1	
I	29		2	0		0					2	0					0	0	0	1
	157		2	3		0					4	3					2	2	1	
II	35		1	1		0					1	1					0	0	0	1
	122		1	2		0					3	2					2	2	1	
III	33		0	1		0					0	1					0	0	1	1
	89		1	1		0					3	1					2	2	0	
IV	26		0	0		0					1	0					1	1	0	1
	63		1	1		0					2	1					1	1	0	
V	28		1	1		0					1	1					0	0	0	1
	35		0	0		0					1	0					1	1	0	
VI	35		0	0		0					1	0					1	1	0	1

TOTAL ACFT REQ: 6

Figure 2. Type load worksheet.

(Classification)

Appendix 1 (Air Movement Table) to Annex E (Air Movement) to OPLAN ESSEX

Reference: OPLAN ESSEX

Time Zone Used Throughout the Plan: ZULU

Copy No__of__copies
1-66 Inf
Fort Benning, Georgia 31905
051400 Feb 73
EEL

TRANSPORTING UNITS							TRANSPORTED UNITS							
Serial Nr A	De-parture B	Chalk Nr C	Airlift Unit(s) D	Serial Cdr E	Nr & Type Aircraft F	Payload Available G	Employ-ment H	Unit To Be Loaded I	Serial Cdr J	Time Loading Begins (Z) K	Station Time L	Take-Off Time M	Destination DZ/LZ ETA N	Remarks O
1	0255	H-1	61st TASS	COL Canyon	C-141	60,000	Airland	HHC	COL Eagle	0130	0230	0250	LZ W 0502	
"	"	H-2	"	"	"	"	"	"	"	"	"	"	"	
"	"	H-3	"	"	"	"	"	"	"	"	"	"	"	
"	"	H-4	"	"	"	"	"	"	"	"	"	"	"	
"	"	H-5	"	"	"	"	"	"	"	"	"	"	"	
1	0255	A-1	61st TASS	COL Canyon	C-130	35,000	Airland	Co A	COL Eagle	0130	0230	0250	LZ W 0520	
"	"	A-2	"	"	"	"	"	"	"	"	"	"	"	
"	"	A-3	"	"	"	"	"	"	"	"	"	"	"	
"	"	A-4	"	"	"	"	"	"	"	"	"	"	"	
"	"	A-5	"	"	"	"	"	"	"	"	"	"	"	
"	"	A-6	"	"	"	"	"	"	"	"	"	"	"	

Continued

(Classification)

Figure 3. Air movement table (TM 55-450-15).

AIRLOADING TABLE				HEADQUARTERS: Co A, 1-66 Inf	
Inclosure 1 (Airloading Table) to Appendix 2 (Loading Plan) to Annex E (Air Movement Plan) to OPLAN ESSEX				PLACE: Fort Benning, Georgia	
DEPARTURE AIRFIELD: A-101				DATE:	
LOADING BEGINS 0130Z D+1				STATION TIME: 0235z D-1	
SERIAL NR	AF UNIT	ACFT CHALK NR	ARMY UNIT	ASSAULT ACFT LOADED WITH	REMARKS, INCLUDING SP EQUIP NEEDED FOR LOADING AND TOTAL PAYLOAD
1	61st TASS	A -1	A/1-66	29 Personnel 2 ea ¼ T Trk 2 ea ¼ T Tlr	Personnel (9) Co Hq: Cdr, RTO, Comm Ch, Rad Mech, Wireman, Aidman, Arty FO, Recon Sgt, Recon RTO (5) 1st Plt: Plt Ldr, RTO, 81-mm FO & RTO, Aidman (10) 1 Rif Sqd (5) AT gunner, asst gunner, MG gunner, asst MG gunner, ammo bearer Vehicles Co Hq: 1 ea ¼ T Trk w/Tlr Arty FO: 1 ea ¼ T Trk w/Tlr TOTAL PAYLOAD: 15,236 lbs
		A - 2	A/1-66	25 Personnel 1 ea ¼ T Trk w/Tlr 1 ea ¾ T Trk w/Tlr	Personnel (1) 1st Plt: Plt Sgt (20) 2 Rif Sqd (6) Wpn Sqd Ldr, AT gunner, asst gunner, MG gunner, asst gunner, ammo bearer (8) Mort Plt: Plt Ldr, RTO, FDC, 1 81-mm Mort Sqd Vehicles Mort Plt: 1 ea ¼ T Trk w/Tlr 1 ea ¾ T Trk w/Tlr TOTAL PAYLOAD: 22,795 lbs
		A - 3	A/1-66	33 Personnel 2 ea ¾ T Trk 1 ea ¾ T Tlr	Personnel (5) 2d Plt: Plt Ldr, RTO, 81-mm Mort FO & RTO, Aidman (20) 2 Rif Sqd (6) Mort Plt: FDC, 1 81-mm Mort Sqd (2) Redeye Vehicles Mort Plt: 1 ea ¾ T Trk w/Tlr Redeye: 1 ea ¾ T Trk TOTAL PAYLOAD: 25,594 lbs

Figure 4. Airloading table.

PASSENGER MANIFEST	(Check applicable box) NONREVENUE	REVENUE	1. CARRIER MAC	2. AIRCRAFT NO. C–124/0502
3. ORIGIN Pope AFB	4. DESTINATION (Name and location) Travis AFB	5. MANIFEST NO. 2	6. TRIP NO. AND DATE 4419 1 Jan	7. CABIN ATTENDANT

8. MANIFEST

LINE NO.	GRADE OR TITLE A.	U.S. ARMED FORCES PASSENGERS (Name and AFSN or SSAN) U.S. CIVILIANS AND FOREIGN NATIONALS (Name-Last, First, M.I.- and Passport No.) B.	CHECKED BAGGAGE PIECES C.	CHECKED BAGGAGE WEIGHT D.	PASSENGER WEIGHT PLUS CABIN BAGGAGE E.	AUTHORITY AND/OR PRIORITY IDENTIFICATION (HQS., Order No., and Date) F.
1	SSG	DOE, JOHN M 260932563			300	405th TFW
2	MAJ	JONES, FRANK W 732484290			300	405th TFW
3	LTC	ROE, THOMAS T 402079044			285	HQ USSTRICOM
4	SN	SMITH, LLOYD A 322060728			285	AIRANTISUBRON 11
5	SP6	GREEN, ROBERT N 194786112			300	HQ 107 AIRBORNE DIV
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
		TOTALS			1470	TOTAL WEIGHT PASSENGERS AND ALL BAGGAGE 1470

9. ALL PASSENGERS AND BAGGAGE LISTED ON THIS MANIFEST HAVE BEEN LOADED

DATE	MANIFEST PREPARED BY (Typed name, grade, title)	SIGNATURE OF LOADING SUPERVISOR
1 JAN 68	BROWN, PAUL M., SSG	

10. ALL PASSENGERS AND BAGGAGE LISTED ON THIS MANIFEST HAVE BEEN RECEIVED EXCEPT AS CIRCLED AND NOTED ON THE REVERSE

DATE	PRINTED NAME, GRADE OR TITLE OF UNLOADING SUPERVISOR	SIGNATURE

AF FORM APR 68 96 REPLACES AF FORM 96h, OCT 63, WHICH WILL BE USED UNTIL 30 JUN 69

Figure 5. Passenger manifest (TM 55-450-15).

PLANNING WORKSHEET		HEADQUARTERS					OPERATION			DATE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
UNIT	PERSONNEL	ADDITIONAL SUPPLIES		MAJOR ITEMS OF EQUIPMENT					TOTAL SPACES EA UNIT (TOTAL COL 2, 4, 9)	REMARKS
		Weight lbs	Spaces	Item	Weight lbs	Spaces (ea)	Nr of Items	Total Spaces		
B/1-66	185 (Includes attachments) Note 1	4566	19	¼-T Trk w/AN/VRC-125	2357	10.0	1	10.0		Wpns Plt Ldr veh. Wt includes radio.
				¼-T Trk w/AN/VRC-47	2408	10.5	2	21.0		Cdr & XO vehs. Wt includes radio.
				¼-T Trk w/AN/VRC-46 AN/VRC-125	2462	10.5	1	10.5		Arty FO Tm veh. Wt includes radios.
				¼-T Trk w/AN/VRC-46 AN/VRC-24 & AN/GRC-19	2714	11.5	1	11.5		TACP. Wt includes radios.
				¼-T Trk, Amb	2963	12.5	1	12.5		
				¼-T Trk for TOW	2696	11.5	2	23.0		Wt does not include rifle.
				TOW w/4 Missiles	389	2.0	2	4.0		Wt includes grd mount.
TOTALS	185		19					92.5	296.5	

NOTES:

1. The following personnel were left with the battalion:
   XO — Co Clk
   Supply Sergeant — Rad-Tel Opr
   Armorer

2. 81-mm mortar section will use the XO's vehicle.

$$\frac{\text{ACL}}{240} = \frac{3000}{240} = 12.5 \text{ spaces per helicopter}$$

$$\frac{\text{Total Unit Spaces}}{\text{Spaces/helicopter}} = \frac{296.5}{12.5} = \begin{matrix}23.9 \text{ or } 24 \text{ UH-1D/H} \\ \text{Helicopters to} \\ \text{lift B/1-66}\end{matrix}$$

Figure 6. Planning worksheet.

LOAD	C-119 *L443 W 110 H 96	C-123 L W II	C-130 L496 W 120 H 109	C-124 L924 W 135 H 139	C-141 L840 W 123 H 109	C-5A L1736 W 228 H 162	CARIBOU CV-2 L345 W 735 H 75	CHINOOK CH-47 L366 W 90 H 78
Parachutists	42	46	64	112	123	**75	24	24
Air Landed Personnel	62	60	92	200	154	***270	32	33
Trk ¼-T	3 Trks	3 Trks	4 Trks	12 Trks	6 Trks	–	1 Trk	2 Trks
Trk ¼-T w/Tlr	2 Trks, 2 Tlrs	3 Trks, 3 Tlrs	3 Trks 3 Tlrs	8 Trks, 8 Tlrs	4 Trks, 3 Tlrs	–	1 Trk, 1 Tlr	2 Trks, 2 Tlrs
Trk ¾-T	2 Trks	2 Trks	2 Trks	4 Trks	4 Trks	–	–	1 Trk
Trk ¾-T wT Tlr	1 Trk, 1 Tlr	1 Trk, 1 Tlr	2 Trks, 2 Tlrs	3 Trks, 3 Tlrs	3 Trks, 2 Tlrs	–	–	1 Trk
Misc ¾-T Loads	1 Trk w/How 105-mm	1 Trk w/How 105-mm	–	–	2 Trks w/How 105-mm	–	–	–
Trk 2½-T w/Tlr	1 Trk, 1 Tlr	1 Trk, 1 Tlr	1 Trk, 1 Tlr	2 Trks, 2 Tlrs	2 Trks, 2 Tlrs	–	–	–
Misc Loads	Combination Not Loadable	Combination Not Loadable	1 Trk 5-T 1 How 155-mm	2 Trks, 2 How 105-mm	2 5-T Trks	–	–	–
	1 How 155-mm	1 How 155-mm	1 Trk 2½-T 1 How 105-mm	1 Trk 5-T 1 How 105-mm	–	–	–	–
	1 AN/GRC-26 (Mod)	1 AN/GRC-26 (Mod)	1 AN/GRC-26 (Mod) 1 Trk ¾-T	1 AN/GRC-26 1 Trk 2½-T	–	–	–	–
	1 Tractor D6	1 Tractor D6	1 Tractor D6	1 Tractor D7 1 Tractor D4	–	–	–	–
	2 AN/GRC-46	2 AN/GRC-46		2 Shop Vans 2 Tlrs 1½-T	–	–	–	–
			8-Inch Howitzer	8-Inch Howitzer	–	–	–	–

*Cargo compartment size in inches.
**Under development, 73 seats available in troop compartment.
***Aft facing paletized seat kit.

Figure 7. Aircraft load summary.

16. **Aircraft Load Summary** (figure 7). List of aircrafts/personnel and equipment capabilities.

REFERENCES:

FM 57-1, US Army/US Air Force Doctrine for Airborne Operations, Sep 67 (chap 3, pages 18 thru 26, para 3-1 thru 3-11)
FM 101-10-1, Staff Officer's Field Manual, Organizational, Technical, and Logistic Data (Unclassified Data), Jul 76 (chap 4, sec II, pages 4-4 thru 4-11, para 4-4 thru 4-11)
TM 55-12, Movement of Army Units in Air Force Aircraft, Apr 74 (app F, pages F-1 thru F-9)
TM 55-450-15, Airmovement of Troops and Equipment (Non-Tactical), Jun 1971

TASK NUMBER: 071-332-5041

PLAN/REQUEST CLOSE AIR SUPPORT

CONDITIONS:

During combat operations, CPX or FTX, given a map of the operational area, an overlay with approximately five targets suitable for airstrikes and 15 targets suitable for attack by organic or supporting indirect fires, available fire support (one FA Battery, nine 81-mm mortars, four 4.2-inch mortars, close air support sorties allotted to parent battalion), unit OPLAN/OPORD, scheme of maneuver and Joint Tactical Airstrike Request Forms.

STANDARDS:

As a minimum, preplanned close air request must:

1. Only be requested to attack targets that cannot be neutralized or destroyed by organic/supporting indirect fire support or armed helicopters.

2. Be requested within time specified by tactical SOP or OPLAN/OPORD.

3. Include requester's identification, request type, priority, target time, target location, target description, and final control.

PERFORMANCE MEASURES:

1. **Preplanned missions.** These are missions for which the target has been selected in advance, allowing complete planning and preparation prior to execution. The preplanned mission can be integrated into the fire support plan and can be scheduled for timely execution which will best support a given operation.

a. Close Air Support Targets. Close air support target selection is oriented towards short-range and relatively impromptu operations. The targets are developed during the course of battle and selected for attack within 24 hours. The variety of close air support targets is infinite, and the effectiveness with which tactical air can strike them is contingent upon several variables, including the target composition and disposition, weather, weapons, time available, proximity to friendly forces, etc.

b. Target Selection.

(1) The general principle is to select those targets for preplanned airstrikes which are beyond the reasonable capability of available ground force weapons.

(2) In determining whether ground targets are suitable for preplanned air attack, certain factors must be considered.

(a) Capabilities of organic weapons. Ground targets are normally engaged at the lowest echelon having weapons available which can achieve effective results. Therefore, commanders at each echelon must consider the capability of organic, attached and supporting weapons available to them prior to requesting close air support. There must be good reasons for not using available weapons such as armed helicopters, artillery, mortars, rockets, etc., to achieve the desired result on the target.

(b) Armament capabilities. Armament capability of close air support is varied (napalm, rockets, SMART bombs, etc.) and its effectiveness would depend on the tactical conditions and nature of the target. In considering the use of close air support, the ground commander takes into account the type of armament usually carried by such aircraft and the suitability of its employment for the task involved. The ground commander need not specify the armament to be employed. However, a detailed target description, location of friendly forces, and results desired are necessary for proper evaluation by higher echelons and determination by the Air Force as to the actual armament load to be used.

(c) Time. Time is an important factor with respect to urgency of the desired results. Considering the time it could reasonably be expected to take to get an airstrike on a target, the ground commander must determine if his mission, the tactical situation, and the nature of the target warrants accepting the delay. Even when other conditions may indicate the suitability of an airstrike, the factor of time may preclude its use and dictate employment of other means.

2. **Processing tactical air support requests.**

a. Requests. Preplanned close air support requests are forwarded through Army channels, moving progressively upward through each level until they reach the senior tactical operations center (TOC). These are then passed to the tactical air control center (TACC) as an Army requirement for fulfillment (figure 1).

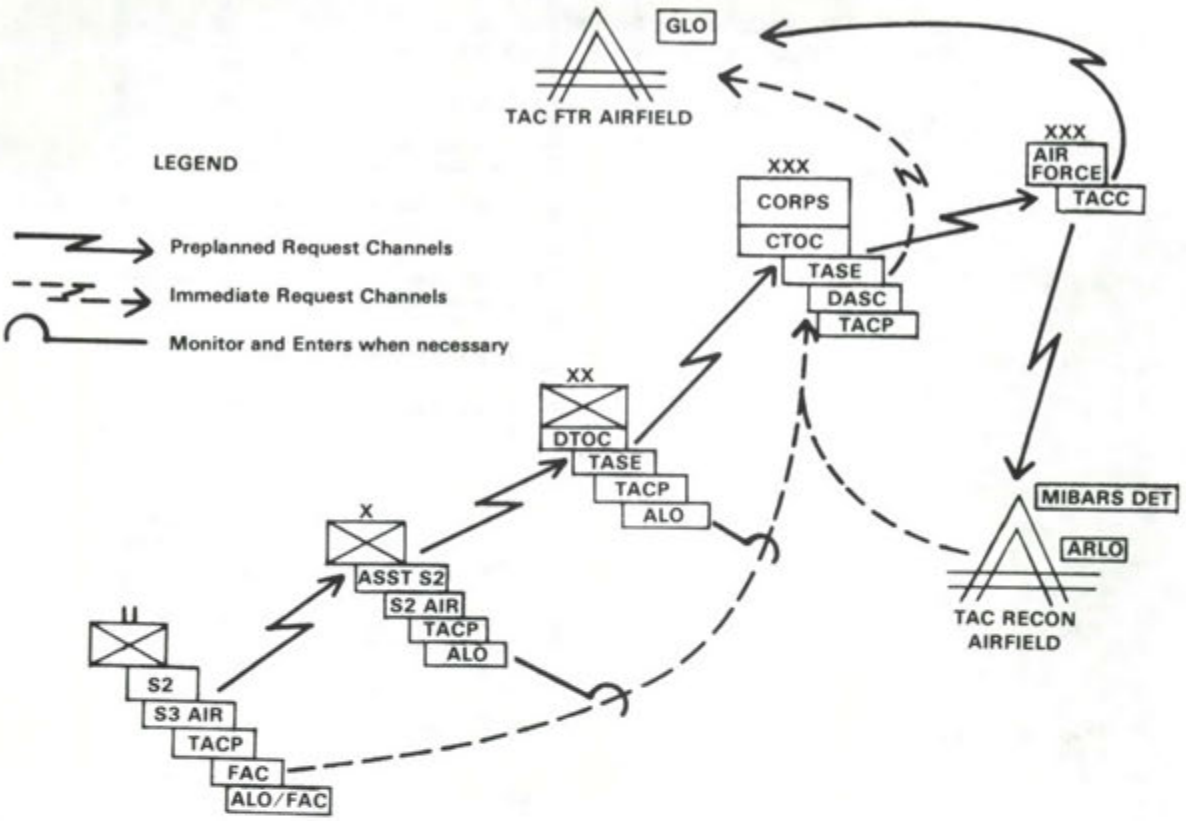


Figure 1. Air-ground operations.

b. Fire Support Coordination. To insure coordination of all means of fire support, requests for preplanned air support are closely coordinated with the fire support coordinator or fire support coordination element at each level of command.

c. Essential Elements of a Close Air Support Request. A preplanned request for close air support contains sufficient detail to permit each Army echelon concerned to determine the suitability of air or select other means to be employed. As a minimum, it includes:

(1) Requester's identification/request number.

(2) Request type and priority.

(3) Target type.

(4) Target location.

(5) Target time.

(6) Final control.

3. **Request forms.** Request forms for close air support may vary from command to command, but the essential information contained remains unchanged (figure 2). Each block is numbered for ease of transmission.

INSTRUCTIONS FOR USE OF THE JOINT TACTICAL AIR STRIKE REQUEST FORM

Figure 2.

SECTION I - (MISSION REQUEST)

Title and Element(s)		Explanation
Line 1.	Unit called (Identifier)	1. Identifies the unit called by unit designation/call sign/preassigned number.
	This is (Identifier)	Identifies the request originator by unit designation/call sign/preassigned number.
	Request number	Indicates the originator's request number in series.
	Sent	Indicates the time and the individual who transmitted the request.
Line 2.		2.
	A. Precedence	A. For preplanned requests, indicates the requester's assignment relative to his other requests stated numerically in descending order of importance.
	B & C	B & C. Use numerical designation below to define the tactical situation for prelanned (B) or immediate (C) request.

Priority -- It is the responsibility of the requester to establish the priority. The categories of mission priority are:

Priority No.	Priority	Definition
1	Emergency	Targets which require immediate action and precedence over all other categories of mission priority.
2	Priority	Targets which require immediate action and take precedence over routine targets.
3	Routine	Targets of opportunity, targets which do not demand urgency in execution.

	Received	Indicates the time and the individual who received the request.
Line 3.	Target is/Number of	3. Describes the type, approximate size, and mobility of the target to be attacked.
Line 4.	Target Location is	4. Locates the target by using the military grid reference system prescribed for the area concerned.
	A. Coordinates	A. Locates a point target or starting point.
	B. Coordinates	B. When used in conjunction with A, provides from _____to_____ coordinates.
	C. Coordinates	C. When used in conjunction with A and B, provides a route.
	D. Coordinates	D. When used in conjunction with A through C, provides a route or describes a target area.
	E. Target Elevation	E. Target elevation in feet above sea level.
	F. Sheet No. _____	F. Self-explanatory.

Title and Element(s)		Explanation
	G. Series _____	G. Self-explanatory
	H. Chart No.	H. Self-explanatory
	Checked	Indicates with whom target information has been cross-checked.
Line 5.	Target Time/Date	5. Indicates the time/date when the airstrike is requested.
	A. ASAP	A. As soon as possible.
	B. NLT	B. The target is to be attacked before, but not later than the time indicated.
	C. At	C. Indicates time at which target is to be attacked.
	D. To	D. Deontes a period of time in which support such as airborne alert or column cover is required. When used with item C, use of item B is unnecessary.
Line 6.	Desired Ordnance/results	6. Indicates the requester's desired ordnance airstrike results.
	A. Ordnance	A. Self-explanatory
	B. Destroy	B. Self-explanatory
	C. Neutralize	C. Self-explanatory
	D. Harass/Interdict	D. Self-explanatory
Line 7.	Final Control	7. Identifies the final controller (FAC, radar beacon FAC (RABFAC), TAC(A), ASRT) who will conduct the attack briefing and control the release of ordnance.
	A. FAC, TAC(A)	A. Self-explanatory
	B. Call sign	B. Self-explanatory
	C. Freq--Pri/Sec	C. Self-explanatory
	D. ASRT/RABFAC	D. Self-explanatory
	E. Freq--Pri/Sec	E. Self-explanatory
	F. Fix/Cont Pt	F. Military grid coordinates or navigational aid fix of a control point which is the farthest limit of an attack aircraft's route of flight prior to control by the final controller.
Line 8.	Remarks	8. Allows for the incorporation of other essential information not provided for in the request format.
	Acknowledged Bde/Regt Division Other	Acknowledge indicates that the request has been copied for concurrence at brigade/regiment, division, and higher echelon. (Applies only to requests by ground forces.)

NOTE: This block may not apply to air interdiction missions.

Change 1

SECTION II (COORDINATION)

Title and Element(s)	Explanation
Line 9. NGF	9. Naval gunfire coordination
Line 10. ARTY	10. Artillery coordination
Line 11. AIO/G-2/G-3	11. Air Intelligence Officer, G2, G3, or other service equivalent coordination.
Line 12. Request	12. Indicates the approval or disapproval of the request.
A. Approved	
B. Disapproved	
Line 13. By	13. Indicate the individual who approved or disapproved the request.
Line 14. Reason for disapproval	14. Self-explanatory
Line 15. Restrictive Fire/Air Plan	15. Safety measures for friendly aircraft. The restrictive fire plan establishes airspace that is reasonably safe from friendly, surface-delivered, nonnuclear fires. The restrictive air plan provides a warning to aircraft of the parameters of surface-delivered fire in a specific area. A plan number is issued, as appropriate. The plan should be identified as "Fire" or "Air."
A. Is not	
B. Number	
Line 16. Is in Effect	16. Establishes the time period that the applicable plan will be in effect.
A. From time	
B. To time	
Line 17. Location	
A. From--coordinates	A. Military grid coordinates, by bearing and distances, of a known navigation aid.
B. To--coordinates	
Line 18. Width (meters)--from either side of the centerline defined by the above coordinates. (May not apply to the restrictive air plan.)	
Line 19. Altitude/VERTEX (use subitem A for VERTEX only entry)	
A. Maximum/VERTEX	Given in mean sea level (MSL) altitude; altitude above sea level.
B. Minimum	

SECTION III (MISSION DATA)

Title and Element(s)	Explanation
Line 20. Mission Number	20. Indicates mission number
Line 21. Call sign	21. Flight call sign of mission aircraft
Line 22. No. and Type Aircraft	22. Self-explanatory
Line 23. Ordnance	23. Type of ordnance either by code number or actual nomenclature
Line 24. Est/Act Takeoff	24. Estimated or actual time the mission aircraft will take off.
Line 25. Est TOT	25. Estimate time on target
Line 26. Cont Pt/RDNVS (Coord/ NAVAID FIX)	26. The farthest limit of the attack aircraft's route of flight prior to control by the final controller. It should be the same as Line 7, Item F, when designated in the request.
Line 27. Initial Contact	27. Indicates the initial control agency the flight is to contact.
Line 28. FAC/ASRT/TAC(A) Call Sign Freq	28. Call sign of final control agency and frequency.
Line 29. Restrictive Fire/Air Plan--see 15-19	29. Refer to Blocks 15 through 19 for this data.
Line 30. Tgt Description	30. Self-explanatory
Line 31. Tgt Coord/Elev	31. Self-explanatory

NOTE: Section III mission data information transmitted to the requesting agency may be limited to those items not included in the request.

4. **The air fire plan.**

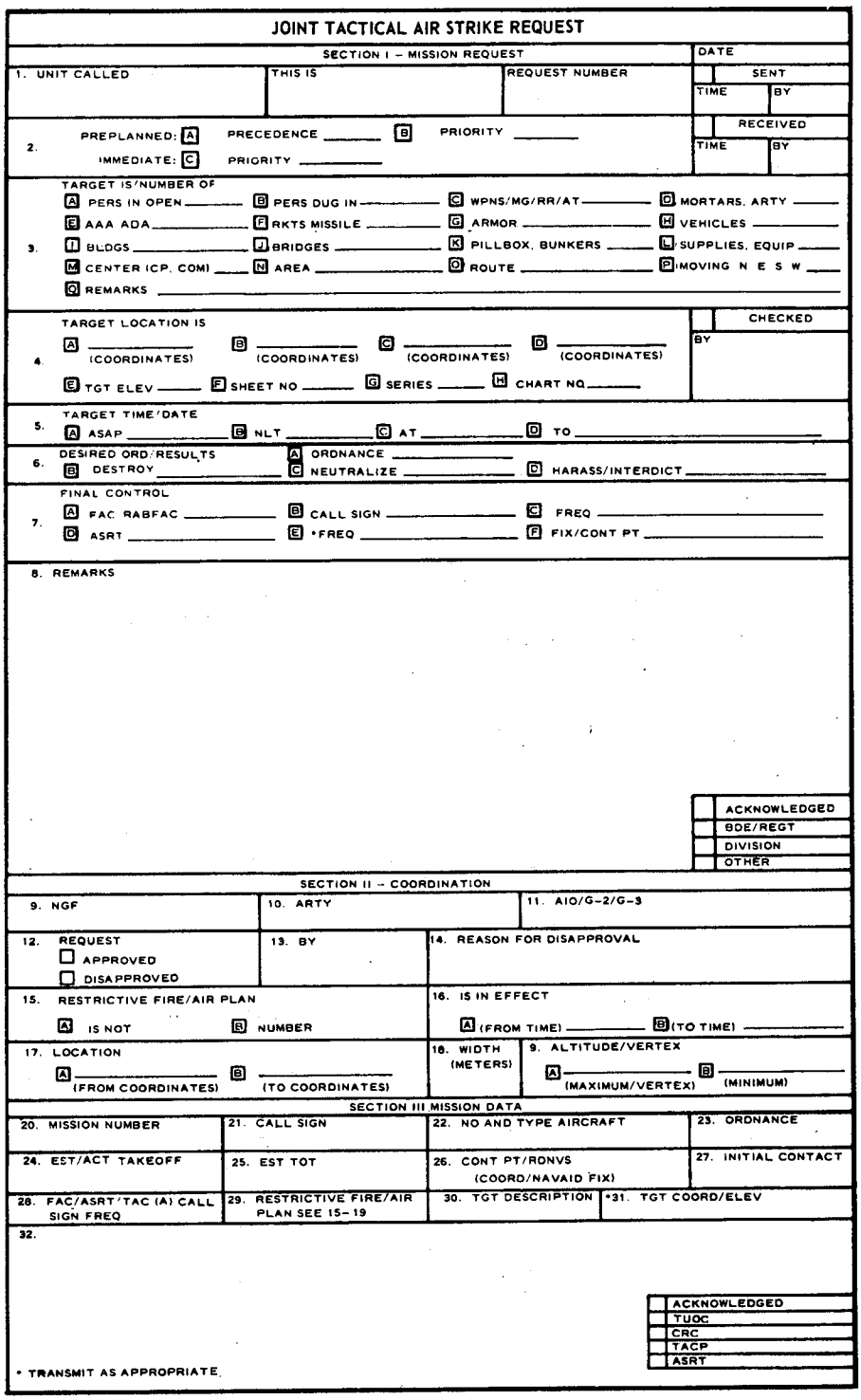
a. Details of close air support may be disseminated by the following means:

(1) Oral instructions.

(2) The Fire Support Annex to an operation order.

(3) The Air Fire Support Appendix to a Fire Support Annex.

b. The demands of each particular situation and the amount of detail of air support matters will be determining factors in the selection of the medium to be used.



JOINT TACTICAL AIR STRIKE REQUEST

SECTION I – MISSION REQUEST

1. UNIT CALLED | THIS IS | REQUEST NUMBER | DATE | SENT | TIME | BY

2. PREPLANNED: [A] PRECEDENCE _____ [B] PRIORITY _____
IMMEDIATE: [C] PRIORITY _____ | RECEIVED | TIME | BY

3. TARGET IS/NUMBER OF
[A] PERS IN OPEN _____ [B] PERS DUG IN _____ [C] WPNS/MG/RR/AT _____ [D] MORTARS, ARTY _____
[E] AAA ADA _____ [F] RKTS MISSILE _____ [G] ARMOR _____ [H] VEHICLES _____
[I] BLDGS _____ [J] BRIDGES _____ [K] PILLBOX, BUNKERS _____ [L] SUPPLIES, EQUIP _____
[M] CENTER (CP, COM) _____ [N] AREA _____ [O] ROUTE _____ [P] MOVING N E S W _____
[Q] REMARKS _____

4. TARGET LOCATION IS
[A] _____ (COORDINATES) [B] _____ (COORDINATES) [C] _____ (COORDINATES) [D] _____ (COORDINATES)
[E] TGT ELEV _____ [F] SHEET NO _____ [G] SERIES _____ [H] CHART NO _____
CHECKED | BY

5. TARGET TIME/DATE
[A] ASAP _____ [B] NLT _____ [C] AT _____ [D] TO _____

6. DESIRED ORD RESULTS
[A] ORDNANCE _____
[B] DESTROY _____ [C] NEUTRALIZE _____ [D] HARASS/INTERDICT _____

7. FINAL CONTROL
[A] FAC RABFAC _____ [B] CALL SIGN _____ [C] FREQ _____
[D] ASRT _____ [E] *FREQ _____ [F] FIX/CONT PT _____

8. REMARKS

ACKNOWLEDGED
BDE/REGT
DIVISION
OTHER

SECTION II – COORDINATION

9. NGF | 10. ARTY | 11. AIO/G-2/G-3

12. REQUEST ☐ APPROVED ☐ DISAPPROVED | 13. BY | 14. REASON FOR DISAPPROVAL

15. RESTRICTIVE FIRE/AIR PLAN [A] IS NOT [B] NUMBER | 16. IS IN EFFECT [A] (FROM TIME) _____ [B] (TO TIME) _____

17. LOCATION [A] _____ (FROM COORDINATES) [B] _____ (TO COORDINATES) | 18. WIDTH (METERS) | 19. ALTITUDE/VERTEX [A] _____ (MAXIMUM/VERTEX) [B] _____ (MINIMUM)

SECTION III MISSION DATA

20. MISSION NUMBER | 21. CALL SIGN | 22. NO AND TYPE AIRCRAFT | 23. ORDNANCE
24. EST/ACT TAKEOFF | 25. EST TOT | 26. CONT PT/RONVS (COORD/NAVAID FIX) | 27. INITIAL CONTACT
28. FAC/ASRT/TAC (A) CALL SIGN FREQ | 29. RESTRICTIVE FIRE/AIR PLAN SEE 15–19 | 30. TGT DESCRIPTION | *31. TGT COORD/ELEV

32.

ACKNOWLEDGED
TUOC
CRC
TACP
ASRT

* TRANSMIT AS APPROPRIATE.

Figure 2.

REFERENCES:

FM 100-26, The Air-Ground Operations System, Mar 73 (chap 4, pages 4-2 thru 4-4, para 4-5)

TASK NUMBER: 071-332-5042

RELAY REQUEST FOR IMMEDIATE CLOSE AIR SUPPORT

CONDITIONS:

During combat operations, CPX or FTX, given a radio request for immediate close air support from subordinate element, Joint Tactical Air Strike Request Form, map/overlay of subordinate units locations, and parent unit SOP for air-ground operations.

STANDARDS:

As a minimum, you must within 2 minutes:

1. Verify correct locations of target and friendly elements.

2. Channel request through battalion air liaison officer (ALO)/forward air controller (FAC) within the Tactical Air Control Party (TACP).

PERFORMANCE MEASURES:

1. **Immediate close air support requests.** Immediate CAS missions are flown from sorties set aside from the daily allocation for this purpose or, if these are exhausted, by diverting preplanned sorties. They are used against targets of opportunity, targets that rapidly develop as a result of the ground commander's action, and in operations where targets are not identified in time to permit detailed planning.

2. **Immediate close air support channels** (figure 1). Immediate CAS generated at platoon and company level are forwarded to the battalion CP via Army communications.

a. The requests are validated at this level by the battalion commander, S3 or S3 Air, and handed over to the battalion ALO/FAC within the Tactical Air Control Party (TACP).

b. The ALO/FAC submits the requests directly to the DASC over the Air Force-operated immediate air request net.

c. The TACP at higher echelon monitors and acknowledges having received these transmissions and coordinates the request with the Army S3/G3 Air at that level. If the Army echelon above the initiating level has organic firepower (i.e., artillery, missiles), which will do the job or desires to disapprove the request for other reasons, the ALO with the headquarters disapproving the request will notify the direct air support center (DASC) to cancel the mission. Normally, disapproval should be voiced within 5 minutes after acknowledgement of receipt; silence normally means approval. Also, the initiating unit will be notified how the mission is to be handled.

d. During the time that the tactical air support elements are researching their own capabilities, the DASC personnel are simultaneously preparing the mission data and performing the planning necessary to engage the target as soon as possible.

e. The DASC immediately scrambles the aircraft from ground alert or diverts air alert or preplanned air through the use of the CRP.

f. The DASC then calls the TACP of the requesting unit and gives them the number of aircraft, their call signs, ordnance load (if appropriate), and the time on target that can be expected for their final control by the FAC.

g. If the desired effect on the target is not achieved by diverted ordnance, the originator must resubmit the request.

3. **Marking of friendly positions.** It is important to identify friendly positions for safety reasons and as another means of referencing the target location. Covert means should be employed whenever practical.

4. **Direction of delivery.** The direction of delivery is an important consideration. Whenever possible, the fighters should attack parallel to the front of friendly troops to enhance safety. Weather, terrain features, or enemy defenses could make this impossible or unwise. In this case, friendly troops should be more concerned about marking their positions, protective cover, and increasing safe separation distances.

5. **Request forms for immediate close air support are the same forms used for preplanned CAS.** See figure 2, task: **Plan/request preplanned close air support.**

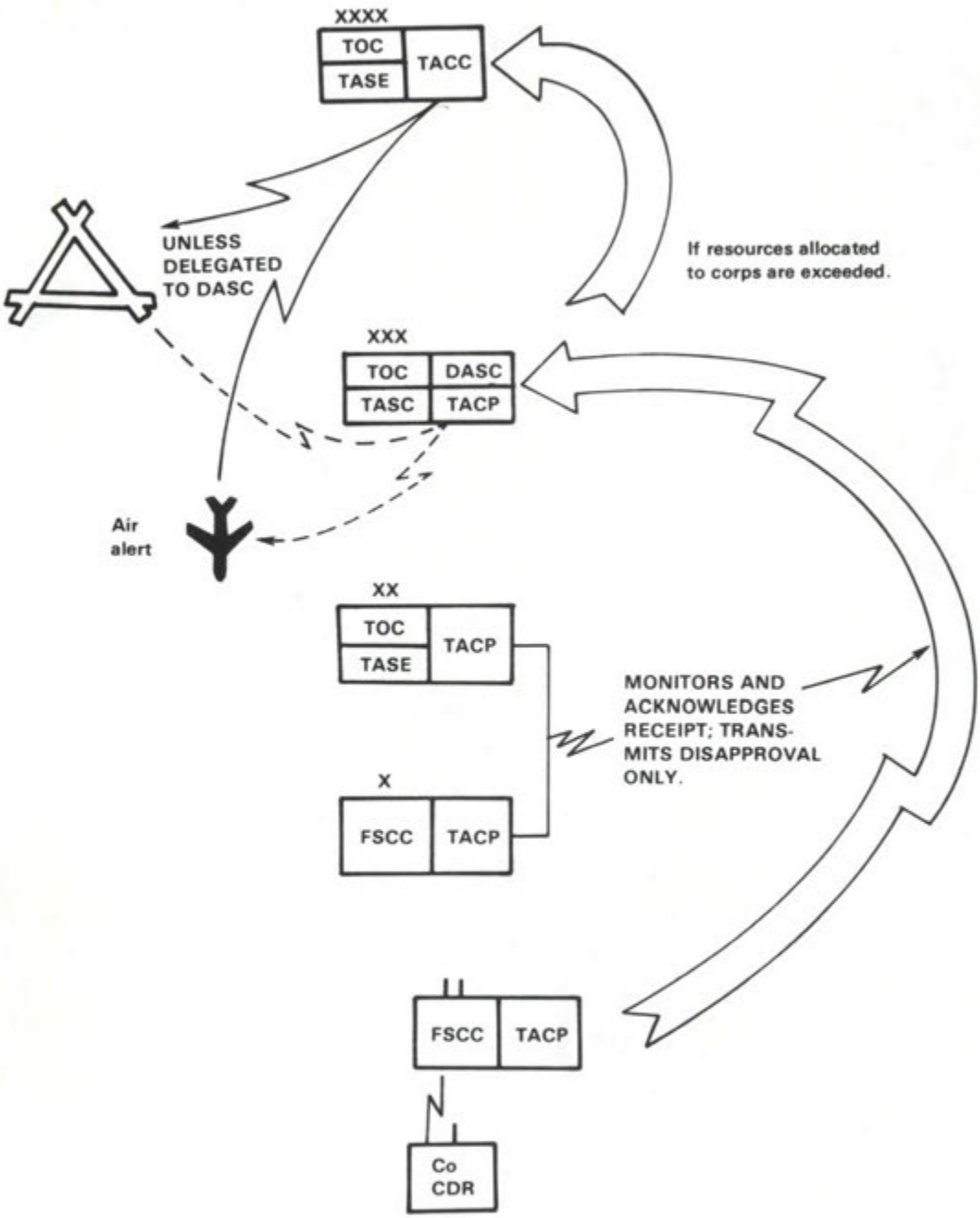


Figure 1. Immediate close air support request channels.

REFERENCES:

FM 100-26, The Air-Ground Operations System, Mar 73 (chap 4, page 4-1 thru 4-6, para 4-1 thru 4-5)

TASK NUMBER: 071-332-5050

MONITOR OPERATIONS/MOVEMENTS OF SUBORDINATE UNITS

CONDITIONS:

During battalion combat operations, CPX, FTX, contingency in peacetime, given a copy of the OPORD, frag order, or movement order that designates the operation/movement; overlay or graph showing the scheme of maneuver/route of movement, phase lines, and critical points; a map; a watch; and AM/FM radio(s).

STANDARDS:

As a minimum:

1. Continuously monitor tactical operation/movement from initiation to completion.

2. Advise units of corrective actions when major deviations from the OPORD/movement order occur.

3. Implement supporting action for subordinate units/elements that require assistance.

PERFORMANCE MEASURES:

1. The primary functions of the S3 section at the battalion level are monitoring and coordinating operations and movements of subordinate units. The S3 section presents to the commander the current operation estimate of the situation and recommendations for the employment of organic, assigned, attached, and supporting combat and combat support units. The S3 section uses information provided by subordinate units, staff sections, and other tactical operation elements and insures the dissemination of this information to other sections of the command post.

2. The S3 section.

a. Maintains information on the status of subordinate units reporting directly to the battalion. The S3 section maintains only essential information required to insure control, e.g., knowledge of capabilities, commitment, availability, and effectiveness of subordinate units.

b. Maintains information on the current status of barriers and obstacles. The location and extent of artificial and natural barriers, obstacles, and gaps are displayed in the command post. This information is provided by the S2, and supporting engineers. The S3 section receives reports of changes from subordinate units as they occur and provides the information to other command post (CP) elements.

c. Maintains information on the current friendly situation. The S3 section is the focal point within the battalion CP for information on the current friendly situation. The information is shown graphically on the friendly portion of the situation map. This information is maintained and displayed for use by all CP elements. The S3 section also portrays the latest information on the operation, to include boundaries, control measures, objectives, and location of all units.

d. Disseminates orders and information and monitors execution to insure compliance with the commander's concept and decisions. The S3 section disseminates orders and instructions directly to combat and combat support units.

e. Disseminates the commander's decisions, guidance, priorities, and allocation of resources. The S3 section disseminates to other CP elements the commander's decisions and guidance concerning conduct of the current operation and the establishment of priorities and allocation of resources. The extent to which the S3 section may act on its own initiative is prescribed by the commander.

f. Coordinates requirements for movement of combat and combat support units. Movements of combat and combat support units in the battalion operational area are coordinated with the S4. He supports movements in accordance with priorities recommended by the S3 section.

g. Prepares the maneuver portion of fragmentary operation orders. The S3 section, in close coordination with the S2 section, prepares portions of orders pertaining to the combat elements of the battalion. Other staff sections are provided this information to insure coordination of the combat support portion of orders.

h. Recommends the employment of organic, attached, or supporting combat and combat support resources. Recommendations are based on advice and recommendations from other battalion sections, liaison representatives in the command post, and subordinate unit commanders. Before it submits the recommendations, the S3 section coordinates to insure feasibility, availability of required combat support and combat service support, and interchange of information.

REFERENCES:

FM 7-20, The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger), Apr 78 (chap 3, pages 3-13 thru 3-15)
FM 101-5, Staff Officer's Field Manual, Staff Organization and Procedure, Jul 72 (app J, pages J-4 and J-5, para J-15)

TASK NUMBER: 071-332-5051

PREPARE/POST DAILY STAFF JOURNAL

CONDITIONS:

During combat operations, CPX, FTX, or peacetime contingency, given a unit SOP, DA Form 1594 (Daily Staff Journal/Duty Officer's Log), and pen, pencil, or typewriter.

STANDARDS:

During period specified by unit SOP:

1. Record events which affect your unit or staff section operations on DA Form 1594 (Daily Staff Journal/Duty Officer's Log).

2. Journal entries must:

a. Be posted immediately upon receipt/dispatch/occurrence of events.

b. Accurately and concisely describe the information received/dispatched on the event that occurred.

c. Specify actions that were taken upon receipt/dispatch of information on the event that occurred.

PERFORMANCE MEASURES:

1. The journal is a permanent, chronological record of reports and messages that have been received and transmitted, of important events that have occurred, and of actions taken in response, covering a stated period (specified by the commander), usually 24 hours. Among the purposes for maintaining a journal are:

a. To assist in the more efficient conduct of operations.

b. To provide a ready reference for the commander and staff and for higher and lower headquarters.

c. To serve as a permanent record for training matters, operational reviews, and historical research.

2. There are generally three methods of maintaining a journal: (1) the S1 maintains it for headquarters, (2) each staff section maintains a staff journal for that section, or (3) it is maintained as a combined staff section journal such as the S1/S4 staff journal and S2/S3 staff section journal. The commander of a brigade may prescribe the maintenance of one journal for the unit or require the maintenance of separate journals by each staff section.

3. Form and contents:

a. Difference in size, organization, and missions of units and staff sections preclude rigid adherence to a model form of journal. The format of this example is provided by DA Form 1594 (Daily Staff Journal or Duty Officer's Log), figure 1.

b. Journal entries should reflect:

(1) An accurate and concise statement of the message, report, or event.

(2) A notation as to the sender or individual making the report, to include unit duty position or section, such as S3 1/29 Inf.

(3) The time of receipt or dispatch and method of transmission.

(4) Action actually taken (not intended) as a result, to include dissemination given to reports or information.

(5) The purposes, subjects, and conclusions of command conferences will be described briefly; command decision will be set down; plans will be summarized; all movements of units down to company, battery, and troop level will be described in such a manner as to enable their locations to be pinpointed and traced; all changes in unit status, i.e., activation, inactivation, redesignation, reduction to zero strength, and assignment.

(6) Liaison activities, training activation, weather, and other conditions influencing operations.

(7) Synopses of written, oral, electronic, and visual messages and orders will be entered and identified for future reference.

(8) At the close of each period, a summary of important events and plans for the following period will be entered by the individual responsible for signing the journal.

(9) Following the summary, a legend of symbols used in action taken will be entered.

(CLASSIFICATION)

DAILY STAFF JOURNAL OR DUTY OFFICER'S LOG
For use of this form, see AR 220-15; the proponent agency is Office of Deputy Chief of Staff for Military Operations.

PAGE NO. 2 | NO. OF PAGES 2

ORGANIZATION OR INSTALLATION	LOCATION	PERIOD COVERED			
		FROM		TO	
		HOUR	DATE	HOUR	DATE
S2/S3 1st Bn, 66th Inf	VIALAN (NA928153)	0001	04 Jan 71	2400	04 Jan 71

ITEM NO.	TIME IN	TIME OUT	INCIDENTS, MESSAGES, ORDERS, ETC.	ACTION TAKEN	INITIALS
7		1730	OPORD 6 issued 1730	T, F	RAS
8		1800	S3, 1st Bde notified — Tm A: Closed new assembly area vic NA938162 at 1755	M, S	PS
9		1800	S3, 1st Bde notified — Tm B: Closed new assembly area vic NA929150 at 1745	M, S	PS
10	1820		Bde S2 Air: Tac Air Recon reports trenches vic NA5252, NA5143, and NA5244 prepared but	M, S	PS
			unoccupied		
11	1825		S2 and S3 returned CP 1820		JC
12		1825	S3, 1st Bde notified — that all units TF 1—66 closed new assembly area vic NA932157 at	M, S	JC
			1820		
13	1915		S3, 1st Bde notified — 1—45th FA LO 4—100—mm AA guns located vic NA4747, 4—100—mm	M, S, Bde	JC
			AA guns located vic NA4843, 6—122—mm HOW located vic NA4741. Increased aggressor counter—		
			battery fire in brigade sector 1815—1915		
14		2340	Cdr Tm C: Cdr Tm C meet Cdr TF 1—66 at OP No 2 050530 Jan.	F	HMA
15	2355		S3, 1st Bde notified — Time of Div attack changed to 050830 Jan.	Cdr, S, T, F	RAS
			Summary: TF moved to assembly area in preparation for attack 050830. For details see OPORD 6. Plans		
			for next period: TF will attack to carry out mission of seizing high ground south of LE BAIR (NA931204).		
			LEGEND M — Situation Map S — Staff Disposition		
			T — Distribution to Troops F — File		

TYPED NAME AND GRADE OF OFFICER OR OFFICIAL ON DUTY	SIGNATURE
/t/FRANK A. COOCH, MAJ	/s/Frank A. Cooch

DA FORM 1 NOV 62 1594 PREVIOUS EDITION OF THIS FORM IS OBSOLETE. ☆ U.S. GOVERNMENT PRINTING OFFICE: 1973—779-769

(CLASSIFICATION)

Figure 1. S2/S3 daily staff journal.

4. A journal file will be maintained and will contain material necessary to support the entries in the journal itself. The journal file will include copies of orders, periodic reports of the unit and its subordinate and attached units, available periodic reports of higher and adjacent units, messages, memoranda, conference notes, maps, overlays, firing charts of artillery units when applicable, personnel reports, ammunition expenditure reports, and other statistics and data considered appropriate.

a. When the journal is maintained by the S1 for the entire headquarters, he will establish a system for the receipt of items for inclusion in the journal sheet and journal file from other staff members.

b. The recommended system for maintaining the journal at brigade and battalion is the combined staff sections (S1/S4 Journal and S2/S3 Journal). Under this method, the combined journal sheets and journal file are turned over to the S1 at the end of the specified reporting period for consolidation and filing.

5. Journals and journal files are records of permanent value, and will be disposed of in accordance with AR 340-18-2.

REFERENCES:

AR 220-15, Daily Staff Journal and Journal File, Aug 73 (pages 1 and 2, para 1 thru 4)
FM 101-5, Staff Officer's Field Manual, Staff Organization and Procedure, Jul 72 (chap 2, page 2-7, para 2-16c)

TASK NUMBER: 071-332-5052

SUPERVISE ESTABLISHMENT/DISPLACEMENT OF TACTICAL OPERATIONS CENTER (TOC)

CONDITIONS:

As an assistant operations sergeant, given a requirement to supervise or assist in the establishment/displacement of a TOC.

STANDARDS:

Insure that as a minimum the TOC satisfies the requirements listed in the TOC operation checklist (figure 1). [NOTE: Your unit may amend or provide a totally different checklist or SOP tailored to its specific operational requirements.]

PERFORMANCE MEASURES:

As an assistant operations sergeant during combat or in a simulated combat environment, your principal duty is to assist in establishment and the actual operation of the commander's nerve center, the tactical operations center. To make your job easier and to identify requirements that must be accomplished to insure effective performance, the TOC operation checklist has been developed (figure 1). This checklist consists of two sections:

1. Section I: The tasks in this section are listed in the order in which they normally occur. When adequate personnel are involved in the operation of the TOC, these tasks may be performed simultaneously. If these tasks cannot be done, the TOC has failed in its mission.

2. Section II: The remaining tasks on the checklist do not represent all that must be done to insure the combat survivability and efficiency of the TOC but they are the more important ones. Depending on the number of personnel available, all the tasks can be accomplished at the same time as those in section I or separately. The order in which the section II tasks are listed in the checklist does not set a priority for their accomplishment.

TOC OPERATION CHECKLIST

Section I: Mission requirements.	YES	NO
1. All radios (AM/FM) operational and manned by qualified personnel.	_____	_____
2. Situation map posted with the current operation(s) and updated with significant developments.	_____	_____
3. The Staff Duty Journal (DA Form 1594) is opened as soon as TOC is operational and all significant developments are entered on the form.	_____	_____
Section II: Additional requirements that improve efficiency and survivability.	_____	_____
4. Telephone nets are opened.	_____	_____
5. Planning map and/or planning overlays are available to the commander.	_____	_____
6. TOC personnel are assigned defensive sectors and hasty defensive positions are prepared.	_____	_____
7. Access to TOC is controlled (e.g., concertina and sentries positioned and I.D. badges used).	_____	_____
8. TOC duty shifts are designated.	_____	_____
9. Vehicular equipment and positions are camouflaged.	_____	_____
10. Facilities are blacked out.	_____	_____
11. Generators are sandbagged.	_____	_____
12. Fighting positions are improved.	_____	_____

Figure 1.

REFERENCES:

FM 101-5, Staff Officer's Field Manual, Staff Organization and Procedures, Jul 72 (page J-3, para J-13)

APPENDIX C
CONSOLIDATED LIST OF REFERENCES
(FM 7-11B4)

FIELD MANUAL (FM)

FM 3-8	Chemical Reference Handbook, C1-4	Jan 67
FM 3-50	Chemical Smoke Generator Units and Smoke Operation, C2	Apr 67
FM 5-20	Camouflage	May 68
FM 5-25	Explosives and Demolitions	Feb 71
FM 5-34	Engineer Field Data	Sep 76
FM 5-36	Route Reconnaissance and Classification	Jan 70
FM 7-7	The Mechanized Infantry Platoon and Squad	Sep 77
FM 7-8	The Infantry Platoon and Squad	TBP
FM 7-20	The Infantry Battalion (Infantry, Airborne, Air Assault, Ranger)	Apr 78
FM 8-15	Medical Support in Divisions, Separate Brigades, and the Armored Cavalry Regiment	Sep 72
FM 8-35	Evacuation of the Sick and Wounded	Jan 77
FM 17-95	Cavalry	Jul 77
FM 20-32	Mine-Countermine Operations at the Company Level	Nov 76
FM 21-5	Military Training Management	Dec 64
FM 21-6	How to Prepare and Conduct Military Training	Nov 75
FM 21-26	Map Reading, C1	Jan 69
FM 21-30	Military Symbols, C1	May 70
FM 21-40	Chemical, Biological, Radiological, and Nuclear Defense	May 71
FM 22-6	Guard Duty, C1	Sep 71
FM 30-5	Combat Intelligence	Oct 73
FM 55-12	Movement of Army Units in Air Force Aircraft	Apr 74

FM 57-1	U.S. Army/U.S. Air Force Doctrine for Airborne Operations	Sep 67
FM 71-1	The Tank and Mechanized Infantry Company Team	Sep 77
FM 71-2	The Tank and Mechanized Infantry Battalion Task Force	Jun 77
FM 100-10	Combat Service Support	Apr 76
FM 100-26	The Air-Ground Operations System	Mar 73
FM 101-5	Staff Officers' Field Manual: Staff Organization and Procedure	Jul 72
FM 101-10-1	Staff Officer's Field Manual: Organizational, Technical and Logistical Data, Unclassified Data	Jul 76

TRAINING CIRCULAR (TC)

TC 20-32-1	Hasty Protective Mining	Aug 75

TECHNICAL MANUAL (TM)

TM 3-220	CBR Decontamination, C1, 2	Nov 67
TM 3-6665-225-12	Operator's and Organizational Maintenance Manual: Alarm, Chemical Agent Automatic: Portable, Manpack, M8	Aug 75
TM 55-12	Movement of Army Units in Air Force Aircraft	Apr 74
TM 55-450-15	Air Movement of Supplies and Equipment (Non-Tactical)	Jun 71

ARMY REGULATION (AR)

AR 220-15	Journals and Journal Files	Mar 73
AR 600-10	The Army Casualty System, C1, 2	Jan 76

DA PAMPHLETS

DA Pam 623-1	Preparation of Enlisted Evaluation Reports	May 75

MILITARY INSTRUCTOR TRAINING

901-071-0097-F	Evaluating Training

QUESTIONNAIRE

SOLDIER'S MANUAL

To provide you a better manual, please give us your comments after studying this field manual. Note that some of the questions apply to soldiers only and some to trainers only. Please fill out the following before continuing.

MOS _____ **RANK** _____ **TIME IN GRADE** _____

TIME IN SERVICE _____ **UNIT** _____

DIVISION _____

_____

1. **The following comments are a result of my review of the Soldier's Manual for Skill Level** _____.

2. **My duty position is:** _____

_____

_____

_____

3. **The Soldier's Manual contains only the critical combat skills the infantryman needs to fight and survive on the battlefield. I think it contains:**

☐ Too many tasks ☐ The right number ☐ Too few tasks

4. **Are there tasks that should be added?**

☐ Yes **(See the list below)** ☐ No

_____ **Continue in block 15 if needed.** _____

5. **Are there tasks that should be dropped?**

☐ Yes **(See the list below)** ☐ No

Continue in block 15 if needed.

6. **How difficult was it to find the tasks which you must perform?**

☐ Easy, I had no trouble.

☐ Not difficult, but I think the instructions were confusing. **(Please tell us how to improve the instructions in the space below).**

☐ Difficult, I had to have someone explain how to do it.

Continue in block 15 if needed.

7. **Will the Soldier's Manual help you do a better job as an infantryman?**

☐ No, I don't think it will help at all.

☐ Yes, it will be a big help.

☐ Yes, but it will be better if improvements are made. **(List the improvements you would like to see.)**

Continue in block 15 if needed.

8. **Did the conditions for each task describe the real conditions under which you usually perform each task?**

☐ Yes ☐ No, I would change:

Continue in block 15 if needed.

9. **The STANDARDS are:**

☐ Too easy ☐ Too hard ☐ About right

10. **Can the PERFORMANCE MEASURES help you perform the task to the standard?**

☐ Yes ☐ No If you check NO please explain in block 15.

11. **(Trainers only): Will the Soldier's Manual help you as a trainer in improving the combat proficiency of 11B soldiers?**

☐ Yes, I think it will be a big help.

☐ Yes, but the Soldier's Manual needs to be changed as I recommended in question 10.

☐ No, it will not help at all **(please explain in block 15).**

12. **Which of the following best tells what an infantryman must be able to do in combat?**

☐ Job Description in AR 611-201, Personnel Selections and Classification.

☐ Study Guides for MOS Tests.

☐ Soldier's Manual.

☐ 11B Study Reference Manual.

☐ Other _____

Continue in block 15 if needed.

13. **If I could make any improvement(s) in the Soldier's Manual it (they) would be:**

Continue in block 15 if needed.

14. **Is the artwork used in this field manual understandable and correct for each task?**

☐ Yes ☐ No

If you checked no, please make suggestions concerning replacement of artwork in block 15 or enclose suggested line drawing, sketch, photo, etc., with this questionnaire.

15. **Comments.**

15. Comments (continued).

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FM 7-11B4

NOVEMBER 1978

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Chief of Staff

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