NATO OTAN

NATO STANDARDIZATION AGENCY
AGENCE OTAN DE NORMALISATION

NSA

MILITARY COMMITTEE LAND STANDARDIZATION BOARD (MC LSB)

27 January 2005 NSA(ARMY)0063-ENGR/2036

MC LSB Distribution List N° 1

STANAG 2036 MC ENGR (EDITION 6) – LAND MINE LAYING, MARKING, RECORDING AND REPORTING PROCEDURES

References:
a. NSA(ARMY)0006-ENGR/2036 dated 02 February 2004 (Edition 6) (Ratification Draft 1)
b. MAS(ARMY)118-ENGR/2036 dated 28 January 1999 (Edition 5)

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in the **NATO Standardization Document Database (NSDD),** is promulgated herewith.

2. The references listed above are to be destroyed in accordance with local document destruction procedures.

ACTION BY NATIONAL STAFFS

3. National staffs are requested to examine **their ratification status of the STANAG** and, if they have not already done so, advise the MC LSB, NSA, through their national delegation as appropriate of their intention regarding its ratification and implementation.

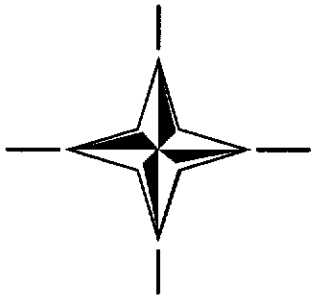
J. MAJ
Brigadier General, POL(A)
Director, NSA

Enclosure:
STANAG 2036 (Edition 6)

NATO Standardization Agency – Agence OTAN de Normalisation
B-1110 Brussels, Belgium Internet site: http://nsa.nato.int
E-mail: nsa.army@hq.nato.int – Tel 32.2.707.55.79 – Fax 32.2.707.57.18

STANAG Nº 2036
(Edition 6)

NORTH ATLANTIC TREATY ORGANIZATION
(NATO)



NATO STANDARDIZATION AGENCY
(NSA)

STANDARDIZATION AGREEMENT
(STANAG)

SUBJECT: LAND MINE LAYING, MARKING, RECORDING AND REPORTING PROCEDURES

Promulgated 27 January 2005

J. MAJ
Brigadier General, POL(A)
Director, NSA

RECORD OF AMENDMENTS

No.	Reference/date of amendment	Date entered	Signature

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.

2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.

3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet http://nsa.nato.int; NATO Secure WAN http://nsa.hq.nato.int).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO/NSA – Bvd Leopold III - 1110 Brussels - BE.

STANAG 2036
(Edition 6)

NATO STANDARDIZATION AGREEMENT
(STANAG)

LAND MINE LAYING, MARKING, RECORDING, AND REPORTING PROCEDURES

ANNEXES:
- A. Minefield Patterns and Requirements
- B. Minefield, Contaminated Areas, and Lane Marking Requirements
- C. Completion of Minefield Records
- D. Information Exchange Requirements for Laying Scatterable Mines
- E. Information Exchange Requirements for Laying Conventional Mine Laying
- F. MC 362 - NATO Rules of Engagement Series 38

Related Documents:

STANAG 2017 ENGR	-	Orders To The Demolition Guard Commander and Demolition Firing Party Commander (Non Nuclear)
STANAG 2123 ENGR	-	Obstacle Folder
STANAG 2989 ENGR	-	Transfer of Barriers
AAP-6	-	NATO Glossary of Terms and Definitions (English and French)
AAP-19	-	NATO Combat Engineer Glossary
AEngrP-2	-	Land Forces Combat Engineer Messages, Reports and Returns (R2)
APP-6	-	Military Symbols for Land Based Systems
ATP-27	-	Air Interdiction and Close Air Support
ATP-52	-	Land Force Combat Engineer Doctrine

AIM

1. The aim of this agreement is to standardize the procedures and techniques of planning, laying, marking, recording, reporting, and control of minefields for use by NATO forces.

AGREEMENT

2. Participating nations agree that land mine laying, marking, recording, and reporting and the control of minefields by NATO forces will be in accordance with existing international law, rules of engagement (ROE), host nation (HN) restrictions on which land mine warfare is to be conducted, and established, agreed-upon procedures and techniques.

3. Land mine procedures cover the use of minefields on land, inland waterways and on beaches out to the extreme low-water line. However, this agreement does not include the laying and marking of mines in harbors and inland waterways which have been internationally recognized as sea-going shipping routes.

4. The following will be standardized:

a. Command procedures, terms and definitions, classification of minefields, and laying procedures.

b. The minimum essential information to be contained in a commander's orders for the laying of minefields.

c. Marking and fencing of minefields and minefield lanes.

d. Reporting and recording of minefields.

TERMS AND DEFINITIONS

5. The terms and definitions used in this STANAG are highlighted in bold and defined in AAP-6 or AAP-19.

GENERAL

6. This agreement is divided into four parts: Minefield Integration, Minefield Types and Employment Concepts, Minefield Planning, and Command and Control. This document does not specifically cover countermine operations nor enemy or unidentified minefield control policies.

DETAILS OF THE AGREEMENT

Part One: Minefield Integration

7. General. Minefields are primarily designed to enhance the effects of friendly fire on the enemy. The correct combination of fire and minefields are a vital concern of both the engineer and tactical commander and in many situations are key to an operation. Great care must be exercised to ensure that all minefields are integrated with the overall tactical direct- and indirect-fire maneuver plans.

8. Commander's Intent. Minefields and their supported fire are designed to achieve a desired effect on the enemy. These effects are characterized by the following:

a. Disrupt. To cause the enemy to break his formation and tempo, interrupt his timetable, cause him to commit breaching assets prematurely and piecemeal his attack in order to unhinge his plan, and to delay and constrain his freedom of maneuver.

b. Turn. To divert the enemy from one avenue of approach to another or into an engagement area.

c. Fix. To slow the enemy within a specific area in order to acquire, target, and destroy with fire. May be used to generate the time necessary for friendly force counter moves or to break contact and disengage from the enemy.

d. Block. To stop the enemy on a specific avenue of approach in order to break up his attack, destroy his forces and prevent him from accomplishing his objectives.

9. Importance of the Tactical Commander. The tactical commander, advised by the engineer commander, is responsible for providing guidance on the type, purpose, potential locations, and priorities of minefields as an integrated part of his overall plan, and for allocating the resources required. The engineer commander is responsible for detailed minefield siting, design and construction in accordance with his commander's requirements. The tactical commander retains overall responsibility for minefield location and use.

10. Synchronization. Minefield effects must be synchronized in time, space, and purpose with direct- and indirect-fire plans as part of the commander's overall tactical and operational plans.

Part Two: Minefield Types and Employment Concepts

11. Effectiveness of Minefields. The effectiveness of minefields depends on their location and extent, the type of minefield, and the density of mines used. They will only achieve full effectiveness if they are covered by direct and/or observed indirect fire and fully integrated into the defensive plan. In this way, the enemy will be unable to reconnoitre or negotiate them unhindered or unnoticed. Minefields should be sited in such a way that the enemy cannot bypass them or can do so only in those places where it is planned that they should be able to. This objective can be best achieved if they are constructed adjacent to natural obstacles or combined with them to produce a more effective minefield. Their depth must be great enough to prevent the enemy negotiating them in one bound without incurring heavy loss of personnel/equipment. In many cases, the effectiveness of several closely spaced minefields may be greater than that of a single large minefield because the attacker is forced to deploy in his breaching formations on several occasions.

12. Anti-Tank and Anti-Personnel Minefields. Minefields are employed primarily against armoured forces; however, where the terrain is unsuitable for vehicle movement, minefields may contain anti-personnel mines exclusively. Anti-tank minefields may also contain anti-personnel mines to prevent them being negotiated on foot or being cleared by hand.

NOTE: The decision to lay anti-personnel minefields is subject to the overall rules of engagement and restrictions or ban imposed by nations. The tactical commander of a multinational force is therefore to be aware of the national restrictions applicable to laying and the take-over of anti-personnel mines by the national components of his force. See Annex F

13. Types of Mines.

a. Anti-personnel. See AAP-19

b. Anti-tank. See AAP-19

c. Area defense weapon. See AAP-19

d. Off route. See AAP-19

e. Anti-helicopter. See AAP-19

14. Types of Minefields.

a. Tactical minefield. See AAP-19

b. Protective minefield. See AAP-19

c. Nuisance minefield. See AAP-19

d. Phony minefield. See AAP-19

15. Concept of Employment. Minefields must be coordinated with the overall operations plan. They should be planned to disrupt, turn, fix, or block the enemy in support of the commander's plan. Minefields can be employed in three ways:

a. Terrain-oriented minefields. Planning for these minefields may be based on a thorough terrain analysis and long-term planning. It is related to the tactical commander's initial concept of operations. The individual minefield may be peacetime prepared, permanent, or field constructed. They form the backbone of the obstacle system because they reinforce or modify the existing terrain to the defender's advantage. They should be prepared as early as possible. Where appropriate, logistics and organizational planning for the minefields are carried out in peacetime.

b. Situation-oriented minefields. Once enemy deployment for an attack has commenced, additional intelligence will become available which will confirm or revise the assessment of the enemy's intentions. Specifically, his likely axes of advance and selected points of main effort should be identified and an indication of the force ratio expected should be determined. Additional obstacles may then be implemented in these areas to strengthen the existing defense once an anticipated enemy course of action has been confirmed. They may be planned prior to the start of an operation to allow their rapid execution when required. Scatterable and remotely delivered mines or other rapidly emplaced obstacles are likely to be used because of the speed of reaction required, especially for the closure of breached obstacles.

c. Target-oriented minefields. Scatterable mines—delivered by fixed-wing aircraft, helicopter, rocket or artillery—offer the ability to attack targets directly (for example, maneuvering or resting units or key choke points such as defiles or bridges). Prerequisites for the success of target-oriented minefields are real-time reconnaissance, resources availability, and short reaction times. The aim of this type of minefield may be to disrupt enemy deployment by causing casualties, thus preventing the quick and unhindered introduction of follow-on echelon forces. The principal targets may be—

(1) Armored forces.

(2) Headquarters and fire-support elements.

16. Methods of Laying.

a. Placed. Placed mines may be laid either by hand or using mechanical systems. Further details of minefield design by both methods are given at Annex A.

(1) Hand laid. Hand laying is laborious and time-consuming. Mines are hand laid in patterns or randomly. The mines may be buried or surface laid.

(2) Mechanical laid. Mechanical laying is quicker than hand laying and also requires fewer men. The mines may be buried or surface laid.

b. Scatterable. Scatterable mines are placed mechanically by ground vehicle, artillery projectile, or aircraft-delivered munitions. They can be emplaced very rapidly and require few troops.

(1) Scatterable minefields are distinguished by their rapid and less accurate emplacement onto the battlefield. Artillery and aircraft emplacement allow minefields to be laid in the face of the enemy or in depth of his position. They are also well suited for use as flank protection during offensive operations. Scatterable mines may also be laid with ground-dispensing vehicles. Scatterable mines provide the commander with an extremely flexible system that has utility in both offensive and defensive mine laying.

(2) Scatterable mines having a limited laid life, will self-destruct or self-neutralize at the termination of their laid life period. The location of scatterable minefields and timings for destruction or neutralizing mines must be coordinated and recorded.

c. Remote. Remotely delivered scatterable mines are not directly emplaced but delivered by artillery, missile, rocket, mortar, or dropped from an aircraft or other similar means.

NOTE*: Per CCW Protocol II: Mines delivered by land-based systems from less than 500 meters are not considered to be remotely delivered.*

Part Three: Minefield Planning

17. Planning Considerations. At each level, tactical commanders include minefield planning in the decision-making process for both offensive and defensive operations. The engineer commander, along with the rest of the staff, conducts an analysis of the terrain, the enemy, and friendly forces and presents these findings to the tactical commander. The commander uses this information to provide his guidance as to the effect he wants to achieve with his minefields. The engineer commander uses this guidance, along with the concept of operation that the staff develops, to develop the barrier plan. Once the plan is developed, the engineer commander ensures that the necessary materials are on hand and the available time is efficiently used to complete the barrier plan.

a. Terrain. The engineer commander helps to determine the avenue of approach. This analysis helps in determining the amount, type, and effect of the supporting minefields. An important consideration is to identify any terrain that may cause the enemy to change formation. This natural terrain effect can be readily enhanced with minefields.

b. Enemy. The engineer commander advises the tactical commander on the likely enemy engineer course of action, types and locations of key enemy breaching equipment, enemy mobility organizations, and the enemy's use of mines. The engineer commander may also contribute to the reconnaissance and surveillance effort, particularly that required to accurately site or trigger minefield laying.

c. Friendly forces.

(1) Equipment. The engineer commander determines which assets are available to establish the task organization and priority of work. Some assets that may affect the minefield planning include—

(a) Intelligence assets that can support minefield execution.

(b) Engineer mine-laying equipment.

(c) Other unit equipment that may support minefield emplacement.

(d) Air or artillery assets with scatterable minefield capability.

(2) Personnel. The personnel strength of engineer units is a vital statistic in planning engineer work effort and accurately developing an engineer work line. The engineer commander may need to request additional engineers or available other arms soldiers to assist in mine laying. Personnel requirements must be considered

early in the minefield planning process, particularly where large numbers of hand-placed minefields are envisioned.

d. Engineer estimate. The engineer commander must requisition the necessary mines to complete the obstacle plan and plan for the use of the available time.

(1) Resources. Supply requests for minefield materials must include the quantity of each material, the required delivery time, the transportation responsibilities, and a desired location. Lack of material or late delivery could adversely affect the mission. Transportation responsibilities must be clearly understood.

(2) Time analysis. The engineer commander must establish a time line that sets the priority of work for minefields construction. The time line must consider all critical events such as movement, preparation of mines, siting of the minefield, and recording of the minefield, in addition to the actual mine-laying time.

e. Designs and effects. It is imperative that the designs and effects of minefields are well understood. Minefield intent consists of the following components:

(1) Target. The target is the enemy force that the commander wants to effect with tactical minefields. The commander usually identifies the target in terms of the size and type of enemy force, the echelon, the avenue of approach, or a combination of these things.

(2) Minefield effect. Tactical minefields and fire manipulate the enemy in a way that supports the commander's intent and scheme of maneuver. The minefield effect is the intended enemy reaction that the commander wants the minefield and fire to produce. This effect drives all arms integration, focuses subordinate's fire and minefield effort, and multiplies the cumulative effects of firepower. It is important to remember that minefield effects occur because of the integration of fire and minefields, not just by the minefields alone.

(3) Tactical commanders exercise control to ensure that minefields support current and future operations. Control ensures that subordinate commanders lay minefields to best support the higher commander's intent and in accordance with type, time and geographic restrictions that the higher commander may impose in addition to the overall rules of engagement.

f. Lanes and gaps. Lanes and gaps are planned through minefields to allow passage of friendly forces. Patrol lanes will have a minimum width of 1 meter, one-way lanes a 4.5-meter minimum, and two-way lanes a 9 meter minimum. They are also used during withdrawal operations and for the counterattack. Both must be integrated into the tactical plan. Closure of

lanes and gaps must also be carefully planned and executed to prevent unintended restriction to friendly maneuver.

g. Remote control planning. Remote-control minefields and mines are synchronized with the battle. This ensures that they are not activated during the passage of friendly forces, but are activated when required by the tactical commander. Care should be exercised to ensure that the decision points for execution are well known to all forces operating in the area of the remote control mine.

Part Four: Command and Control

18. Authority to Order.

a. The theater commander will decide the general guidelines for policy in compliance with international conventions, rules of engagement and host-nation restrictions on which land mine warfare is to be conducted.

b. Rules of Engagement (ROE), International Agreements. ROE and international agreements may also impose restrictions including the type of mines authorized to be laid, the areas in which they may be laid or the purpose to which they may be used. The ROE, which encompasses international agreements, will take precedence over the procedures outlined in this STANAG where the parameters in the ROE are more prescriptive.

19. Authority to Lay a Minefield.

a. Delegation of authority. Once authority to lay mines has been granted to a theater commander, it is likely that he would delegate the responsibility for employing mines (including scatterable mines) to subordinate commanders at Corps (or below) and that this authority would be progressively delegated down to brigade and even battalion commanders as the situation required. The authority to lay scatterable mines will be similarly controlled. The authority to lay protective minefields may be delegated to subunit level.

b. Restrictions. Commanders at all levels may impose restrictions on any delegated authority to lay mines. Such restrictions may involve designation of obstacle-free or restricted zones, geographical, time constraints, constraints on the use of specific mine types (i.e., anti-personnel mines) or marking, or self-destruct timings.

20. Precautions. All feasible precautions shall be taken to protect civilians and friendly forces from the effects of mines, booby traps and unexploded explosive ordnance. Feasible precautions are those precautions, which are practicable or possible considering all circumstances ruling at the time, including humanitarian and military considerations. These circumstances include, but are not limited to

a. The short- and long-term effect of mines against the local civilian population for the duration of the laid-life time of the minefield.

b. Possible actions to protect civilians (i.e., warning, monitoring and marking.)

c. The availability and feasibility of using alternatives to mines.

d. The short- and long-term military requirements for a minefield.

Effective advance warning should be given of any emplacement of mines, booby-traps, and other unexploded explosive ordnance, unless circumstances do not permit.

21. Marking. Marking ensures that friendly forces and civilians do not accidentally enter a minefield and, it is a requirement under international law. Commanders must make every attempt to mark minefields as soon as the tactical situation allows. Where minefield marking is to be undertaken, it should conform to the requirements at Annex B.

a. Protective Minefields. Protective minefields have to be monitored by the laying unit and may be marked. They have to be cleared prior to the end of the mission of the laying unit. If protective minefields were not cleared prior to the departure the laying unit and marking was impossible, the lack of marking has to be noted in the minefield record. Information has to be passed, through the chain of command, to the local national authorities by the laying unit in order to protect civilian population.

b. Tactical Minefields and Nuisance Minefields. The marking of tactical minefields and nuisance minefields is at the discretion of the tactical commander in consideration of the tactical and humanitarian situation. Possible solutions are marking

- Only on the friendly edge of the minefield,
- On the friendly edge and on both sides of the minefield and
- All around the minefield.

c. Scatterable minefields. Scatterable minefields, which are normally rapidly laid during, combat operations or which are laid in an area occupied by the enemy, will not be marked immediately. The reporting of these minefields will be in accordance with Annex D. Scatterable minefields will be marked in accordance with Annex B as soon as the situation allows (i.e., after cessation of hostilities or as soon as friendly forces have reached scatterable minefields emplaced in an area previously held by enemy forces). After the self-destruction of the mines in a scatterable minefield, you may do without marking.

d. Booby-traps and other devices. If booby-traps or other devices are emplaced in cities, towns, villages or other areas containing similar concentration of civilians, this area has to be marked in accordance with Annex B, unless either they are placed on or in the close vicinity of a

military objective or measures are taken to protect the civilians from their effects.

e. Marking lanes. All minefield lanes will normally be marked and, if time permits, fenced. Lane markers should indicate the safe and dangerous sides and should be visible at all times, including periods of poor visibility. See annex A.

f. Gaps. Minefield perimeter fencing will normally provide the demarcation for gaps. Their precise location and sitting should be synchronised with the tactical commander and should support his plan of operations. Gaps must be closely monitored to preclude their use by the enemy.

g. Chemical Minefields and unexploded explosive ordnance. Areas where chemical minefields or unexploded explosive ordnance are encountered should be marked in accordance with Annex B.

22. After cessation of hostilities, all minefields and areas where booby traps, other devices or other unexploded explosive ordnance have been emplaced must be marked by the laying unit - or the unit taking over - in their area of responsibility; this does not apply to scatterable minefields after self-destruction.

23. Remote Control. Remote mine activation must be precisely monitored and controlled to prevent inadvertent mine arming. Generally, remote-control authority will be with the commander who has the authority to lay. Authority to operate remote-control devices can be delegated to either the engineer or tactical commander. Transfer of this authority and the actual remote-control device should be carefully planned, synchronized and precisely executed.

24. Minefield Recording. Records must be prepared by the laying unit for each minefield. The record provides the location and design of the minefield to assist friendly troops in locating and clearing it. ***In the case of self-neutralizing mines, the record will indicate the effective life of the minefield***.

a. Conventional minefields.

(1) The recording of conventional minefields is necessary to enable the engineers to approach the minefield in safety. See Annex C for further information. When using database information systems also refer to Annex E (MINLAYREP).

(2) Changes to the minefield. If a minefield is altered in any way (for example, mines are emplaced to close a lane in the minefield), the original minefield record must be amended to record the additional mines. Any changes should be forwarded through the same channels as the original.

b. Scatterable minefields. Scatterable minefields, regardless of the method of laying, will be recorded in accordance with Annex D.

c. Protective minefields. Protective minefields are expected to be cleared prior to the departure of the emplacing unit; they are recorded in accordance with national doctrine. When these minefields are not cleared, but left behind, they should be recorded as shown in Annex C.

25. Reporting.

a. General. The timely reporting of friendly and enemy minefields to higher headquarters is essential. See AEngrP-2 for further information on reporting requirements.

b. Intent to lay. Commanders authorized to order mine laying should report their intention to lay a minefield to their next higher headquarters by the fastest secure means available.

c. Report of completion. The report of completion is usually an oral report to the authorizing commander. It is forwarded by the fastest means possible indicating the minefield is complete and functional. A report of completion is immediately followed by a completed minefield record form.

IMPLEMENTATION OF THE AGREEMENT

26. This STANAG is implemented when nations have issued instructions to their forces adopting these procedures.

ANNEX A TO
STANAG 2036
(Edition 6)

MINEFIELD PATTERNS AND REQUIREMENTS

1. Mines and clusters configuration (see Figure A-1).

   a. Contents within a mine strip:

      (1) The “cluster” is the basic unit of the mine strip. The number of anti-personnel mines and/or the number of anti-tank mines must be the same in each respective type cluster. There are two (2) types of clusters - live and omitted.

         (a) A live cluster contains 1 to 5 mines.

         (b) An omitted cluster does not contain mines but is some type of structure located at the 3 meter interval which will not allow the emplacement of a live cluster. Omitted clusters are numbered and recorded in sequence just as a live cluster is recorded (see A-3.)

      (2) Different types of anti-personnel mines may be used in a cluster.

      (3) The type of anti-tank mines may vary from one cluster to another.

   b. The total number of mines in one cluster will not exceed five, with no more than one anti-tank mine.

   c. All recording is done in meters (a pace is generally 0.75 meter).

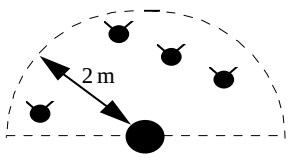
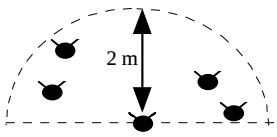
Individual laying of anti-tank mine	
Individual laying of anti-personnel mine	
Cluster with one anti-tank mine plus several anti-personnel mines within or on a 2-meter semicircle from the anti-tank mine	
Cluster with several anti-personnel mines within or on a 2-meter semicircle of the central anti-personnel mine	

Figure A-1. Laying of individual mines or clusters

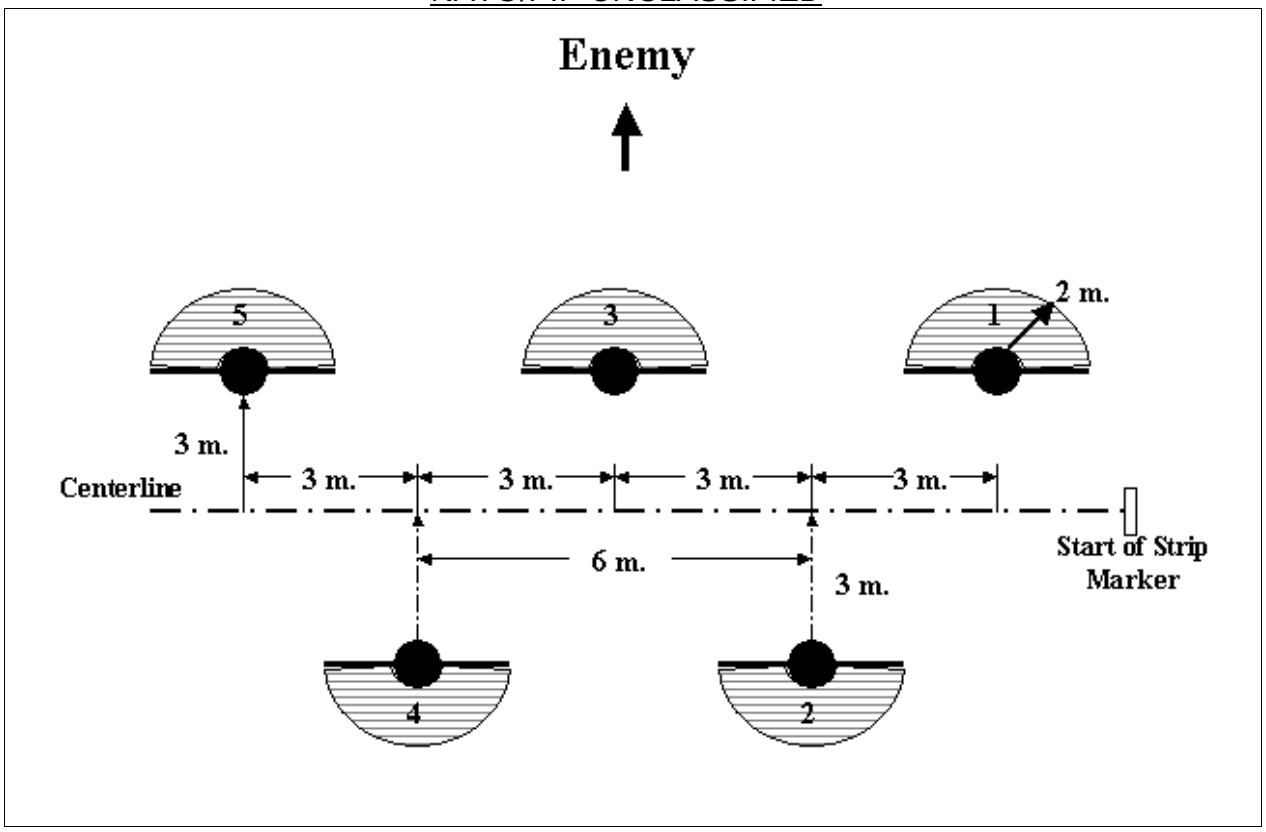


Figure A2. Mine strip - cluster pattern

2. Rules for laying mine clusters in strips (see Figures A-2 through A-5).

a. The first cluster is emplaced on the enemy side of the mine strip center line. Odd-numbered clusters will always be on the enemy side of the strip. (See A-2 above)

b. The direction of laying is indicated by the sequential increase of the numerical numbering; that is, strip A1 to A2, B1 to B2 etc. For example, marking the end points of strip with A1 and A2 will indicate the laying direction of a minefield. (See A-3)

c. Irregular Outer Edge (IOE) short strips may extend from anywhere along the baseline, not just from the turning points. The IOE is normally the first part of the minefield encountered by the enemy. (See A-3).

d. If the terrrain or tactical conditions prevent laying a cluster, the minefield pattern will be maintained. An “omitted cluster” will be annotated, numbered and listed in the minefield record. (See A-3).

e. Minimum separation distances are specified for safety purposes.

Rules for Laying Mine Clusters in Strips
• The last cluster before the turning point will have a distance of at least three meters and less than six meters from the turning point • The first cluster after the turning point will be laid on the opposite side of the strip centerline from the last cluster before the turning point and three meters from the turning point (see A-4, IOE1 -IOE2). • Turns should not exceed 45 degrees from the last azimuth.

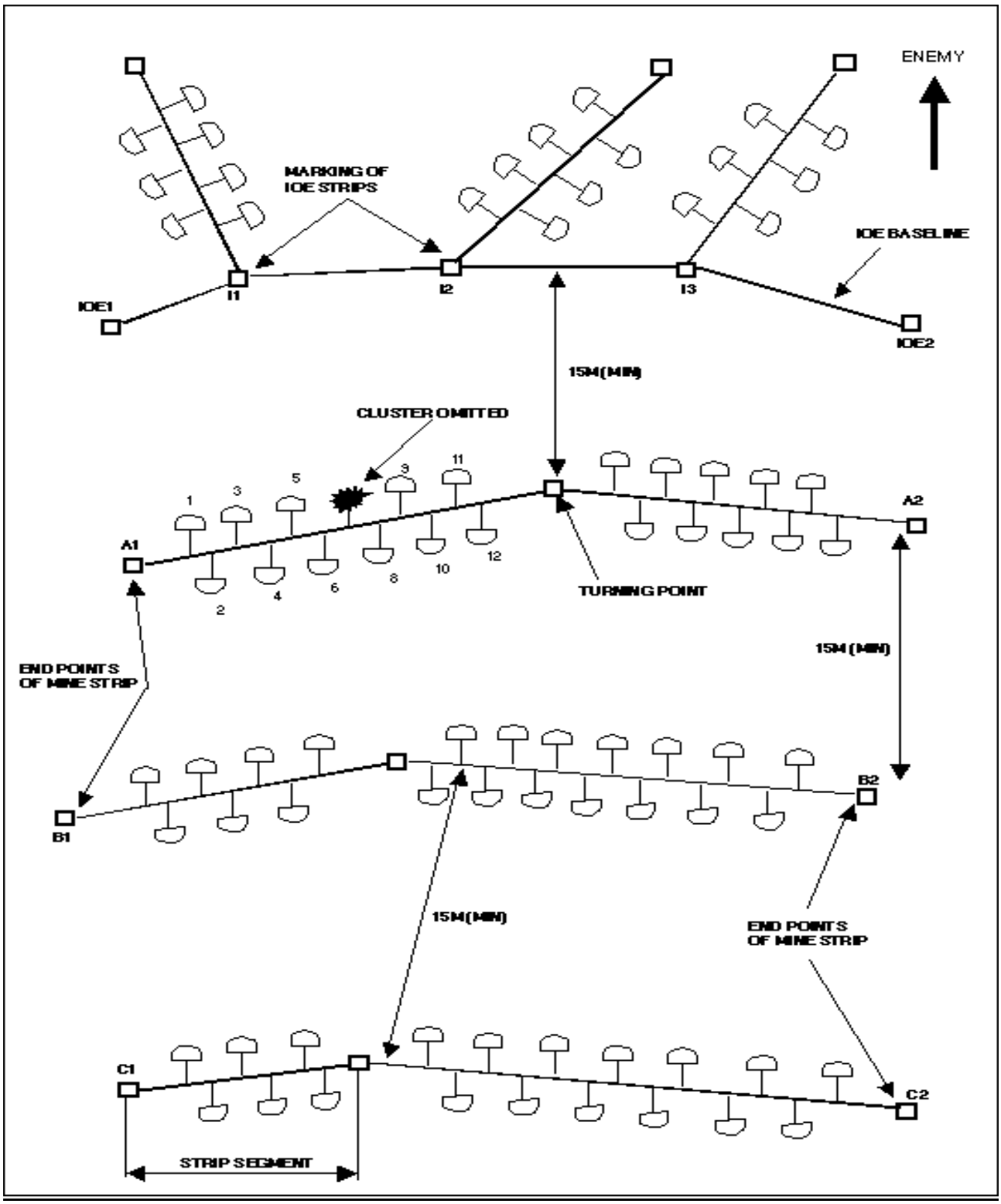


Figure A-3. Minefield pattern layout

NOTE: In all figures, the enemy arrow is pointing in the direction of the enemy location.

Turning Points

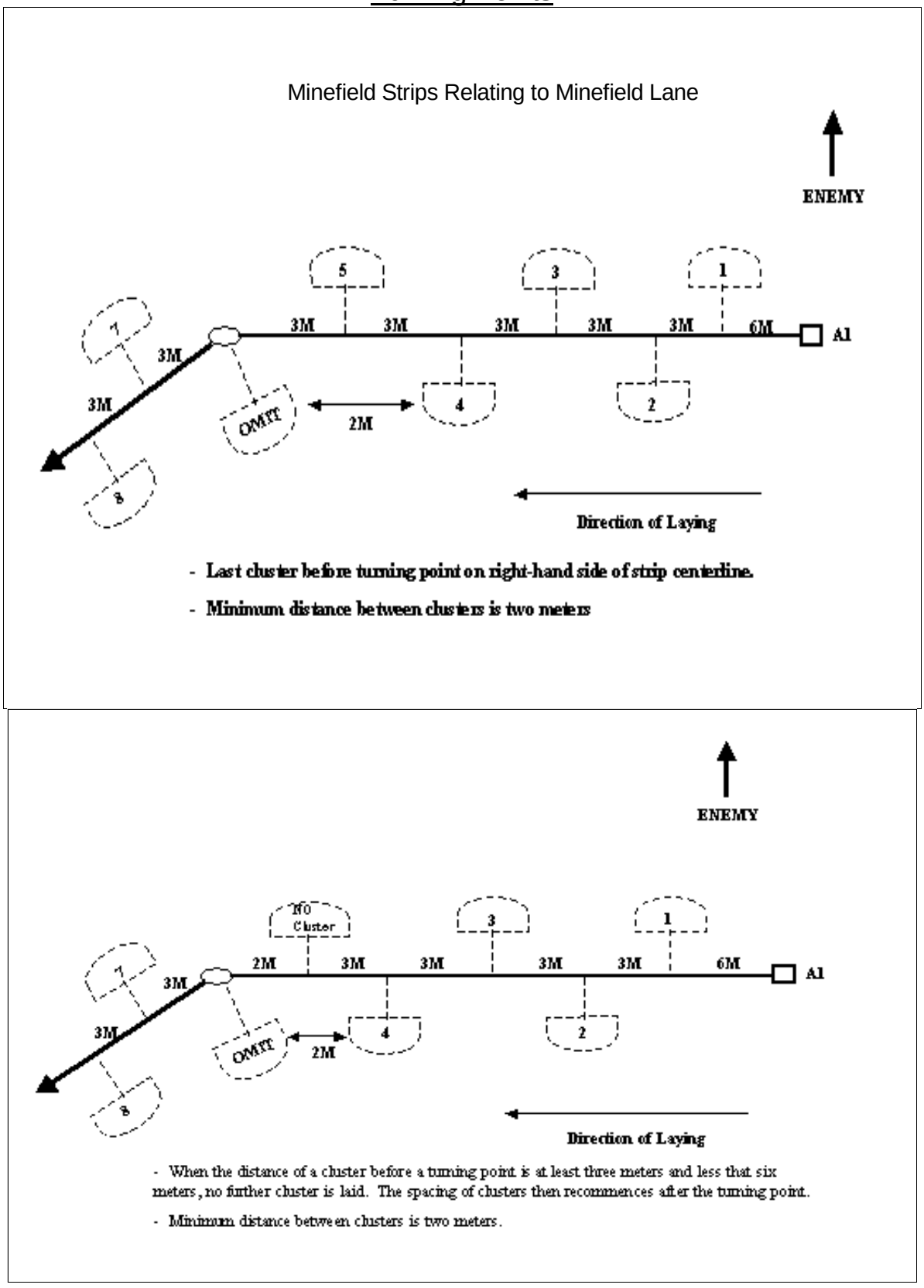


Figure A-4 Turning Points

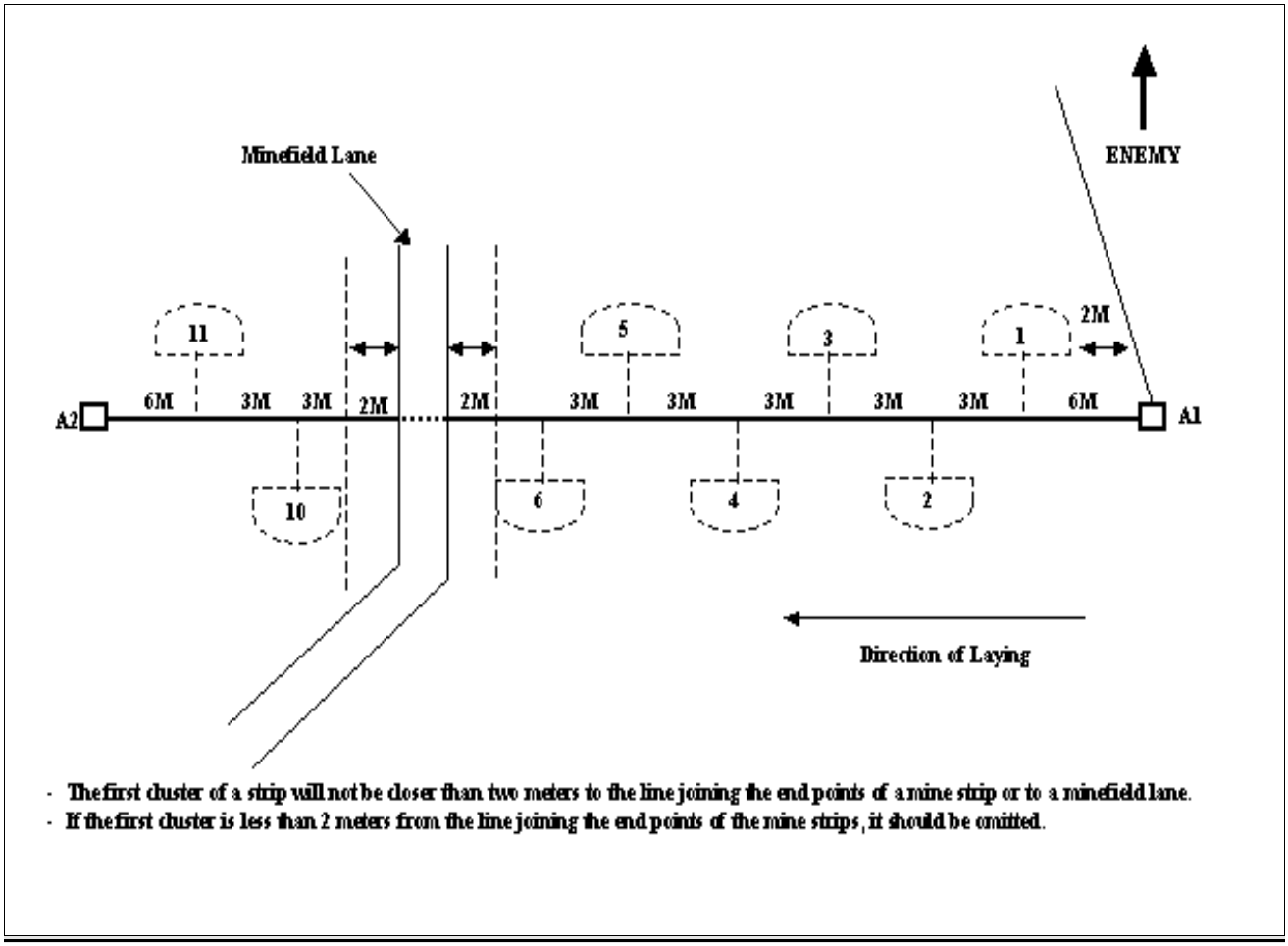


Figure A-5

3. Rules for laying a row minefield (see Figure A-8).

a. Single mine laying pattern without IOE using mines without self-neutralization or self-destruction devices.

(1) The mine spacing in the minefield may vary from row to row but should remain the same in any one row. The only exception to this rule is for mines emplaced immediately before and after a turning point. These mines may be of a different spacing, but must be annotated on the minefield record to give this distance. The remainder of the mines will maintain the same spacing as the mines laid prior to the turning point.

(2) The distance between a start row marker and the first mine in that row is the mine spacing for that row (see Figure A-8).

b. Single mine row and mine-cluster row pattern.

(1) Anti-tank mines laid mechanically (if turn points are deleted) or by hand. Anti-personnel mines laid by hand.

(2) Distance between mines/mine clusters is a national decision.

(3) Mine clusters will be in accordance with this appendix.

(4) Distance between rows will be at least 8 meters.

(5) Rows must be consistent either with single anti-tank mines or with clusters.

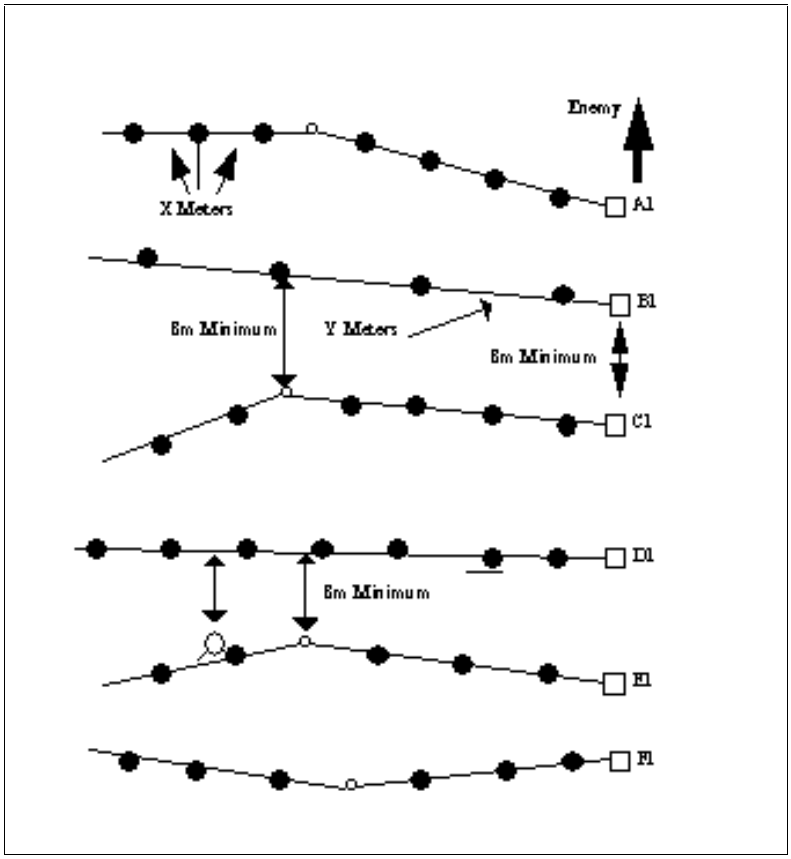


Figure A-6. Row minefield (single-laying pattern)

4. Minefield with off-route mines.

a. Off-route mines are emplaced in one or two mine rows.

b. Mine rows can go straight ahead, turn, or follow the curve of a road (see Figure A-7).

c. The direction of effectiveness of off-route mines can change, but must not endanger soldiers working along the mine row.

d. Minimum distances are safety distances.

e. The sketch should indicate the direction of mine action and, if possible, the range of effectiveness.

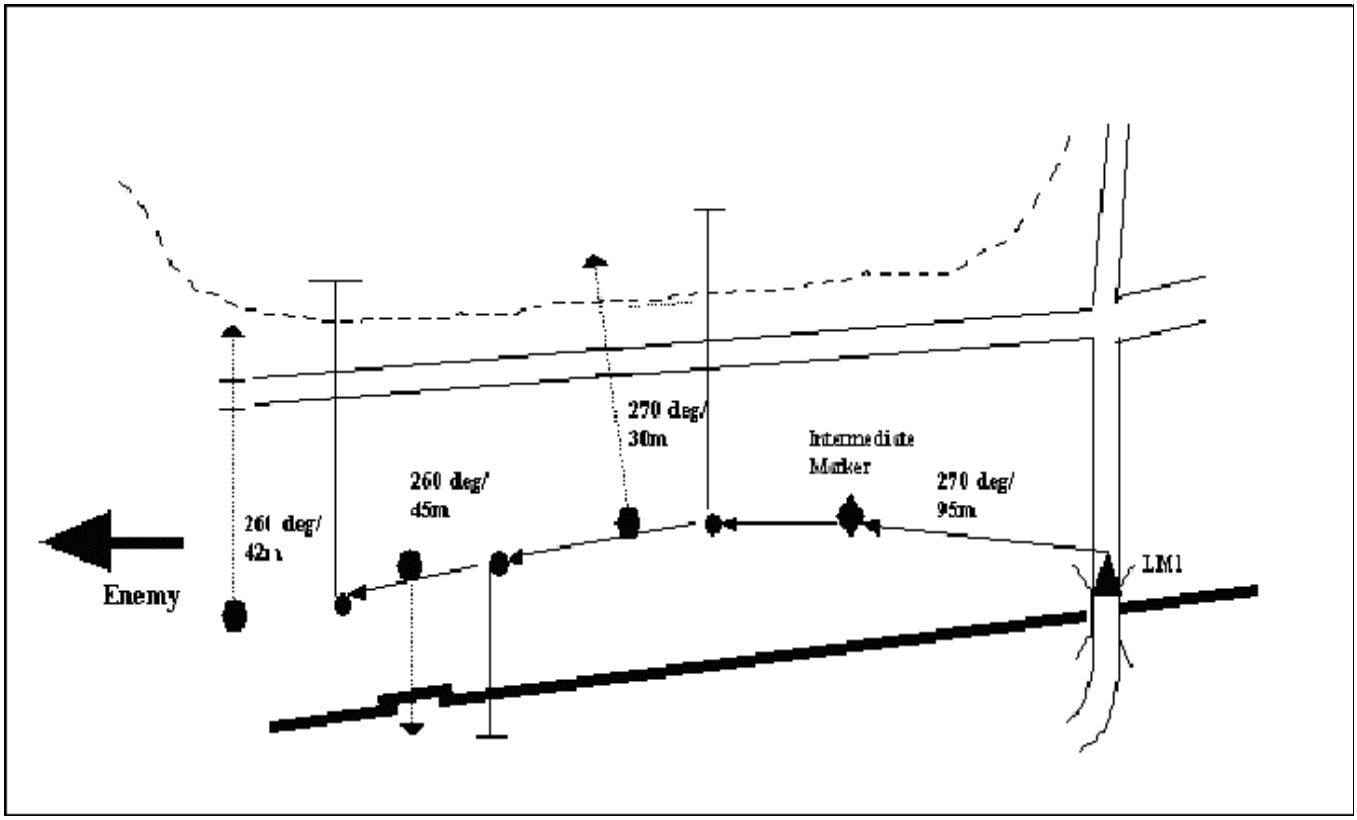


Figure A-7. Off-Route Mines laid in a straight row

5. Safety requirements for wire-actuated mines in minefields.

a. Safety line serves to facilitate laying of wire-actuated mines and will not be marked or measured after completion of the minefield (see (A) on Figure A-8).

b. Trip wires are only allowed on the enemy side of the strip. Trip wires must not be closer than two meters from the border of a minefield lane, safety lane, cluster, another trip wire, IOE baseline or the line joining strip (see (B) on Figure A-8). Trip wires are identified in Figure A-10 by a “t” beside the wire.

c. No cluster with mines will be less than two meters from the minefield lane (See (C) on Figure A-8) and clusters will be no closer than 2 meters from the perimeter fence (see (D) on Figure A-8).

d. Symbol for the direction of the trip wire from a horizontal action anti-personnel mine (see (E) on Figure A-8).

e. Minimum distances are safety distances.

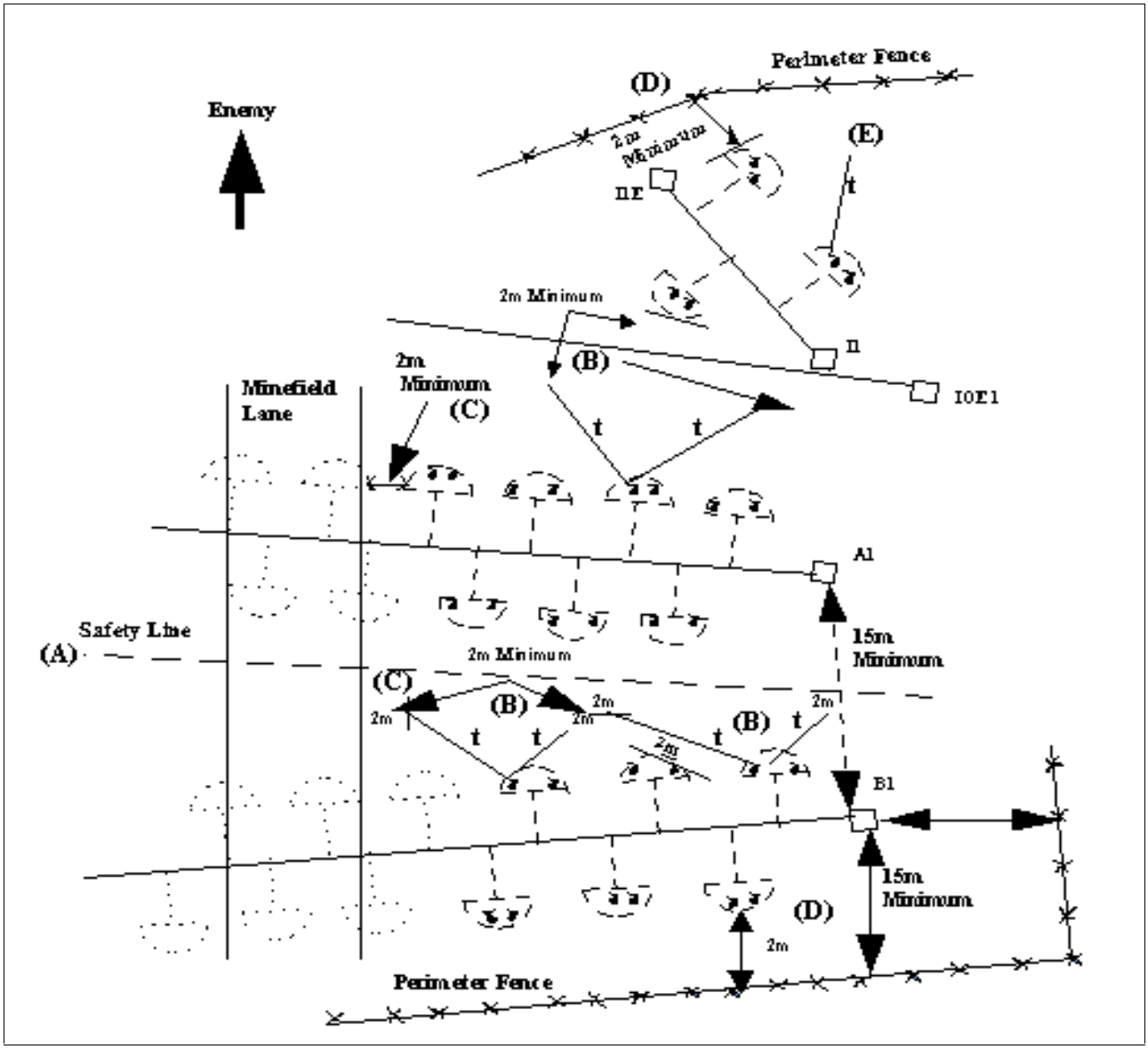


Figure A-8. Safety lane for wire-actuated minefield

ANNEX B TO
STANAG 2036
(Edition 6)

MINEFIELD, CONTAMINATED AREAS, AND LANE MARKING REQUIREMENTS

NOTE: ***Participating nations agree that land mine laying, marking, recording, and reporting and the control of minefields by NATO forces will be in accordance with rules of engagement, international law, host nation restrictions on which land mine warfare is to be conducted and established, agreed-upon procedures and techniques.***

1. This annex is to standardize warning signs, marking requirements for minefields, contaminated or dangerous land areas such as radiological, biological, chemical, chemical minefields (or barriers), other than chemical, booby-traps, and unexploded munitions. Participating nations agree that the signs and marking methods will be used by the NATO nations.

2. For the sake of brevity in the annex, the term “minefield” will relate to all types of minefields and barriers listed in paragraph 1 above.

3. The provisions of this agreement do not preclude additional marking or signposting over and above that required by this STANAG. This decision is based on the concerns of the Tactical Commander.

4. Marking of mined terrain: Minefields must be marked to prevent fratricide. Marking ensures that friendly forces and civilians do not accidently enter a minefield and, it is a requirement under NATO and Geneva Convention agreememts. Commanders must make every attempt to mark minefields as soon as the tactical situation allows. Minefield marking specifics are discussed below.

a. Barbed wire is the standard material to use in marking minefields, however, other types of fencing material may be used in place of barbed wire (Figure B-1).
b. Additional strands of fencing material may be used at the discretion of the authorized tactical commander.

c. Minefield perimeter fence should be no closer than 2 meters plus the mine actuating distance (if appropriate to the mine type) from clusters or mines.

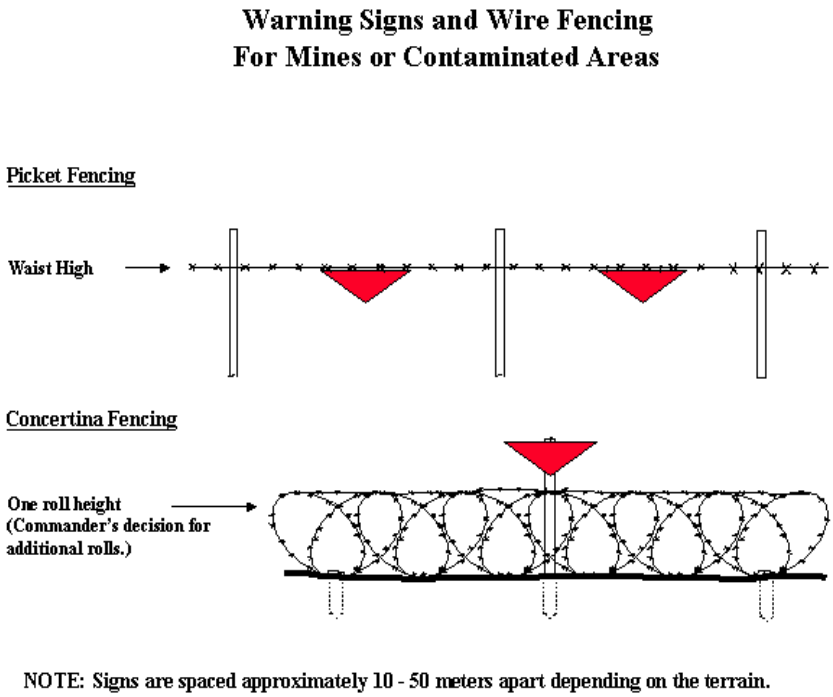


Figure B-1. Marking of Perimeter Fence.

5. Minefield warning signs. In marking the perimeter of a minefield, the nature of the danger or contamination of the considered area is to be indicated by the colors of the signs. In figure B-2 below, are the primary background colors of the front surface. The secondary color is used for additional markings or inscriptions on the front surface.

DANGER	PRIMARY COLOR	SECONDARY COLOR MARKING INSCRIPTION	
Minefields (or Barriers) other than Chemical	RED	NONE	WHITE
Booby-Trapped Areas	RED	WHITE STRIPE	WHITE
Unexploded Ordnance	RED	WHITE BOMB	NONE
Radiological Contamination	WHITE	NONE	BLACK
Biological Contamination	BLUE	NONE	RED
Chemical Contamination	YELLOW	NONE	RED
Chemical Minefields	RED	YELLOW STRIPE	YELLOW

Figure B-2. Color Codes

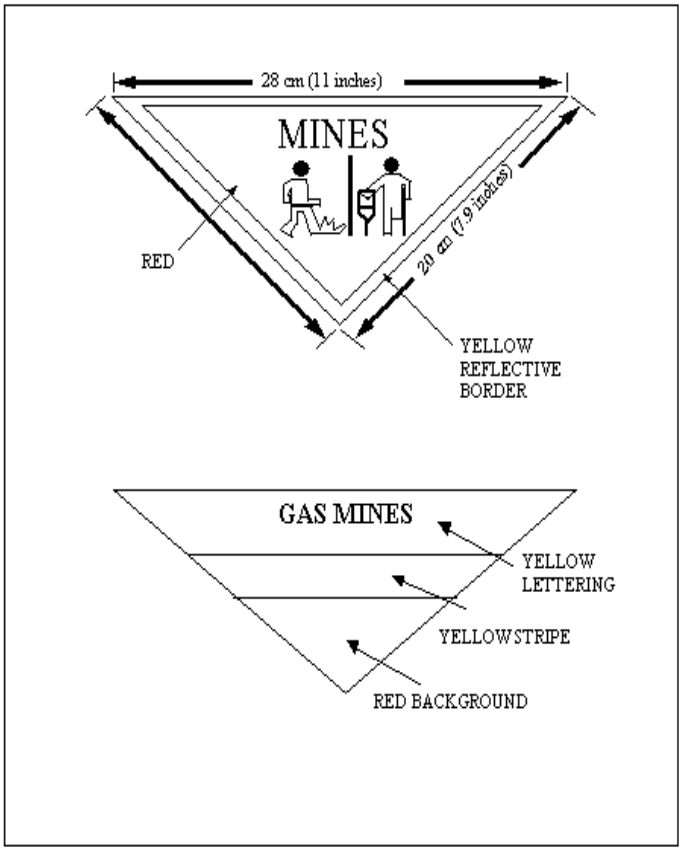


Figure B-3. Minefield warning sign

a. Signs similar to Figure B-3 above shall be used in the marking of minefields and mined areas to ensure their visibility and recognition by both friendly forces and the civilian population:

(1) Size and shape. The sign shall be a triangle or square no smaller than 28 centimeters (11 inches) by 20 centimeters (7.9 inches) for a triangle, and 15 centimeters (6 inches) per side for a square.

(2) Color. The sign will be colored as stated in figure B-2 above.

(3) Symbol. The signs may have a symbol similar to that illustrated in Figure B-3, or an alternative readily recognizable in the area in which the sign is to be displayed as identifying a dangerous area.

(4) Language. The sign should contain the words in one of the following six languages: Arabic, Chinese, English, French, Russian or Spanish and the language or languages prevalent in the area. As a safeguard, the words “MINES”, “ATOM”, GAS MINES”, “GAS”, “BIO” or “ATOM” with the optional addition of a symbol, where required by national authorities, will be painted or written with the secondary color on the front surface.

b. In the case of danger due to chemical minefields (barriers), booby traps and unexploded munitions, the front of the surface of the sign which faces

away will have two colors such as for gas mines being red background, yellow stripe and yellow wording. (see figure B-3).

6. Perimeter fence.

a. Minefields. The perimeter of a minefield should be marked by a fence and minefield warning signs attached to the fence. The fence may either be a natural (a hedge) or an existing fence, or it may be one especially constructed with pickets. When pickets are used, they should be linked by at least one strand of wire placed about waist high. The enemy side of the minefield may be left unmarked or marked lower than waist high (see Figure B-1).

b. Special Chemical Marking Procedures.

(1) The signs marking areas contaminated by chemical agents, are to be placed on all probable routes leading into the contaminated area at about 20 m (60ft) before the point where the presence of the liquid contamination is detected.

(2) For areas of confirmed or suspected contamination or release of Toxic Industrial Chemicals, mark the boundaries of the exclusion or isolated zones which will be identified in STANAG 2909 when promulgated.

7. Placing of minefield warning signs. Signs will be placed above the ground on wire boundary fences, spaced at an interval of 10 to 50 meters depending on the terrain. If fences have not yet been erected, the signs should be placed on trees, rocks, or poles, or the apex should be put into the ground. These latter methods should not be used if the other methods can be adopted as the signs might be obscured by grass and other undergrowth and may also be easily knocked down. The front side of the sign is to be posted facing away from the minefield (see Figure B-1).

8. Lane marking standards.

a. Lane markers are painted red and white markings with white indicating the cleared side of the lane (see Figure B-4). The markers are spaced the width of the lane and in intervals of approximately 30 meters from the lane entrance to the exit as shown in Figure B-5).

b. During periods of low visibility the following procedures will be followed:

(1) Entrance and exit markers are identified by two white or green lights, horizontally placed, or two white or green illuminated arrows horizontally placed (see Figure B-6). For entrance and exits, the illuminated arrow should point toward the lane (see Figure B-5).

(2) Lane markers are identified by one white or green light or by one white or one green illuminated arrow pointing inward.

(3) Whenever possible, the color of light should be the same (white or green) throughout the lane.

(4) Marking is designed so the marker lights are visible at 50 meters.

(5) The authorized commander should decide whether the lane marker lights are to be visible in one or both directions.

(6) Lights may be placed on top of the marker or on its vertical surface; the decision is left to the nation involved.

(7) Field-expedient methods to illuminate the minefield may be used. This may include the use of chemical lights, infrared lights, or other like items.

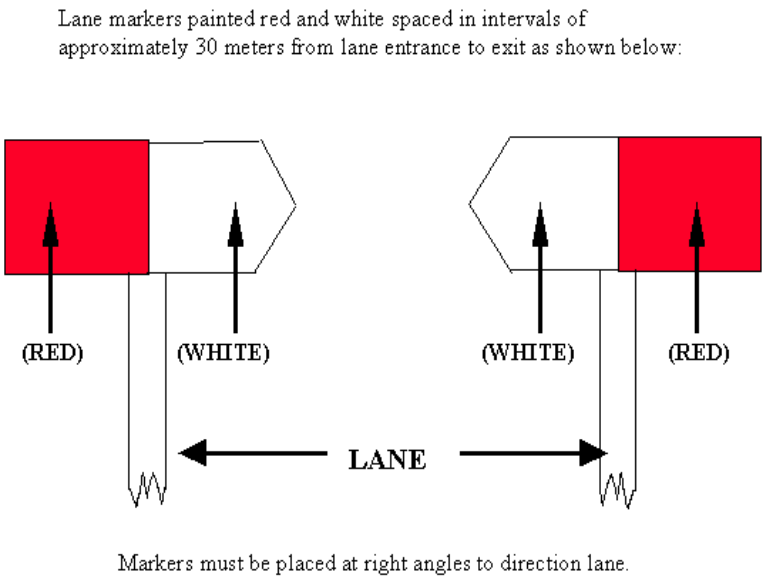


Figure B-4. Daylight marking of a minefield lane

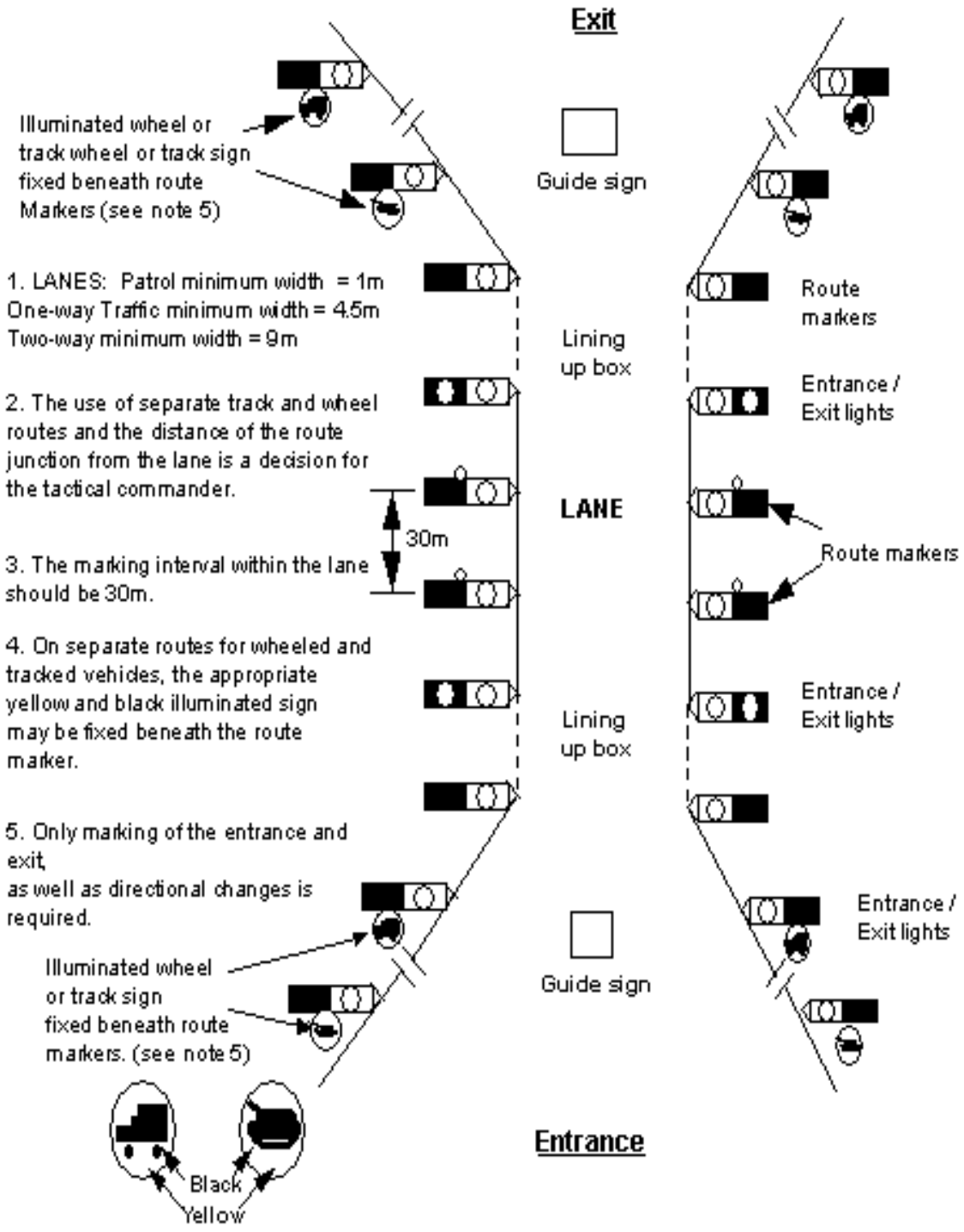


Figure B-5. Completed lane marking of a minefield

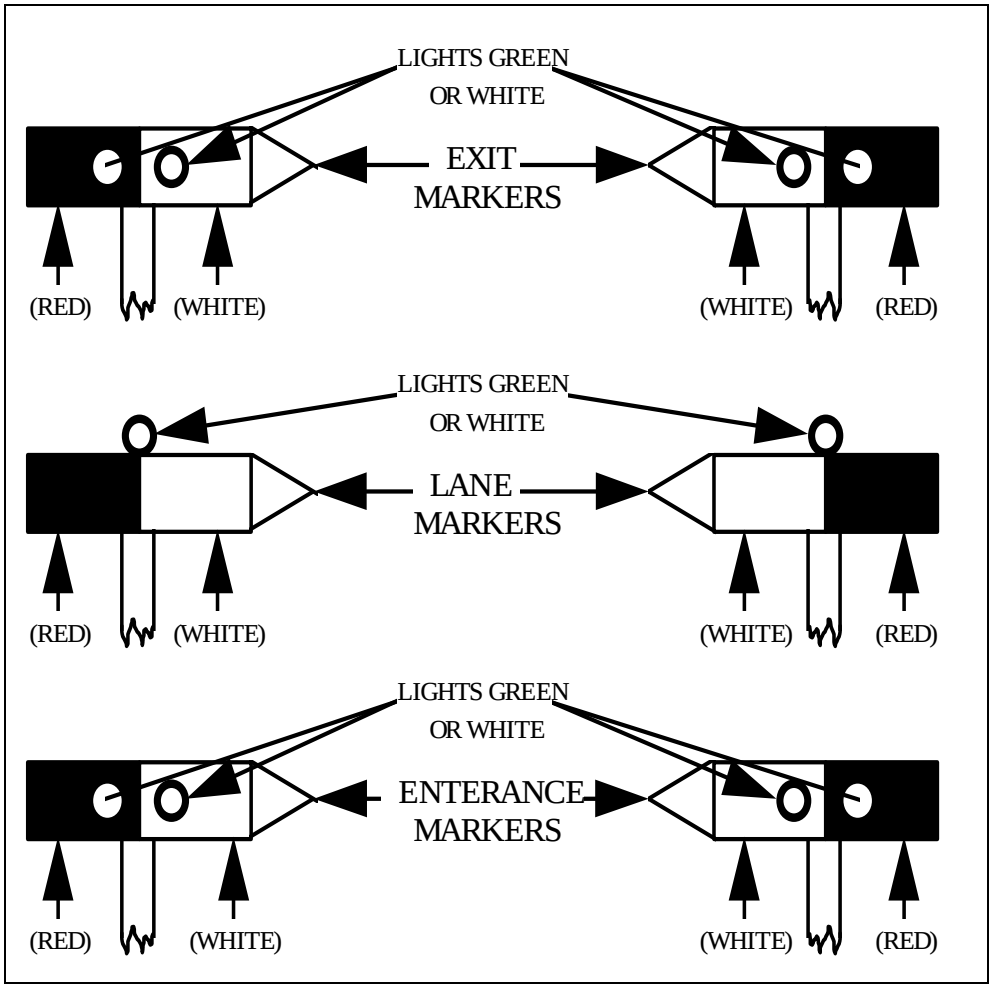


Figure B-6. Night/low visibility marking of minefield lane

ANNEX C TO
STANAG 2036
(Edition 6)

COMPLETION OF MINEFIELD RECORDS

STANDARD TACTICAL ROW MINEFIELD RECORDING

(Numbers 1-18 correspond to numbered blocks on the form)

1. Enter complete data on authority of laying and on the laying unit. Officer-in-charge (OIC) block will include name, rank, and identification number.

2. Enter the date-time groups for starting and completion times. Recorder blanks will include name, rank, and identification number.

3. Enter the copy number and the sheet numbers. The number of sheets will depend upon the length and the depth of the minefield versus scale.

4. Enter the minefield number.

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

6. Enter complete data on at least two landmarks. All laid minefields must be recorded with at least two landmarks identified by grid references (8-digit grid coordinates) and a complete description of the landmarks. Cross out unused blocks.

7. Enter description(s) of any intermediate markers used. When the strip/row reference stake cannot be seen from the landmark, an intermediate marker must be used. Landmarks and end points of the first mine row on the friendly side of the minefield must be visible from the nearest intermediate marker. The intermediate markers must be located on the friendly side of the minefield. If possible, the intermediate marker should not be closer than 75 meters to the strip/row reference point or nearest end marker. Cross out unused blocks.

8. Enter the word “Standard” when the standard marking fence is used; describe the boundary marking if other than the standard marking is used.

9. Enter the number of strips/rows laid other than the IOE. Describe the strip/row markers (line out words not applicable).

10. 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 “Notes” (Line 12). Patrol lanes are 1-meter wide, one-way vehicular lanes are 4.5 meters, and two-way vehicular lanes are 9 meters. Cross out unused blocks.

11. Enter the type of minefield by crossing out the lines not needed. Indicate the method of laying by marking out incorrect descriptions. Enter types of mines as AT, APF, APB. For each type of mine, enter the number of mines and antihandling devices

installed in the IOE and in each strip or row. Strips or rows will be lettered serially, starting with the first one laid. Enter the totals. Cross out unused blocks.

12. Under Notes enter information that would be useful to personnel clearing the minefield. Appropriate items include the location of AT mines with antihandling devices, the location of AP mines with trip wires, clusters in IOE that contain mines, location of buried safety devices, strip cluster composition, and numbered omitted clusters in regular strips. A mandatory comment in the note section is the mine spacing from a mine placed immediately prior to and immediately after a turning point, if this spacing is different from the spacing used for the rest of the row.

13. OIC enters signature, rank, and date.

14. Enter arrows for the direction of the enemy (arrow should point toward the current enemy location) and magnetic north. The enemy arrow should always point within the top 180 degrees of the paper; the north arrow should follow one of the lines of the graph.

15. Enter scale of sketch for standard pattern minefields.

16. Sketch in the 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 or farthest mine in a group.

(2) From landmarks to intermediate markers, if used.

(3) For each straight-line section of a lane centerline.

(4) Between markers of starting points of adjacent strips, including IOE, and between finishing points of adjacent strips, including IOE.

(5) For each segment of a strip or of the IOE, label all directional arrows with magnetic azimuth in degrees and distance in meters. Express as (247 degrees/90 meters). Recorded from friendly to enemy side and from right to left/or left to right.

(6) From landmarks (or intermediate markers) to the start of the lane at the centerline.

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 trace of shoreline and direction and approximate rate in meters per second of water current, for mines laid underwater.

17. Enter security classification of the form.

18. OIC enters signature and rank.

19. The laying unit will prepare four copies of the minefield record. The laying unit will normally retain one copy and forward, through the chain of command, the other three copies to (1) the next higher command, (2) the appropriate formation headquarters, and (3) the appropriate national territorial authority.

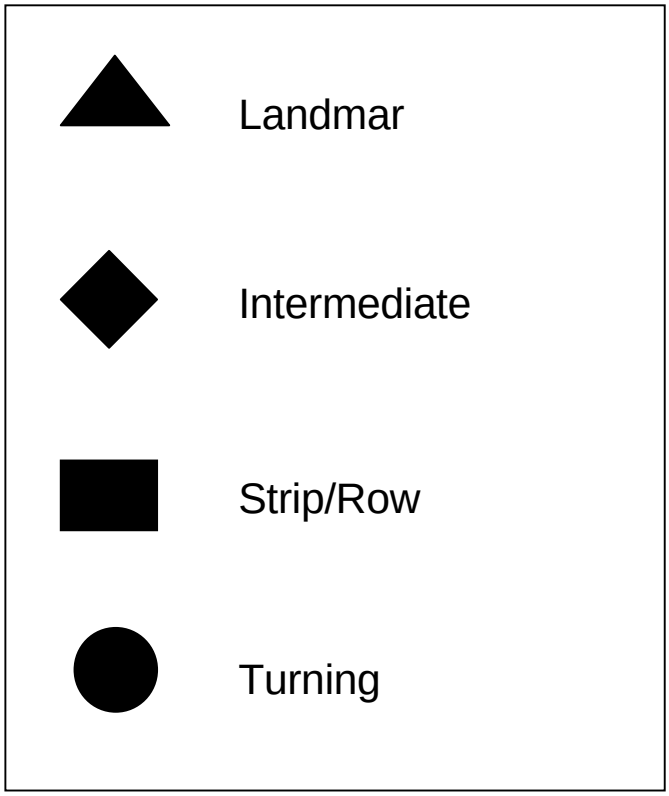


Figure C-1. Symbols used on the minefield record form

SAMPLE

MINEFIELD - RECORD

3 Copy No. _____ of _____ Sheet No. _____ of _____

1 AUTHORITY
LAYING UNIT
OFFICER IN CHARGE

2 DATE AND TIME: START / COMPLETION
RECORDER

4 MINEFIELD NUMBER

5 MAP SERIES NUMBER AND SCALE
SHEET NO. (OR NAME)

6 LANDMARKS

NO	COORDINATES	DESCRIPTION
1		
2		
3		
4		

7 INTERMEDIATE MARKERS

NO	DESCRIPTION
1	
2	
3	
4	

8 DESCRIPTION OF BOUNDRY FENCE OR MARKING

9 NO. OF STRIPS/ROWS_____ DESCRIPTION OF STRIP/ROW MARKERS

10 LANES

NO	WIDTH	HOW MARKED	METHOD OF CLOSING
1			
2			
3			

11

TACTICAL MINEFIELD NUISANCE MINEFIELD PHONEY MINEFIELD		ANTITANK MINES (AT)								ANTIPERSONNEL MINES (AP)			
		TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TOTAL AT MINES	ANTI-LIFT DEV	TYPE	TYPE	TYPE	TOTAL AP MINES
		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
	IOE												
	A												
	B												
	C												
	D												
	E												
	F												
	G												
	H												
	I												
TOTAL													

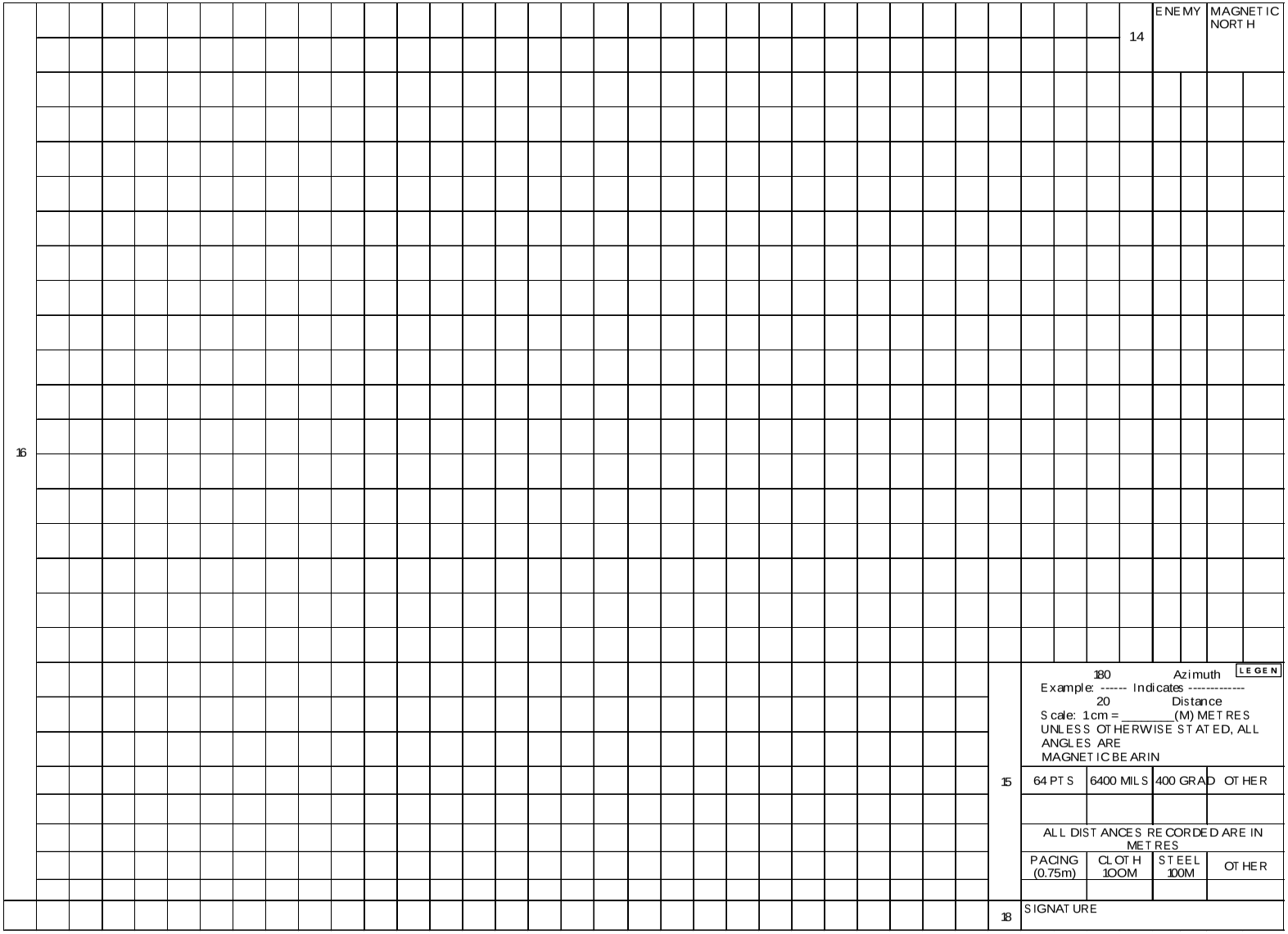
12 NOTES
1. MINE CLUSTERS AT _____METRES/PACE SPACING

13 SIGNATURE (OFFICER IN CHARGE)

SAMPLE

Figure C-2

SAMPLE
~~SECRET~~ (When Completed)



SAMPLE
~~SECRET~~ (When Completed)

Figure C-3

SAMPLE

~~SECRET~~ (When Completed)

MINEFIELD - RECORD

3 Copy No. 1 of 4 Sheet No. 6 of 6

1 AUTHORITY: CG, 2d INF DIV
LAYING UNIT: 3D PLT, B. CO., 2D ENGR BN
OFFICER IN CHARGE: HARRY O. HUSTED, 1LT, 287-38-8888

2 DATE AND TIME: START 100700z JAN 02; COMPLETION 101500z JAN 02
RECORDER: PFC JIMMY DURANTE, 474-84-8976

4 MINEFIELD NUMBER: 2XX (INF) 2-E

5 MAP SERIES NUMBER AND SCALE: H754 1:50,000
SHEET NO. (OR NAME): NJ201J HUNSAN

6 LANDMARKS

NO	COORDINATES	DESCRIPTION
1	UT 35817602	U-SHAPED PICKET W/GROUND ON NORTH
~~2~~		CORNER ROAD JUNCTION
~~2~~ 3	UT 36507719	U-SHAPED PICKET W/GROUND ON NORTH
~~4~~		NORTH END OF ROAD CULVERT

7 INTERMEDIATE MARKERS

NO	DESCRIPTION
1	
2	
3	
4	

8 DESCRIPTION OF BOUNDRY FENCE OR MARKING
STANDARD MARKING FENCE - ONE (1) STRAND CATTLE FENCE ON 3 SIDES OF MINEFIELD

9 DESCRIPTION OF STRIP/ROW MARKERS
NO. OF STRIPS/ROWS - 6
SHORT U-SHAPED PICKETS, BURIED WITH 6" ABOVE THE GROUND

10 LANES

NO	WIDTH	HOW MARKED	METHOD OF CLOSING
1			
2			
3			

11

TACTICAL MINEFIELD / NUISANCE MINEFIELD / PHONEY MINEFIELD		ANTITANK MINES (AT) TYPE M21 NO	TYPE M19 NO	TYPE NO	TYPE NO	TYPE NO	TYPE NO	TOTAL AT MINES NO	ANTI-LIFT DEV NO	ANTIPERSONNEL MINES (AP) TYPE M16 NO	TYPE NO	TYPE NO	TOTAL AP MINES NO
	IOE	42						42					
	A	76						76					
	B	98						98		49			49
	C	84						98		49			49
	D	84						84					
	E		96					84					
	F		54					96					
	G							84					
	H												
	I												
TOTAL		384	180					564		98			98

12 NOTES

1. MINE CLUSTERS AT 6 METRES/PACE SPACING

ALL DISTANCES IN MINEFIELD ARE MEASURED IN METERS,

(2) NUMBER OF IOE LIVE CLUSTERS (ALL OTHER NUMBERED BUT OMITTED) I1(1-7), I2 (1-7), I3(1-7), I4(1-7), I5(1-7), I6(1-7)

(3) NUMBERED OMITTED CLUSTERS IN REGULAR STRIPS; B. NONE, C: NONE D: NONE, E: NONE, F: NONE

(3B) OMITTED CLUSTERS FOR LANES CD GAPS: NONE

(4) CLUSTERS WITH AHDs: A: NONE, B: 13,22,34(M142) C: 11, 22, 65(M142) D: 4, 17, 67 (M142), E: NONE, F: NONE,

(5) CLUSTERS WITH TRIP WIRE ACTIVATED AP MINES: NONE

(6) STRIP CLUSTER COMPOSITION: A,D,E,F (1-0-0); B,C(1-1-0) M16 EVERY THIRD CLUSTER

(7) LOCATION OF SAFETY CLIPS/PINS BURIED 30CM BEHIND START ROW MARKER

(8) LOCATION OF MINES FOR CLOSING LANES AND GAPS: NONE

13 SIGNATURE (OFFICER IN CHARGE) *CPT Chesty Puller* DATE *10 Nov 2003*

SAMPLE

~~SECRET~~ (When Completed)

Figure C-4

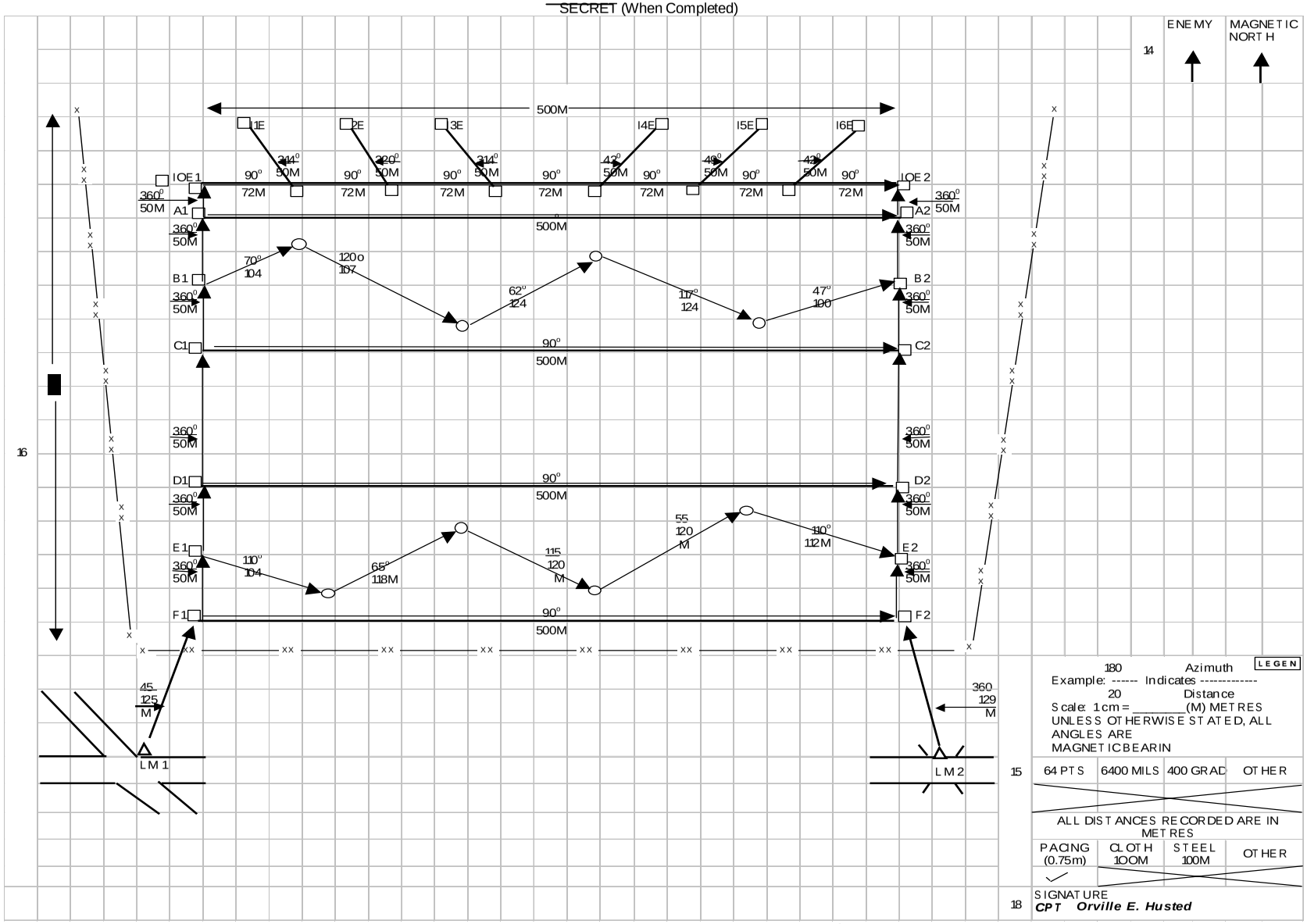

ENEMY
MAGNETIC NORTH
500M
1E
2E
3E
4E
5E
6E
IOE 1
IOE 2
A1
A2
B1
B2
C1
C2
D1
D2
E1
E2
F1
F2
LM 1
LM 2
LEGEN
180 Azimuth
Example: ------ Indicates ----------
20 Distance
Scale: 1cm = _____(M) METRES
UNLESS OTHERWISE STATED, ALL ANGLES ARE MAGNETIC BEARIN
64 PTS
6400 MILS
400 GRAD
OTHER
ALL DISTANCES RECORDED ARE IN METRES
PACING (0.75m)
CLOTH 100M
STEEL 100M
OTHER
SIGNATURE
CPT Orville E. Husted

Figure C-5

MINEFIELD - RECORD

3 Copy No. __01__ of __04____ Sheet No. __01__ of __01__

1 AUTHORITY: CG, 2d INF DIV
LAYING UNIT: 2d PLT, B CO., 2d ENGR BN
OFFICER IN CHARGE: CPT J. KIRKTON, ID# 334-43-8980

2 DATE AND TIME: START 070600Z JAN 02; COMPLETION 071900Z JAN 02
RECORDER: GY SGT LOU DIAMOND, 111-22-1234

4 MINEFIELD NUMBER: A02I-B2A-MN02X

5 MAP SERIES NUMBER AND SCALE: H745 1:50,000
SHEET NO. (OR NAME): NI2025 Khe Sanh, Viet

6 LANDMARKS

NO	COORDINATES	DESCRIPTION
1	PU75723958	Survy Point: Northeastern Bridge abutment
2	PU76203959	Northeastern bridge abutment
3		
4		

7 INTERMEDIATE MARKERS

NO	DESCRIPTION
1	IM 1: (3) U-shaped pickets, 30cm above the ground.
2	
3	
4	

8 DESCRIPTION OF BOUNDRY FENCE OR MARKING

9 NO. OF STRIPS/ROWS _____ DESCRIPTION OF STRIP/ROW MARKERS

10 LANES

NO	WIDTH	HOW MARKED	METHOD OF CLOSING
1			
2			
3			

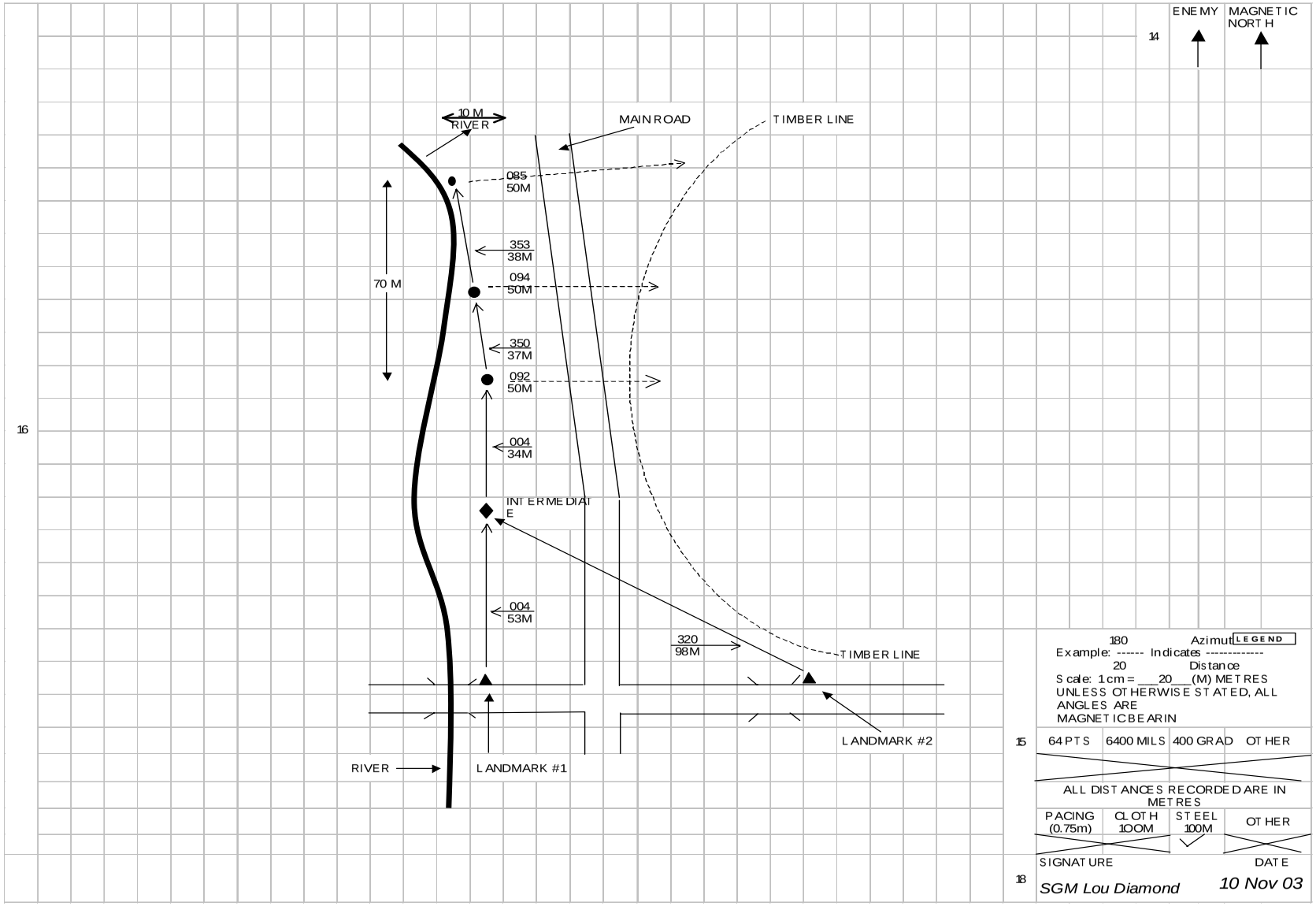
11

TACTICAL MINEFIELD NUSIANCE MINEFIELD PHONEY MINEFIELD	ANTITANK MINES (AT)								ANTIPERSONNEL MINES (AP)			
	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE	TOTAL AT MINES	ANTI-LIFT DEV	TYPE	TYPE	TYPE	TOTAL AP MINES
	DM 12											
	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
IOE												
A												
B												
C												
D												
E												
F												
G												
H												
I												
TOTAL	3											

12 NOTES
1. MINE CLUSTERS AT _____METRES/PACE SPACING
(1) Method of Emplacement: Hand Laid
(2) Type of Fuse: Coustic
(3) Remote command activation and deactivation.

13 SIGNATURE (OFFICER IN CHARGE) DATE
MAJ J. Kirkton 7 Oct 02

Figure C-6



SAMPLE
~~SECRET~~ (When Completed)

Figure C-7

MINEFIELD - RECORD

3 Copy No. __01___ of __04____ Sheet No. __01___ of __01___

1 AUTHORITY: CDR, 3D ARMORED CAV REGT
LAYING UNIT: 1ST PLT, D CO, 5TH ENGR BN
OFFICER IN CHARGE: CPT Rober L. Gunther ID # 544-45-9890

2 DATE AND TIME: START 090600 JAN 02; COMPLETION 090800 JAN 02
RECORDER: SFC K. LILLIENKRON

4 MINEFIELD NUMBER: B06I-A2A-MD01X

5 MAP SERIES NUMBER AND SCALE: G745 1:50,0000
SHEET NO. (OR NAME): PW 5732 LILIENCRON

6 LANDMARKS

NO	COORDINATES	DESCRIPTION
1	UT 34627380	U-SHPED PICKET FLUSH WITH GROUND AT SOUTHWEST
2		CORNER OF ROAD JUNCTION
3	UT 36447381	U-SHPED PICKET FLUSH WITH GROUNDAT NORTHWEST
4		CORNER OF BUILDING

7 INTERMEDIATE MARKERS

NO	DESCRIPTION
1	(3) U-SHPED PICKETS 30cm ABOVE GROUND; NORTH OF LANDAMRK 2 (BUILDING
2	
3	
4	

8 DESCRIPTION OF BOUNDRY FENCE OR MARKING
NONE

9 NO. OF STRIPS/ROWS__0__ DESCRIPTION OF STRIP/ROW MARKERS
U-SAPED PICKET FLUSH WITH THE GROUND; ONE (10 METER SOUTH OF THE MINE

10 LANES

NO	WIDTH	HOW MARKED	METHOD OF CLOSING
1			
2			
3			

11 TACTICAL MINEFIELD
NUISANCE MINEFIELD
PHONEY MINEFIELD

	ANTITANK MINES (AT)								ANTIPERSONNEL MINES (AP)			
	TYPE XM98	TYPE	TYPE	TYPE	TYPE	TYPE	TOTAL AT MINES	ANTI-LIFT DEV	TYPE	TYPE	TYPE	TOTAL AP MINES
	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
IOE	1						1					
A												
B												
C												
D												
E												
F												
G												
H												
I												
TOTAL	1						1					

12 NOTES
1. MINE CLUSTERS AT _____METRES/PACE SPACING
(1) METHOD OF EMPLACEMENT; HAND LAID
(2) TYPE OF FUSE: ACOUSTIC SENSING
(30 REMOTE COMMAND ACTIVATION AND DEACTIVATION

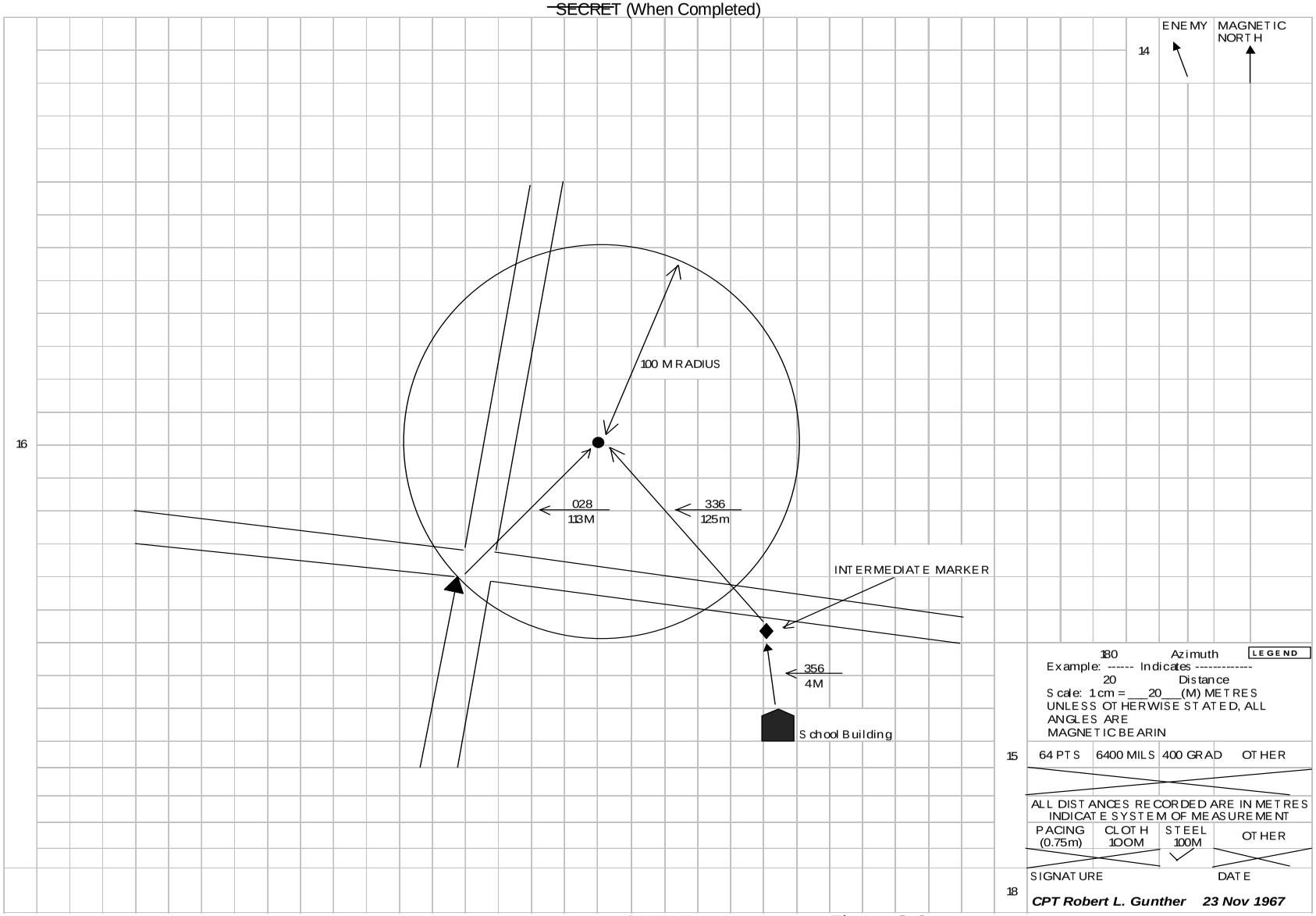
13 SIGNATURE (OFFICER IN CHARGE) DATE
CPT Robert L. Gunther *23 Nov 1967*

SAMPLE
~~SECRET~~ (When Completed)

Figure C-8

SAMPLE

~~SECRET~~ (When Completed)



SAMPLE

~~SECRET~~ (When Completed)

Figure C-9

ANNEX D TO
STANAG 2036
(Edition 6)

INFORMATION EXCHANGE REQUIREMENTS FOR LAYING SCATTERABLE MINES

1. Scatterable Minefield/Munition Recording. All known information on scatterable minefields/munition fields is simply and rapidly reported to all affected units. Although SCATMINES have self-destruct (SD) capability, they are still recorded; and the information is disseminated to prevent causalities to friendly troops and civilians.

2. Safety Zone. Upon advice from the supporting Formation Engineer, it is the Formation Commander's responsibility to designate the safety zone for a scatterable minefield. For most systems, a safety zone is calculated from one or more aim points. For example:

a. A Remote Antiarmor Mine (RAAM) minefield/munition field is recorded based on target location (the grid coordinates given to an artillery firing battery). The size of the minefield/munition field depends on the number of rounds fired, the number of aim points, and the angle of fire.

b. A Ground remotely delivered mine system minefield/munition field can be recorded more accurately by plotting each of the minefield/munition field corner points rather than an aim point (See pages C-10 and 11).

Scatterable Minefield Messages
E301 Group

AEngrP-2(A) Short Message Title					Information Required	AEngrP-Serial No.
SCATMIN REQ	SCATMIN ORD	SCATMIN WARN	SCATMIN REP	SCATMIN REC		
M	M	M	M	M	Name of Report	200/A
O	M	O	M	M	Task Serial Number	202/A
O	O	O	O	O	*Obstacle* Zone / Belt Name or Number	209/A
O	O	M	M	M	Obstacle/Target Number or Nickname	209/B
M	M	M	M	M	Map Sheet Numbers	214/A
O	O	O	O	O	Name of Near Town or Feature	214/B
M	M	M	M	M	Obstacle Grid Co-ordinates	214/D
-	O	-	-	O	Aim Point	214/G
O	O	M	-	M	Safety Zone (m) From Aimpoint or Minefield	214/H
-	-	-	M	O	Actual Completion Time of Task (DTG)	217/E
O	M	-	-	-	Tactical Objective (LIST AB)	219/A
M	M	-	-	-	Target	219/B
-	-	-	O	-	Minefield Density (LIST Z)	219/F
O	M	M	-	M	Laying Method/System (LIST BF)	219/H
O	M	-	-	M	Approving Authority	227/C
-	M	M	M	M	Unit Laying Mines	227/E
M	M	M	-	-	No Mines Before (DTG)	228/A
M	M	M	-	-	No Mines After (DTG)	228/B
O	M	M	M	M	Minefield Effective at (DTG)	228/E
O	M	M	M	M	Minefield Ceases to be Effective at (DTG)	228/F
-	O	-	O	M	Mine Type / Description / Qty LIST BH)	228/G
O	O	O	O	O	Remarks	297/A
M	M	M	M	M	Acknowledge	299/A

Legend:

M = Mandatory (Minimum) Information Requirements
O = Optional Information Requirements
- = No Information Requirement

Notes:
1.Users of manual reporting systems should refer to APP-9 for manual message formats (Voice Templates).

2. Users of information systems capable of formatting messages automatically should refer to AEngrP-2(A) for message format information.

ANNEX E TO
STANAG 2036
(Edition 6)

INFORMATION EXCHANGE REQUIREMENTS FOR CONVENTIONAL MINE LAYING

Engineer Mine laying Messages E122 Group

MINLAYRECCEORD = RECCE ORDER
MINLAYRECCEREP = RECCE REPORT
MINLAY = EXECUTION ORDER
MINLAYREP = COMPLETION REPORT

&

Intent to Lay Minefield Report E306

INTTOLAY = INTENT TO LAY

PURPOSE

The purpose of this group of messages is to provide the means for reporting information relating to minefields laid by friendly engineer troops.

AEngrP-2 (A) Short Message Title						AEngrP-2
E122 Group				**E306A**		
MINLAY RECCEORD	**MINLAY RECCEREP**	**MINLAY ORD**	**MINLAY REP**	**INTENT TO LAY**	**Information Required**	Serial No.
M	M	M	M	-M	**Name of report**	200/A
M	M	M	M	O	**Task Serial Number**	202/A
O	O	O	M	O	**Obstacle Zone / Belt Name or Number**	209/A
O	O	O	O	-	**Obstacle/Target Number or Nickname**	209/B
M	M	M	M	M	**Type of Minefield - List B**	210/C
O	M	M	M	M	**Generic Mine Type - List C**	210/E
-	-	-	-	M	**Obstacle Status - List AC**	210/H
-	-	-	-	M	**Effective Period (DTG)**	210/J
M	M	M	M	M	**Map Sheet Number(s)**	214/A
O	O	O	O	O	**Name of Nearest Town or Feature**	214/B
M	M	M	M	M	**Minefield Boundary**	214/C
O	O	O	O	-	**Main Tactical Road**	214/O
O	-	-	-	-	**No Reconnaissance Before**	216/A
O	-	-	-	-	**Reconnaissance to be Completed by**	216/B
M	-	-	-	-	**Reconnaissance Report to be Submitted by**	216/D
-	M	-	-	-	**Reconnaissance Completed at**	216/C
-	-	M	-	-	**No Work Before (DTG)**	217/A
-	-	O	-	M	**Start Task at (DTG)**	217/C
-	-	M	-	-	**Task to be Completed Before (DTG)**	217/D

AEngrP-2 (A) Short Message Title					Information Required	AEngrP-2
E122 Group				E306A		
MINLAY RECCEORD	MINLAY RECCEREP	MINLAY ORD	MINLAY REP	INTENT TO LAY		Serial No.
-	-	-	M	-	**Actual Completion Time of Task (DTG)**	217/E
M	-	M	-	-	**Tactical Objective - List AB**	219/A
-	-	O	M	-	**Anti Handling Devices %**	219/D
O	O	M	M	-	**Number of Mine Rows**	219/E
O	O	M	M	-	**Minefield Density - List Z**	219/F
O	O	M	M	-	**Minefield Dimensions (m)**	219/G
O	O	O	M	-	**Mine Laying Method - List D**	219/I
M	M	M	-	-	**To Be Marked?**	219/L
M	M	O	M	-	**Is Marked?**	219/M
O	O	O	O	-	**Additional Minefield Obstacles - List E**	219/N
O	-	O	O	-	**Unit to Control Minefield Activation.**	227/A
-	-	O	O	-	***Authorized Commander***	227/B
-	-	-	O	-	**Handover to another unit**	227/D
O	O	O	O	-	**Set Armed Period Duration.**	228/C
-	-	O	O	-	**Change Minefield Effectiveness - List AG**	228/D
O	O	M	M	-	**Minefield Effective at.**	228/E
O	O	M	M	-	**Minefield Ceases to be Effective at.**	228/F
M	M	M	M	M	**Number of Lanes and Gaps**	228/H
M	M	M	-	-	**Lane / Gap to be marked?**	228/I
M	M	O	M	-	**Lane / Gap is marked?**	228/J
M	M	M	M	M	**Lane or Gap Identification - List F**	229/A
M	M	M	M	M	**Entrance and Exit**	229/C
M	M	M	M	M	**Lane / Gap Width (m)**	229/D
-	-	O	O	-	**Mines for Closure.**	229/E
O	M	O	M	-	**Method of Closing - List D**	229/F
-	-	O	O	-	**Minefield Closure Time.**	229/G
O	O	O	O	-	**Unit to Close Lane or Gap.**	229/J
O	O	O	-	-	**Name of Route to Task Site.**	245/A
O	O	O	-	-	**Start Point.**	245/B
O	O	O	-	-	**Intermediate Points.**	245/C
O	O	O	-	-	**Release Point.**	245/D
O	M	M	-	-	**Engineer Assembly Area.**	246/A
-	M	M	-	-	**Manpower Data.**	261/A
-	O	O	-	-	**Unit Providing the Manpower.**	262/A
-	O	M	-	-	**Manpower RV and Time.**	262/B
-	O	O	M	-	**Antitank Mine Details.**	263/A
-	O	O	M	-	**Antipersonnel Mine Details.**	264/A
-	O	O	M	-	**Explosives Details.**	265/A
M	M	M	-	-	**Mine and Explosive Dump.**	266/A
M	M	M	-	-	**Mine and Explosive Available at Time.**	266/B
M	M	M	-	-	**Equipment Data.**	269/A
O	O	O	-	-	**Unit providing the Equipment**	271/A
O	O	M	-	-	**Equipment RV and Time.**	271/B
M	M	M	-	-	**Material Data**	270/A

AEngrP-2 (A) Short Message Title					Information Required	AEngrP-2 Serial No.
E122 Group				E306A		
MINLAY RECCEORD	MINLAY RECCEREP	MINLAY ORD	MINLAY REP	INTENT TO LAY		
O	O	O	-	-	**Unit providing the Material.**	271/A
O	O	M	-	-	**Material RV and Time.**	271/B
M	O	M	-	-	**Name of unit with which Coordination is Foreseen or Necessary.**	288/A
O	-	O	-	-	**Radio frequency/Call sign of Unit Concerned.**	288/B
O	-	O	-	-	**Own Call Sign.**	288/C
M	-	M	-	-	**RV Details.**	288/D
-	-	M	-	-	**Name of Unit providing Protection.**	289/A
-	-	O	-	-	**Radio frequency / Call Sign of Unit concerned.**	289/B
-	-	O	-	-	**Own Call Sign.**	289/C
-	-	M	-	-	**RV Details.**	289/D
O	O	O	O	O	**Remarks.**	297/A
M	M	M	M	M	**Acknowledge.**	299/A

Legend:

M = Mandatory (Minimum) Information Requirements
O = Optional Information Requirements
- = No Information Requirement

Notes:

1. Users of information systems capable of formatting messages automatically should refer to AEngrP-2 (A) for message format information.

ANNEX F TO
STANAG 2036
(Edition 6)

MC 362 - NATO Rules Of Engagement Series 38

1. Reference MAS memorandum, subject NATO Policy on Anti-Personnel Mines, MAS/(ARMY) 0356-1/65, dated 28 Mar 2000

2. In accordance with enclosure II, subject: 39 MINES, to reference above, the following guidance is directed by the NSA Army Board with reference to control the use of land and maritime mines Series 38. An extract of Series 38 is below.

a. Reference 380. (SC) Laying of DESIG mines in DESIG area(s) is prohibited.

b. Reference 381. Use of DESIG mines in DESIG area(s) for DESIG purposes is authorized, subject to DESIG restrictions.

c. Reference 382. - 389. Spare

d. Reference NOTES:

(1) With respect to land mine, each State Party to the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, 3 December 1997 (Ottawa Convention) has undertaken never under any circumstances:

(a) to use anti-personnel mines;

(b) to develop, produce otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly, anti-personnel mines;

(c) to assist, encourage or induce, in any way, anyone to engage in any activity prohibited to a State Party under the Convention.

(2) Non-States Party nations have stated that they retain the right to employ Anti-Personnel Mines/Mixed Munitions on a nation unilateral basis during a NATO operation. The actions of non-States Party nations must take into account the States Party Forces have to be in compliance with obligation of the Ottawa Convention and their national Legislation.