FIRE SUPPORT COORDINATION MEASURES

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CHAPTER ONE

FIRE SUPPORT COORDINATION MEASURES

A. RESPONSIBILITIES (ELO #1).

The maneuver commander is responsible for all fire support delivered on surface targets within his area of responsibility. Because of the tempo of operations on the modern battlefield, the increased technology of weapons, the amount of fire support available, and the varied type of fire support available, the maneuver commander must rely on his Fire Support Coordinator (FSC) for recommendations to ensure the most effective employment of assets. In order to facilitate the coordination of fire support, which includes the responsive delivery of fires and the safeguarding of friendly forces, the commander and his staff must have as thorough an understanding of all fire support coordination measures as the FSC.

B. FIRE SUPPORT COORDINATION

1. Fire support coordination measures are designed to provide safeguards for friendly forces, and at the same time facilitate the rapid engagement of targets. Fire support coordination measures fall into two broad categories: permissive measures and restrictive measures. With the establishment of a permissive measure, no further coordination normally is required for the engagement of targets affected by the measure. In essence, the primary purpose of permissive measures is to facilitate the attack of targets. The establishment of a restrictive measure uses certain requests for specific coordination prior to the engagement of those targets affected by the measure. Therefore, the primary purpose of restrictive measures is to provide safeguards for friendly troops.

2. All fire support coordination measures are established by the maneuver commander, MAGTF commander, or the commander of the landing force (CLF) during amphibious operations. Established fire support coordination measures are based on the commander's intent, and guidance, the location of friendly forces, the scheme of maneuver or plan of defense, and anticipated enemy actions. Once implemented, fire support coordination measures are displayed on maps, firing charts, and overlays. Graphical portrayal will include, as a minimum:

   a. Graphic depiction (black for both permissive measures and restrictive measures)

   b. Abbreviation of the coordination measure

   c. Establishing command element (headquarters)

   d. Effective date-time group (DTG) (often shown as "from-to" times)

CHAPTER ONE - POST TEST

1. Fire support coordination measures which primarily facilitate the rapid engagement of targets are classified as _____ measures.

2. Those fire support coordination measures that primarily provide safeguards to friendly forces are classified as _____ measures.

3. The _____ establishes all fire support coordination measures.

4. The _____ recommends the establishment of all fire support coordination measures. These measures are distinctly different than those used for tactical control of maneuver forces.

5. When graphically portrayed on maps, firing charts, and overlays, fire support coordination measures will be displayed with the following information: _____, _____, _____, and _____.

CHAPTER TWO

BOUNDARIES AND ZONES OF FIRE

A. BOUNDARIES (ELO #2)

1. As inferred in the preceding chapter, the FSC is responsible for recommending to the commander the establishment of all fire support coordination measures. It is a mistake, however, to confuse fire support coordination measures with tactical/maneuver control measures used by maneuver commanders to control the movement of subordinate units. Some of these control measures play a role in fire support planning and coordination considerations. The most important of these tactical control measures are boundaries. Boundaries are used by the maneuver commander in both offensive and defensive operations to designate the geographical area for which a particular unit is responsible. They depict a unit's zone during offensive action or sector during defensive action. Boundaries are normally established along terrain features easily recognizable on the ground and are situated so that key terrain features and avenues of advance or approach are completely included in the area assigned to one unit.

2. Boundaries are both restrictive and permissive in nature. They are restrictive in that no fire support means may deliver fires across a boundary unless those fires are coordinated with the unit responsible for the area on the other side. In this light, fires delivered in close proximity to a boundary also should be coordinated with the adjacent unit. Boundaries are permissive in nature in that within his own boundaries, a unit commander enjoys complete freedom of fire and maneuver. The commander, in certain situations, may decide that his subordinate units may fire across boundaries at positively identified enemy units without coordinating for that specific target. This will only apply to direct fires and observed supporting arms. It also can be applied only to boundaries which that commander has established (e.g., a battalion commander can only apply this exception to his own companies' boundaries).

3. Boundaries are graphically portrayed on maps and overlays by a solid black line. The line is interrupted by the appropriate sized unit symbol, with the designation of the unit responsible for the area shown next to the unit symbol. In those cases where a boundary separates the areas of two units of different sizes (such as one company's area separated from the area of a company in a different battalion), the unit symbol used is that of the larger size. Proposed or planned boundaries are displayed as dashed black lines.

B. ZONES OF FIRE

1. Another use for boundaries is to help designate the areas into which supporting artillery units and naval gunfire ships must be able to fire. These areas are known as zones of fire (ZF).

2. A ZF is not a specific fire support coordination measure or tactical control measure but serves as guidance to the commanders of artillery units and naval gunfire ships for the placement of units or ships in order that the assigned tactical mission can be accomplished.

3. A ZF is assigned to an artillery unit or a naval gunfire ship to help control fires laterally and in depth. The ZF assigned to a particular artillery unit or naval gunfire ship will depend on the tactical mission assigned to that unit or ship. For example, the tactical mission of direct support requires that the supporting unit or ship be able to deliver fires throughout the area of the maneuver unit being supported. A tactical mission of general support requires the supporting unit or ship to be able to deliver fires throughout the zone of action of the force.

CHAPTER TWO - POST TEST

1. Boundaries are used by the _____ commander to designate a geographical area for which a particular subordinate unit has responsibility.

2. Within his own designated boundaries, the unit commander has complete freedom of _____ and _____.

3. Refer to figure 2-1 below. Which unit is responsible for the area in which target number AB1003 is located? _____.

4. If 2nd Bn 2nd Marines wants to attack target number AB1003, must the attack be coordinated with another unit? _____. If so, with which unit? _____

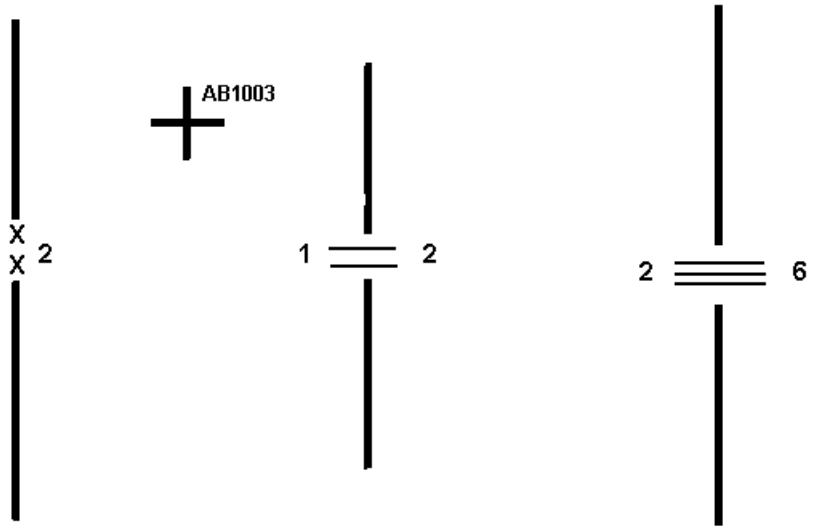


FIGURE 2-1

5. Refer to Figure 2-2 on the following page. Using vertical lines, shade in the area which would represent the ZF for the artillery battalion with the tactical mission of direct support of the 5th Marines.

6. Using Figure 2-2, use horizontal lines to shade in the area which would represent the ZF for the naval gunfire ship with the tactical mission of general support of the 1st Marine Division.

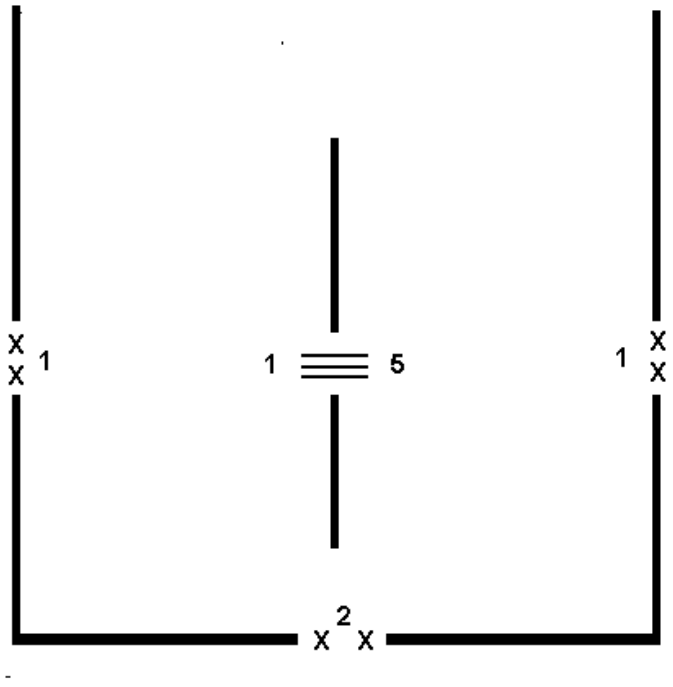


FIGURE 2-2

CHAPTER THREE

PERMISSIVE MEASURES

There are three different fire support coordination measures which are considered to be permissive in nature:

Coordinated Fire Line

Fire Support Coordination Line

Free Fire Area

A. COORDINATED FIRE LINE

1. A coordinated fire line (CFL) is a line beyond which mortars, artillery, and naval gunfire ships may deliver surface-to-surface fires at any time within the zone or sector of the establishing command element, without having to coordinate those fires with maneuver units.

2. The purpose of the CFL is to expedite the attack of targets beyond the CFL, without regard to maneuver unit boundaries.

3. A CFL is normally established by a regimental commander or higher level commander. However, a CFL may be established by a battalion commander (ELO #1). Generally, the battalion commander will choose the location for a CFL within his unit's zone, or sector based on the recommendations of his FSC, and then he establishes the CFL with an effective date-time group (DTG). This battalion level CFL can then be implemented. If the battalion is part of a larger force, however, the battalion will forward to the regimental FSCC the location of their CFL, in order that it may be consolidated with the CFLs of adjacent battalions. The regimental FSC plots each battalions CFL on his situation map, and if desired, consolidates them into a regimental CFL. He will then recommend this location to the regimental commander as a regimental CFL. Before the regimental CFL is implemented, however, any changes to the original battalion CFLs must be cleared with the battalion in question, in order that the consolidated regimental CFL will not interfere with the scheme of maneuver or plan of defense of that battalion. A division or force level CFL could be established in the same fashion.

4. The actual location of the CFL on the ground depends on the tactical situation and the intentions of the maneuver units. For example, in the offense, CFLs may be located further away from friendly positions and several on-call CFLs would probably be planned. In the defense however, the CFL would be located closer to the forward edge of the battle area (FEBA) in order to open up a larger area for the attack of targets by surface-to-surface fires, without the requirement for further coordination.

5. The location of the CFL on the ground may coincide with an easily recognized terrain feature, but this is not a requirement. Generally, the location of a CFL will be described by a series of grid coordinates.

6. The CFL is graphically portrayed on maps, firing charts, and overlays as a dashed black line. It is labeled above the line with the letters "CFL", followed by the identity of the establishing command element in parentheses. Below the line, the effective DTG is indicated. Refer to the example below:

CFL (8th Mar)	CFL (8th Mar)
021200R Jun	021200R Jun

7. A linear fire support coordination measure, such as a CFL, is usually labeled at each end of the line which is its symbol.

8. Once established, the locations of CFLs are published by message and/or by overlay to higher, lower, and adjacent units, and to all appropriate surface-to-surface fire support agencies (mortars, artillery, and naval gunfire ships). Although CFLs apply only to surface delivered fire support assets, their location will assist the Direct Air Support Center (DASC) or Air Support Element (ASE) in integrating aviation assets with surface fires.

9. Remember that a CFL serves to expedite the attack of targets by surface-to-surface means when the targets are located beyond the CFL. A CFL requires coordination when targets are located short of the CFL.

10. In summary, remember that the CFL is a permissive measure, intended to expedite the attack of targets beyond the CFL that are within the zone of the command element that established the CFL. Fires delivered short of the CFL are not affected by its presence; that is, some coordination must take place. Generally speaking, requests for artillery, naval gunfire, or mortar support are monitored by the command's FSCC. Thus, these requests seldom require additional coordination. On the other hand, requests for fire support against targets that lie outside of a unit's zone must be coordinated with the FSCC of the unit in the affected zone.

B. FIRE SUPPORT COORDINATION LINE

1. A fire support coordination line (FSCL) is a line beyond which all fire support means may attack targets within the zone of the establishing command element, without having to coordinate those fires with maneuver units.

2. The purpose of the FSCL is to expedite the attack of targets beyond the FSCL, without regard to maneuver unit boundaries. The difference between a CFL and an FSCL is that while a CFL is a permissive measure for surface-to-surface fires, an FSCL is a permissive measure for all fire support means.

3. An FSCL is established by the CLF/MAGTF commander after consultation with the commanders of the Ground Combat Element (GCE) and the Aviation Combat Element (ACE). However, the FSC or Fire Support Officer (FSO) should make a recommendation to the CLF/MAGTF commander on the location of the FSCL. (ELO #1)

4. The actual location of the FSCL on the ground depends on the tactical situation, the intentions of the maneuver units, and the location of force objectives. It should be located beyond the area into which reconnaissance and security forces will be established. Generally, it will be located beyond force objectives when the force is in the offense, but closer to the forward line of troops (FLOT) when the force is in the defense; however, it is normally not located within the zone of a regiment or smaller unit.

5. Regardless of the situation, the FSCL should be located on terrain which is readily identifiable from the air so that it can be located easily by pilots of attack aircraft.

6. The FSCL is graphically portrayed on maps, firing charts, and overlays as a solid black line. It is labeled above the line with the letters "FSCL", followed by the identity of the establishing command element in parentheses. Below the line, the effective DTG is indicated. Refer to the example below:

FSCL (8th MEF(FWD))	FSCL (8th MEF(FWD))
021200R Jun	021200R Jun

7. A linear fire support coordination measure, such as an FSCL, is usually labeled at each end of the line which is its symbol.

8. Once established, the location of the FSCL is published by message and/or by overlay to higher (if applicable), lower, and adjacent units, and to all fire support agencies, including the DASC, and other agencies within the ACE.

9. In summary remember that an FSCL serves to expedite the attack of targets by all fire support means when the targets are located beyond the FSCL. An FSCL requires coordination with the establishing command element when targets short of the FSCL are to be attacked by aircraft. Attack of targets short of the FSCL by other fire support means will require coordination depending on other fire support coordination measures in effect (such as a CFL).

C. FREE FIRE AREA

1. A free fire area (FFA) is a specific area into which any fire support means (including aircraft) may deliver fires without further coordination with the establishing command element.

2. The purpose of the FFA is to expedite the attack of targets located within the FFA, without regard to maneuver unit boundaries. FFAs are also used as jettison areas for unexpended aviation ordnance.

3. An FFA may be established only by the military or civilian commander with jurisdiction over the area. If a Marine commander determines a need for an FFA, he must forward his request to the approving official through the CLF/MAGTF commander. (ELO #1)

4. Due to the fact that an FFA provides such a degree of freedom to fire support agencies, it may be necessary to coordinate the establishment and location of an FFA with military or civilian officials of the nation in which the Landing Force (LF) is operating.

5. The actual location of an FFA on the ground will depend on the situation which requires the establishment of an FFA. If the primary purpose of an established FFA is to facilitate the attack of targets, then its location will be dependent on the tactical situation. If the primary purpose of an established FFA is as an ordnance jettison area, then its location will be dependent on the existence of a suitable area sufficiently removed from maneuver unit locations to ensure the safety of friendly forces.

6. Regardless of its actual location, the FFA should be located on terrain which is readily identifiable from the air, although this is not an absolute requirement. Its boundaries can be delineated by the outline of a particular terrain feature, such as a prominent valley, or by the use of grid coordinates.

7. The FFA is graphically portrayed on maps, firing charts, and overlays as a solid black line enclosing the area of the FFA. It is labeled within the enclosing line with the letters "FFA", the identity of the establishing command element, and the effective DTG.

8. Once established, the location of the FFA is published by message and/or by overlay to higher (if applicable), lower, and adjacent units, and to all fire support agencies, including the DASC, and other agencies within the ACE.

9. Remember that an FFA serves to expedite the attack of targets located within the FFA, without regard to maneuver unit boundaries, and also serves as a jettison area for unexpended aviation ordnance. The attack of targets outside the FFA is governed by whatever other fire support coordination measures are in effect.

10. In summary, remember that the FFA is a permissive fire support coordination measure, intended to expedite the attack of targets within the FFA by all fire support means, including aircraft. Its permissive nature allows the attack of targets within the FFA without further coordination with maneuver units, regardless of the location of other fire support coordination measures, or the location of maneuver unit boundaries.

CHAPTER THREE - POST TEST

1. A CFL is applicable to the following fire support means: _____, _____, and _____.

2. The purpose of a CFL is to _____ _____.

3. The location of a CFL is based on the recommendation of the _____.

4. A CFL is normally established by the commander of a _____ or higher echelon unit. CFLs may, however, be established by the commander of a _____.

5. If battalion CFLs are consolidated and established as a regimental CFL, the location of the regimental CFL must be coordinated with the battalions first. True or False?

6. In the offense, CFLs will be located relatively _____ from friendly positions. In the defense, CFLs will be located relatively _____ to the FEBA.

7. CFLs may be located on the ground in coincidence with easily recognized terrain features, but this is not a requirement. True or False?

8. CFLs are graphically portrayed by a _____. The CFL is labeled above the line with _____ and below the line with _____.

9. Once established, the locations of CFLs are published by _____ and/or _____. The locations are disseminated to _____ _____, and _____ units, as well as all surface-to-surface fire support agencies.

10. Refer to figure 3-1 on the following page, and label the CFLs shown. These CFLs were established by the respective battalion commanders for the zones indicated. Both CFLs are effective as of 021300R Jun.

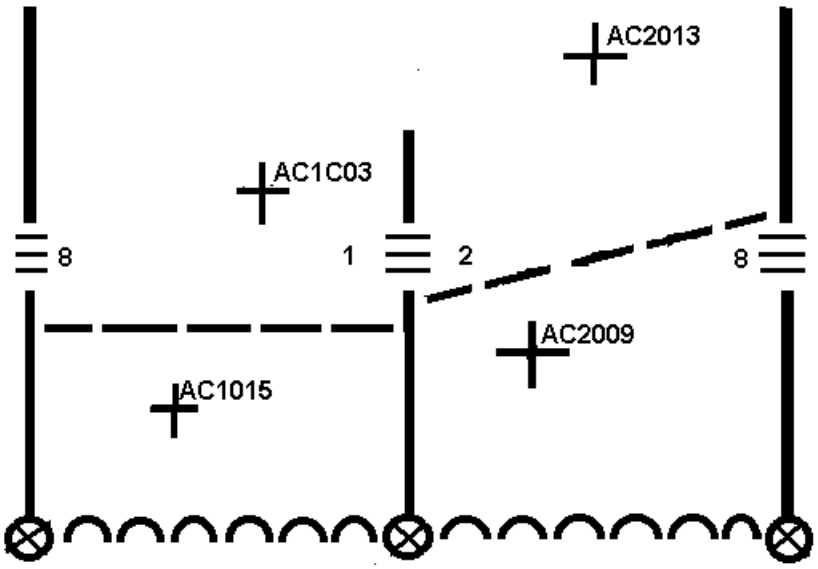


FIGURE 3-1

11. Refer to figure 3-1 above. A forward observer (FO) with 1stBn 8thMar submits a call-for-fire to attack target number AC1003. With which units must the 1/8 FSCC coordinate this mission?

12. Refer to figure 3-1 above. The same FO with 1stBn 8thMar submits a call for fire to attack target number AC2009. With which units must the FSCC coordinate this mission?

13. Refer to figure 3-1 above. An FO with 2ndBn 8thMar submits a call-for-fire to attack target number AC2013. With which units must the 2/8 FSCC coordinate this mission?

14. An FSCL is applicable to all fire support means, including aircraft. True or False?

15. The purpose of an FSCL is to
    _____
    _____.

16. The location of the FSCL should be based on the recommendation of the _____.

17. An FSCL is established by the _____.

18. FSCLs should be located _____ the area into which reconnaissance and security forces will be established.

19. In the offense, FSCLs will be located _____. In the defense, FSCLs will be located somewhat closer to the _____.

20. The FSCL should be located on terrain which is readily identifiable from the air. True or False?

21. FSCLs are graphically portrayed by a _____. The FSCL is labeled above the line with _____, and below the line with _____.

22. Once established, the location of the FSCL is published by _____ and/or _____. The location is disseminated to _____, and _____, as well as to _____.

23. Refer to figure 3-2 below, and label the FSCL shown. This FSCL was established by the Commanding General, 4th MEF (FWD), and is effective as of 021030R Jun.

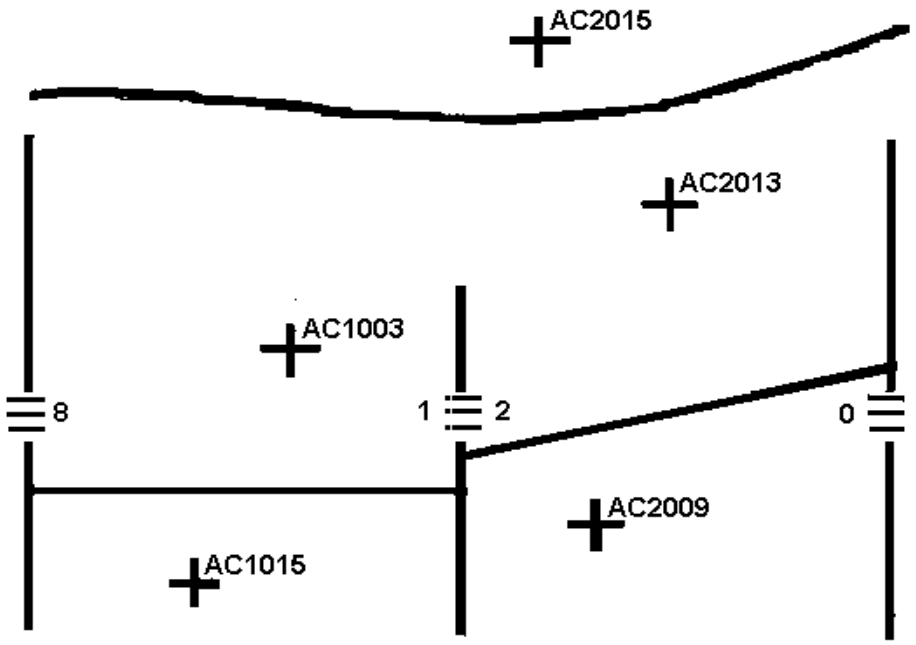


FIGURE 3-2

24. Refer to figure 3-2 above. A Forward Air Controller (FAC) with 2ndBn 8thMar submits a Tactical Air Request (TAR) to attack target number AC2015 with aircraft. With which units must the 2/8 FSCC coordinate this mission?

25. Refer to figure 3-2 above. A FAC with 1stBn 8thMar submits a TAR to attack target number AC2013 with attack aircraft. With which units must the 1/8 FSCC coordinate this mission?

26. Refer to figure 3-2 above. An FO with 2ndBn 8thMar submits a call-for-fire to attack target number AC2015 with artillery. With which units must the 2/8 FSCC coordinate this mission?

27. An FFA is applicable to all fire support means, including aircraft. True or False?

28. The purpose of an FFA is to _____. FFAs are also used as _____.

29. The location of the FFA should be based on the recommendation of the _____.

30. An FFA may be established by any _____ commander, but it is normally established by the _____.

31. The establishment and location of an FFA should be coordinated with military or civilian officials of the host nation. True or False?

32. Which of the following are considerations for choosing the location of an FFA?

    a. Dependent on the tactical situation which requires the establishment of an FFA.

    b. Dependent on the availability of a suitable area sufficiently removed from maneuver units to ensure troop safety.

    c. Located on terrain readily identifiable from the air.

    d. Located completely within the boundaries of a particular maneuver unit.

33. FFAs are graphically portrayed by a _____ _____. They are labeled within the enclosing line with _____.

34. Once established, the location of the FFA is published by _____ and/or _____. The location is disseminated to _____ _____, _____ and _____, as well as to _____.

35. Refer to figure 3-3 on the following page, and label the FFA shown. This FFA was established by the Commanding General, 8th MEF FWD, and is effective from 021445R to 030830R Jun.

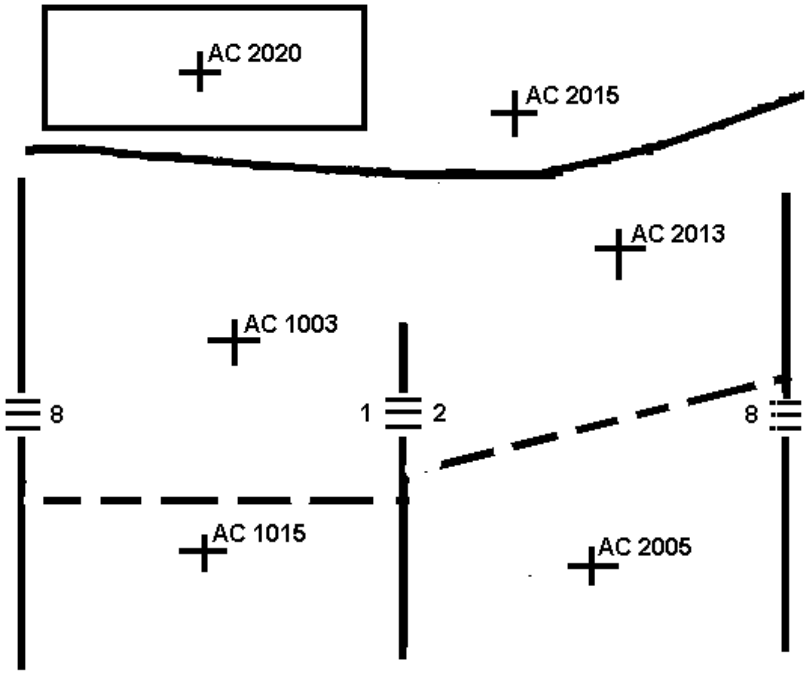


FIGURE 3-3

36. Refer to figure 3-3 above. A FAC with 2ndBn 8thMar submits a TAR to attack target number AC2020 with attack aircraft. With which units must the 2/8 FSCC coordinate the mission?

37. Refer to figure 3-3 above. An FO with 1stBn 8thMar submits a call-for-fire to attack target AC2020 with artillery. With which units must the 1/8 FSCC coordinate this mission?

CHAPTER FOUR

RESTRICTIVE MEASURES

There are four different fire support coordination measures which are considered to be restrictive in nature:

Restrictive Fire Line

Restrictive Fire Area

No Fire Area

Airspace Coordination Area

A. RESTRICTIVE FIRE LINE

1. A restrictive fire line (RFL) is a line established between two converging friendly forces, across which fires may not be delivered without coordination with the affected force. In addition, any fires whose effects may extend across the RFL must be coordinated with the affected force, regardless of the command element which established the RFL.

2. The purpose of the RFL is to provide safety to friendly forces by regulating the fires delivered between converging forces. An RFL is applicable to all fires delivered by any fire support means, including direct fires.

3. An RFL is established by the common commander of the converging forces, based on recommendations received from his FSC and from the FSCs of the converging forces. (ELO #1)

4. The actual location of the RFL on the ground depends on the tactical situation, the intentions of the friendly forces, and the scheme of maneuver. If one of the converging forces is stationary, the RFL should be established as close as possible to the stationary force in order to allow maximum freedom of action by the maneuvering force. If both converging forces are maneuvering, the RFL should be located in such a fashion as to restrict each force to the minimum extent possible.

5. Although there is no specific requirement to this effect, it may be wise to choose an RFL which can be readily identifiable on the ground, as well as from the air. This will make it easier for terminal controllers of supporting arms to identify the location of the RFL in relation to their supported maneuver forces.

6. The RFL is graphically portrayed on maps, firing charts, and overlays as a solid black line. It is labeled above the line with the letters "RFL", followed by the identity of the establishing command element in parentheses. Below the line, the effective DTG is indicated. This information is also depicted in black. Refer to the example below:

RFL (8th MEF FWD) RFL (8th MEF FWD)

021200R Jun 021200R Jun

7. A linear fire support coordination measure, such as an RFL, is usually labeled at each end of the line which is its symbol.

8. Once established, the location of the RFL is published by message and/or overlay to higher, lower, and adjacent units, and to all fire support agencies, including the DASC.

9. Remember that the RFL serves to provide protection for friendly forces from fires delivered by any fire support agency between two converging forces. Fires delivered across the RFL must be coordinated with the affected force.

10. In summary, remember that the RFL is a restrictive fire support coordination measure, intended to provide protection to friendly troops by regulating fires delivered between converging forces. Fires delivered by any fire support means across the RFL must be coordinated with the affected force, to include those instances where the effects of these fires will cross the RFL.

B. RESTRICTIVE FIRE AREA

1. A restrictive fire area (RFA) is a specific area in which specific restraints have been imposed regarding the delivery of fire support. The RFA provides the maneuver unit with a means of regulating supporting fires that is not provided by any other type of fire support coordination measure.

2. The specific restraints which apply to a particular RFA must be clearly stated. Perhaps the best way to understand the nature of these restraints is by providing several examples:

"No fires by weapons larger than 81mm mortars."
"No cluster munitions, including improved conventional munitions (ICM)."
"No unobserved fires."

3. The RFA applies to all fire support means, and the effects of fires delivered, with the exception of those fires which are not specifically restricted by the commander who establishes the RFA. If any fires which exceed the restrictions imposed are to be delivered within the RFA, those fires must first be coordinated with the commander who established the RFA.

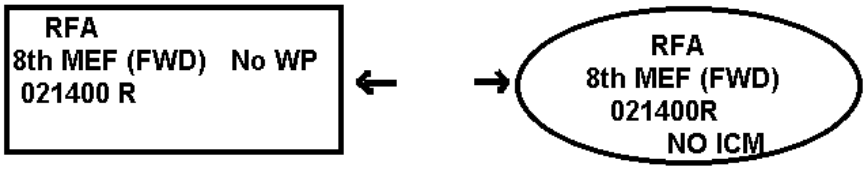
4. An RFA may be established by any maneuver commander, based on the scheme of maneuver and any other considerations, and based on the recommendation of the FSC. (ELO #1)

5. The actual location of the RFA on the ground depends on the tactical situation, the intentions of the friendly forces, the scheme of maneuver, and the considerations involved in restricting fires into the area in the first place. An RFA is often used to protect valuable installations or areas from too great a degree of damage. For example:

   An RFA may be established around a bridge, limiting fires to no larger than 60mm mortars, in order to preclude damage to the bridge, and thus keep it available for subsequent use.

6. Although there is no specific requirement to this effect, an RFA should be readily identifiable on the ground, as well as from the air. An RFA can be delineated as the boundary of a specific terrain feature, or by grid coordinates, or by a radius from a point.

7. The RFA is graphically portrayed on maps, firing charts, and overlays as a solid black line enclosing the area of the RFA. It is labeled within the enclosing line with the letters "RFA", the identity of the establishing command element, and the effective DTG. Also included within the line are the specific restrictions which apply. If space does not permit the specific restrictions to be included, reference must be made to a document which lists those restrictions. Refer to the examples below:



8. Once established, the location of the RFA is published by message and/or overlay to higher, lower, and adjacent units, and to all fire support agencies, including the DASC.

9. Remember that the RFA serves to provide specific restrictions on the type of fire support which may be delivered within the RFA. Fires which do not exceed the specific restrictions may be delivered into the RFA without further coordination. Fires which exceed the specific restrictions established must first be coordinated with the commander who established the RFA.

10. In summary, remember that the RFA is a restrictive fire support coordination measure intended to provide specific restraints on the types of fires delivered within the RFA. It provides the maneuver commander with a unique method of regulating the fires delivered within a particular area, a method not available through other fire support coordination measures.

C. NO FIRE AREA

1. A no fire area (NFA) is a specific area into which no fires may be delivered. In addition, no effects from fires may penetrate the NFA.

2. The purpose of the NFA is to provide a restrictive fire support coordination measure to protect civilian population areas and/or vital installations from the effects of friendly fires.

3. An NFA applies to all fire support means, and the effects of fires delivered. There are two exceptions to the complete prohibition of fires or their effects:

   a. When the commander who establishes the NFA approves fires within the NFA on a mission-by-mission basis.

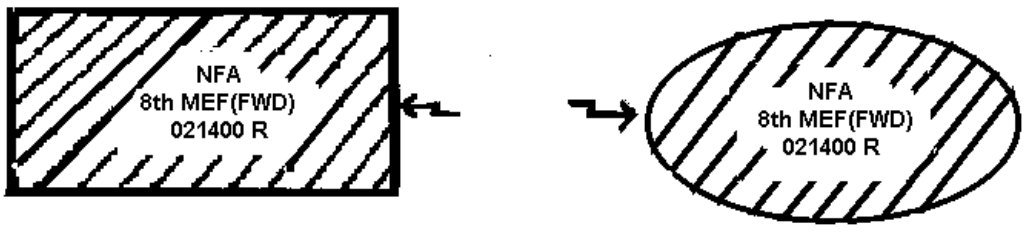
   b. When an enemy force within the NFA engages friendly forces, and is a major threat to friendly forces, and there is insufficient time to obtain a specific exception from the establishing commander, approval falls to the senior man on the scene.

4. An NFA is normally established by the CLF/MAGTF commander, based on the recommendations of the FSO or FSC. Because an NFA establishes a substantial restriction on the freedom of maneuver forces, it is usually imposed only after consultation with civilian and/or military leaders of the nation in which the LF is operating. (ELO #1)

5. The actual location of an NFA on the ground will depend on the situation which requires the establishment of the NFA. Key considerations are the locations of places or structures which need protection: population centers, buildings of historical, aesthetic, or religious value, and key elements of the nation's infrastructure.

6. Regardless of its actual location, the NFA should be located on terrain which is readily identifiable on the ground, as well as from the air, if this is possible. Its boundaries can be delineated by the outline of terrain feature, by the use of grid coordinates, or as a radius from a point.

7. An NFA is graphically portrayed on maps, firing charts, and overlays as a solid black line enclosing the area of the NFA, with diagonal black lines drawn through the area. It is labeled within the enclosing line with the letters "NFA", or written as "No Fire Area", the identity of the establishing command element, and the effective DTG. Refer to the examples below:



8. Once established, the location of the NFA is published by message and/or overlay to higher (if applicable), lower, and adjacent units, and to all fire support agencies, including the DASC, and ASE, and other agencies within the ACE.

9. Remember that an NFA serves to provide protection from friendly fires to civilian population areas and/or vital installations. No fire support means may deliver fires within the NFA unless one of the previously mentioned exceptions applies.

10. In summary, remember that the NFA is a restrictive fire support coordination measure intended to provide protection from friendly fires to civilian population areas and/or vital installations. The NFA applies to all fires. Fires may be delivered into the NFA only if one of the following exceptions can be met:

    a. When the commander who establishes the NFA approves fires within the NFA on a mission-by-mission basis.

    b. When an enemy force within the NFA engages friendly forces, is a major threat to friendly forces, and there is not sufficient time to obtain a specific exception from the establishing commander.

D. AIRSPACE COORDINATION AREA

1. An airspace coordination area (ACA) is a three dimensional block of airspace in which aircraft are reasonably safe from friendly surface delivered fires. Another measure which accomplishes the same purpose as an ACA is the implementation of trajectory limitations, which will be discussed below.

2. The purpose of an ACA is to act as a safety measure for friendly aircraft while allowing other supporting arms to continue to fire in support of the maneuver force or to suppress enemy SAMS or ADA.

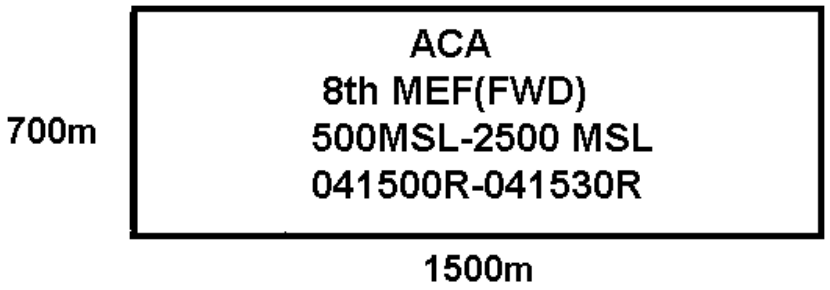
3. An ACA is actually both permissive and restrictive in its effect on fire support means. It is a permissive measure in that it allows attack aircraft to attack targets in relative safety from friendly fires. It can also be used to allow safe passage of other aircraft. It is a restrictive measure in that it prohibits friendly surface delivered fires from passing through certain portions of the airspace.

4. An ACA is usually referred to as either "formal" or "informal". A "formal" ACA is defined the same as mentioned in paragraph 1 on the preceding page, that is, a three dimensional block of airspace. An "informal" ACA utilizes procedures to facilitate immediate CAS missions or routing of helicopters when the implementation time required for formal ACA's is not available. Surface fires and aircraft can be separated by time, altitude or terrain feature.

5. An ACA may be established by a maneuver commander at any echelon however, normally they are not established by commanders below the battalion level. The establishment of an ACA should be based on the recommendation of the FSC. (ELO #1)

6. The actual location of the ACA above the ground, is based on the tactical situation, the nature of the target to be attacked by air, the performance characteristics of the attacking aircraft, the ingress and egress routes the aircraft will follow, the type of aviation ordnance being delivered on the target, and the nature of the enemy air defenses.

7. The ACA is graphically portrayed on maps, firing charts, and overlays as a solid black line enclosing the area (length and width) of the ACA. It is labeled within the enclosing line with the letters "ACA", the identity of the establishing command element the effective DTG, and the minimum and maximum altitudes of the ACA, expressed in altitude above sea level. All information is depicted in black. Optionally, the length and width of the ACA can be noted outside the enclosing line, if those dimensions are not readily apparent from comparing the size of the area to the scale of the map. Refer to the example below:



8. Once established, the location of the ACA is published by message and/or overlay to higher, lower, and adjacent units, and to all fire support agencies, including the DASC.

9. A standardized method of disseminating the location of an ACA usually includes the following: the name of the ACA (if applicable), the effective DTG, the grid coordinates of each end of the "baseline" that defines the ACA, the minimum and maximum altitudes, and the width of the ACA. Refer to the example below:

   "ACA Clown: 020830R - 02090PR, grid 123456 to grid 234567, altitudes 500 feet to 3,000 feet MSL, width 1,000 meters."

10. Remember, the purpose of an ACA is to provide reasonable protection to friendly aircraft from surface delivered fires by prohibiting the trajectories of those fires from passing through the three dimensional space of the ACA.

11. It should be apparent from the preceding information that implementing a formal ACA requires considerable effort and time to ensure that its location is properly coordinated and disseminated to all concerned units. During a conflict, there will be many instances where time is limited, yet the requirement exists to provide safety to friendly aircraft from friendly surface delivered fires. In these situations, an informal ACA might be more expeditious, or the technique of positive control may be employed.

12. An informal ACA can accomplish essentially the same purpose as a formal ACA, but within more stringent time limits. Other measures, such as helicopter approach and retirement lanes, may also serve as informal ACAs.

13. When employing an informal ACA, common practice is to use a terrain feature easily identifiable from the air as a dividing line between aircraft flight paths and surface delivered fires. These restrictions could be expressed as simply as "Keep the aircraft north of Highway 5, and artillery, naval gunfire, and mortar fire south of Highway 5".

14. Helicopter lanes may be used as informal ACA in two ways. One way is to "activate" the lane as an ACA only when it is in use by helicopters. An example would be to restrict helicopters to 200 feet above ground level, allowing relative freedom to surface delivered fire support means.

15. Regardless of the type of informal ACA employed, these informal measures are not normally portrayed on maps, firing charts, overlays. If required, the local standing operating procedures can prescribe techniques for graphic portrayal of informal ACAs.

CHAPTER FOUR - POST TEST

1. An RFL is applicable to all fires delivered by any fire support means. True or False?

2. The purpose of an RFL is to _____ _____.

3. The location of an RFL should be based on the recommendation of the _____.

4. An RFL is established by _____ _____.

5. The actual location of the RFL on the ground depends on _____ _____ _____.

6. If one of the converging forces is stationary, the RFL should be located _____ to the stationary force. If both forces are moving the RFL should be located _____ _____.

7. RFLs must be located on terrain which is readily identifiable on the ground and from the air. True or False?

8. RFLs are graphically portrayed by a _____. The RFL is labeled above the line with _____ _____, and below the line with _____.

9. Once established, the location of the RFL is published by _____ and/or _____. The location is disseminated to _____ _____, and _____, as well as to _____.

10. Refer to figure 4-1 on the following page, and label the RFL shown. This RFL was established by the Commanding Officer, 8thMar, and is effective as of 041050R Jun.

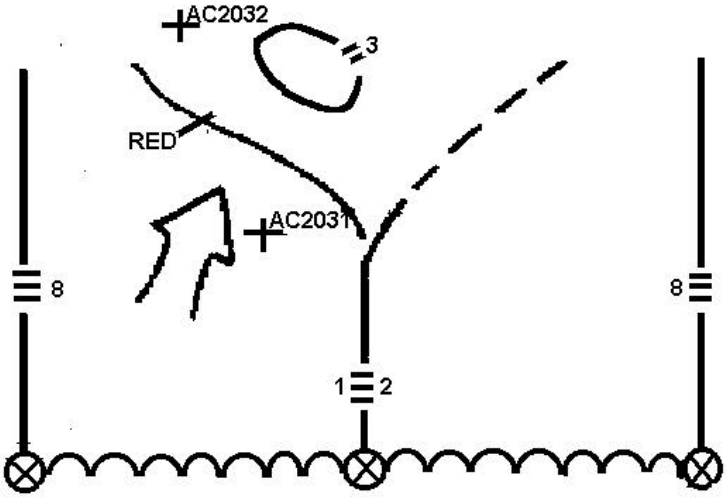


FIGURE 4-2

11. Refer to figure 4-1 above. An FO with 1stBn 8thMar submits a call-for-fire to attack target number AC2031 with artillery. With which units must the 1/8 FSCC coordinate this mission?

12. Refer to figure 4-1 above. The same FO with 1stBn 8thMar submits a call-for-fire attack target number AC2032 with artillery. With which units must the 1/8 FSCC coordinate this mission?

13. Refer to figure 4-1 above. A FAC with 1stBn 8thMar submits a TAR to attack target number AC2032 with attack aircraft. With which units must the 1/8 FSCC coordinate this mission?

14. A specific area in which specific restraints have been imposed regarding the delivery of fire support is called a _____.

15. An RFA applies to _____, including the effects of those fires, with the exception of those fires which _____ _____.

16. Any fires delivered within an RFA which exceed the specific restrictions imposed must _____.

17. An RFA may be established by _____ based on the recommendation of the _____.

18. The actual location of the RFA on the ground depends on the tactical situation, the intentions of the friendly forces, the scheme of maneuver, and _____.

19. While there is no requirement in doctrinal publications to this effect, an RFA should be readily identifiable on the ground, as well as from the air. True or False?

20. An RFA can be delineated as _____, by _____, or by _____.

21. RFAs are graphically portrayed by a _____. The RFA is labeled within the enclosing line with _____, _____, and _____.

22. The specific restrictions which apply to the RFA must be listed within the enclosing line, or reference must be made to a document which lists those restrictions. True or False?

23. Refer to figure 4-2 below and label the RFA shown. This RFA was established by the Commanding General, 8th MEF(FWD), and is effective from 041500R to 051500R Jun. Specific restrictions imposed are that white phosphorous munitions may not be employed within the RFA.

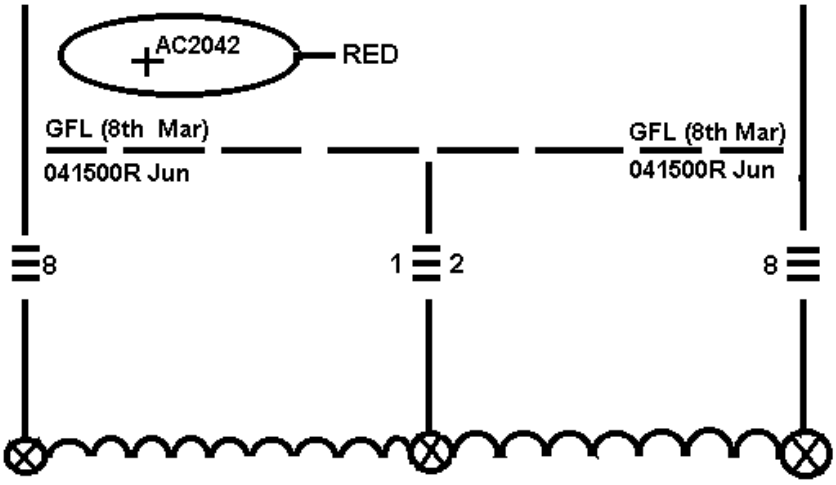


FIGURE 4-2

24. Refer to figure 4-2 above. An FO with 1stBn 8thMar sends a call-for-fire to attack target number AC2042 with artillery. The 1/8 FSCC monitors the message-to-observer and learns that only high explosive projectiles will be fired. With which units must the 1/8 FSCC coordinate this mission?

25. Refer to figure 4-2 above. An 81mm mortar FO with 1stBn 8thMar submits a call-for-fire to the mortar platoon to attack target number AC2042 with mortars. In his call-for-fire, he requests white phosphorous ammunition to be fired in effect. With which units must the 1/8 FSCC coordinate this mission?

26. A specific area into which no fires, or the effects of those fires, may penetrate is called a _____.

27. The purpose of an NFA is to_____
_____.

28. An NFA applies to all fire support means. True or False?

29. There are two exceptions to the prohibition against fires within an NFA. List them in the space provided. #1: _____ _____ #2 _____ _____.

30. An NFA is established by the _____, based on the recommendations of the _____.

31. The establishment and location of an NFA is best coordinated with civilian and/or military leaders of the host nation. True or False?

32. Which of the following is _____ a consideration when selecting the location of an NFA?

    a. Location of structures or areas to be protected.

    b. Location by easily identifiable terrain.

    c. Location in relation to the maximum range of available artillery.

33. NFAs are graphically portrayed by a _____ _____. They are labeled within the enclosing line with _____.

34. Once established, the location of the NFA is published by _____ and/or _____. The location is disseminated to _____, and _____, as well as to _____.

35. Refer to figure 4-3 on the following page, and label the NFA shown. This NFA was established by the Commanding General, 8th MEF(FWD), and is effective as of 021830R Jun.

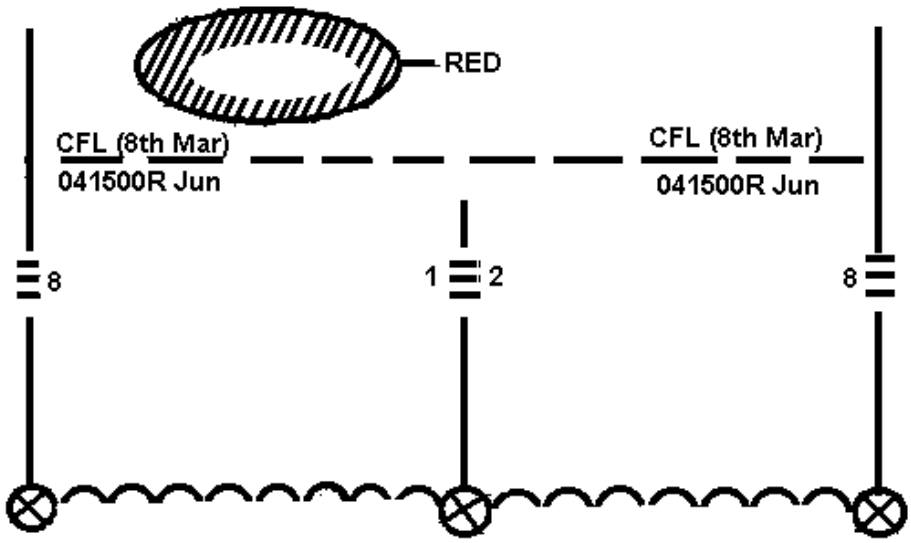


FIGURE 4-3

36. Refer to figure 4-3 above. An FO with 1stBn 8thMar submits a call-for-fire to attack a target of opportunity discovered within the NFA. With which units must the 1/8 FSCC coordinate this mission?

37. Refer to figure 4-3 above. A patrol from 1stBn 8thMar is pinned down by a heavy volume of enemy fire from within the NFA. The patrol leader sends a call-for-fire to suppress the enemy so that he can withdraw his force. With which units must the 1/8 FSCC coordinate this mission?

38. An ACA is defined as a _____ _____.

39. The purpose of an ACA is to _____ _____.

40. An ACA is both a _____ measure and a _____ measure.

41. An ACA is either "formal" or "informal". A "_____" ACA is defined as a three dimensional block of airspace. An "_____" ACA is defined as procedures used to facilitate immediate CAS missions or routing of helicopters when the implementation time required for formal ACA's is not available. Surface fires and aircraft can be separated by time, altitude or terrain feature.

42. An ACA may be established by _____ _____.

43. The establishment of an ACA should be based on the recommendation of the _____.

44. The actual location of the ACA above the ground is based on the tactical situation _____, _____, _____, and _____.

45. ACAs are graphically portrayed by _____. The ACA is labeled within the enclosing line with _____.

46. Once established, the location of the ACA is published by _____ and/or _____. The location is disseminated to _____ _____, and _____, as well as to _____.

47. Refer to figure 4-4 below, and label the ACA shown. This ACA was established by the Commanding Officer, 1stBn 8thMar, is effective from 020830R to 020900R, is 500 meters wide, and has minimum and maximum altitudes of 600 feet and 2,600 feet MSL, respectively.

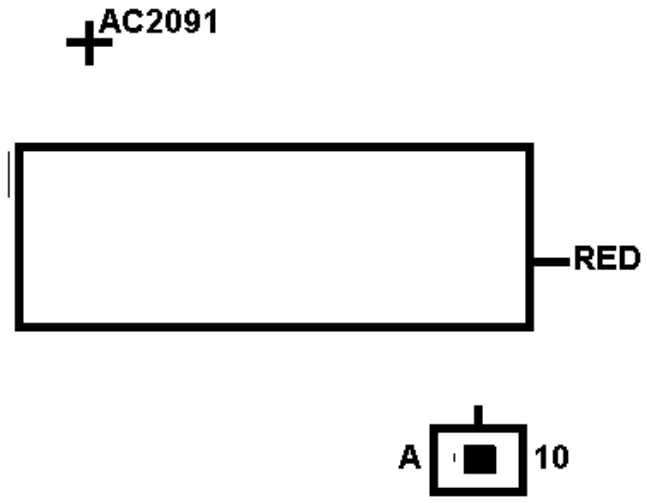


FIGURE 4-4

48. Refer to figure 4-4 above. Battery A, 1st Battalion, 10th Marines is about to fire a mission against target number AC2091. The Fire Direction Officer determines that the ordinate of the trajectory as it passes the ACA will be 1,800 feet MSL. May this mission be fired if the ACA is in effect at the time?

49. Refer to question 48 above. If the Fire Direction Officer recomputes the ordinate of the trajectory for high-angle fire, and determines that the ordinate will be 3,200 feet MSL, may this mission be fired if the ACA is in effect?

CHAPTER ONE - POST TEST

1. Fire support coordination measures which primarily facilitate the rapid engagement of targets are classified as **PERMISSIVE** measures.

2. Those fire support coordination measures that primarily provide safeguards to friendly forces are classified as **RESTRICTIVE** measures.

3. The **MANEUVER COMMANDER OR CLF/MAGTF COMMANDER** establishes all fire support coordination measures.

4. The **FSC** recommends the establishment of all fire support coordination measures. These measures are distinctly different than those used for tactical control of maneuver forces.

5. When graphically portrayed on maps, firing charts, and overlay, fire support coordination measures will be displayed with the following information: **COLOR CODE, ABBREVIATION, ESTABLISHING COMMAND ELEMENT, AND EFFECTIVE DATE-TIME GROUP (DTG).**

CHAPTER TWO - POST TEST

1. Boundaries are used by the **MANEUVER** commander to designate a geographical area for which a particular subordinate unit has responsibility.

2. Within his own designated boundaries, the unit commander has complete freedom of **FIRE AND MANEUVER**.

3. The unit responsible for the area in which target number AB1003 is located is **1ST BATTALION, 2D MARINES (1/2)**.

4. There are no other fire support coordination measures established except the boundaries. Accordingly, if 2/2 wants to attack target number AB1003, that attack **MUST BE COORDINATED WITH 1/2**, as the target lies within the area assigned to 1/2.

Questions 5-6

You should have shaded in the areas as shown on the following page in Figure 2-2. If not, review the discussion of boundaries and ZFs. ZFs for artillery units or naval-gunfire ships can best be described as corresponding to the zone of action of the supported unit.

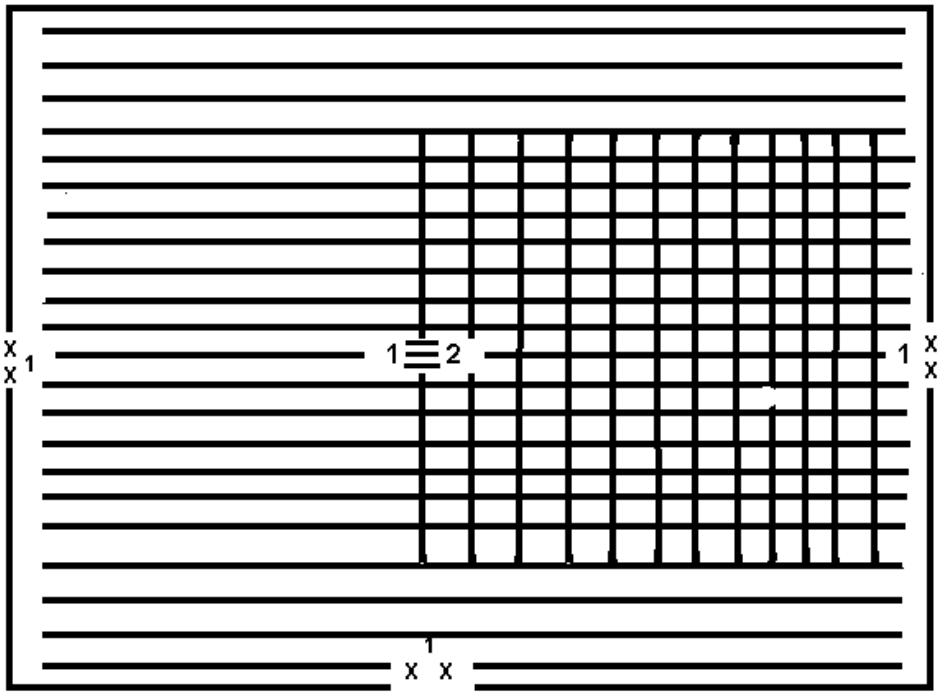


FIGURE 2-2

CHAPTER THREE - POST TEST

1. A CFL is applicable to the following fire support means: **MORTARS, ARTILLERY, and NAVAL SURFACE FIRE SUPPORT SHIPS**.

2. The purpose of a CFL is **to EXPEDITE THE ATTACK OF TARGETS BEYOND THE CFL, WITHOUT REGARD TO MANEUVER UNIT BOUNDARIES**.

3. The location of a CFL is based on the recommendation of the **FSC**.

4. A CFL is normally established by the commander of a **regiment** or higher echelon unit. CFLs may, however, be established by the commander of a **battalion**.

5. **TRUE**. If battalions CFL's are consolidated and established as a regimental CFL, the location of the regimental CFL must be coordinated with the battalions first.

6. In the offense, CFLs will be located relatively **FURTHER OUT** from friendly positions. In the defense, CFLs will be located relatively **CLOSE** to the FEBA.

7. **TRUE**. CFLs may be located on the ground in coincidence with easily recognized terrain features, but this is not a requirement.

8. CFLs are graphically portrayed by a **DASHED BLACK LINE**. The CFL is labeled above the line with **THE LETTERS "CFL", FOLLOWED BY THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT IN PARENTHESES**, and below the line with **THE EFFECTIVE DTG**.

9. Once established, the locations of CFLs are published by **MESSAGE AND/OR OVERLAY**. The locations are disseminated to **HIGHER, LOWER, AND ADJACENT** units, as well as all surface-to-surface fire support agencies.

10. Refer to figure 3-1 on the following page. You should have labeled your CFLs as shown.

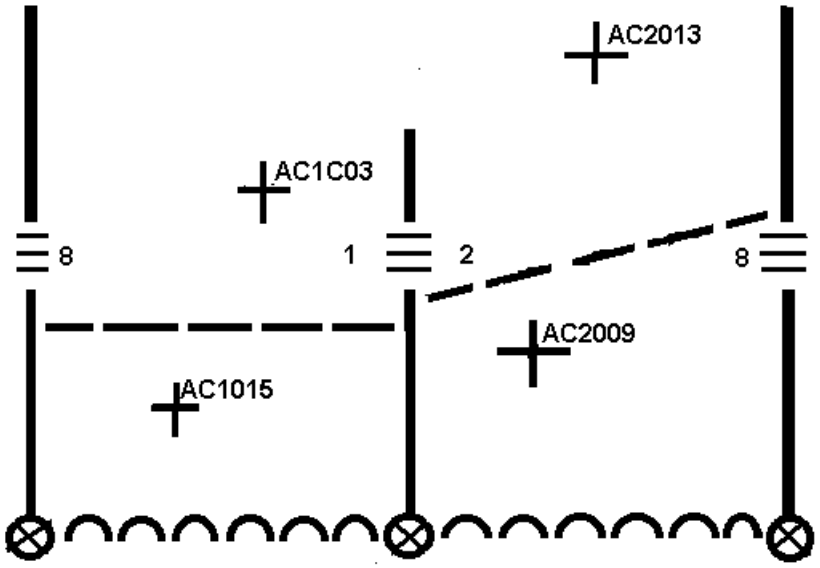


FIGURE 3-1

11. Target number AC1003 lies beyond the CFL established by the commander of 1/8, but is still within the zone of 1/8. Thus, there is no requirement for the 1/8 FSCC to coordinate with adjacent or higher units. Internal battalion coordination may be required, but this is accomplished within the FSCC, if necessary.

12. Target number AC2009 lies within the adjacent battalion's zone, and short of their CFL. Thus, the attack of that target by 1/8 must be coordinated through the 2/8 FSCC. This coordination may be accomplished laterally, or by referring the issue to the regimental FSCC for them to resolve with 2/8.

13. Target number AC2013 lies beyond the CFL established by 2/8, but note that it also lies beyond the forward extent of the battalion's boundaries. Therefore, it is considered to be in the regimental zone. Since there is no regimental CFL established, the attack of this target must be coordinated with the regimental FSCC.

14. **TRUE**. An FSCL is applicable to all fire support means, including aircraft.

15. The purpose of an FSCL is to **EXPEDITE THE ATTACK OF TARGETS BEYOND THE FSCL, WITHOUT REGARD TO MANEUVER UNIT BOUNDARIES**.

16. The location of the FSCL should be based on the recommendation of the **FSC OR FSO**.

17. An FSCL is established by the **CLF OR MAGTF COMMANDER**.

18. FSCLs should be located **BEYOND** the area into which reconnaissance and security forces will be established.

19. In the offense, FSCLs will be located **BEYOND THE FORCE OBJECTIVES**. In the defense, FSCLs will be located somewhat closer to the **FLOT**.

20. **TRUE**. The FSCL should be located on terrain which is readily identifiable from the air.

21. FSCLs are graphically portrayed by a **SOLID BLACK LINE**. The FSCL is labeled above the line with **THE LETTERS "FSCL", FOLLOWED BY THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT IN PARENTHESES**, and below the line with **THE EFFECTIVE DTG**.

22. Once established, the location of the FSCL is published by **MESSAGE** and/or **OVERLAY**. The location is disseminated to **HIGHER (IF APPLICABLE), LOWER, AND ADJACENT UNITS**, as well as to **ALL FIRE SUPPORT AGENCIES, THE DASC AND ASE**.

23. Refer to figure 3-2 below. You should have labeled your FSCL as shown.

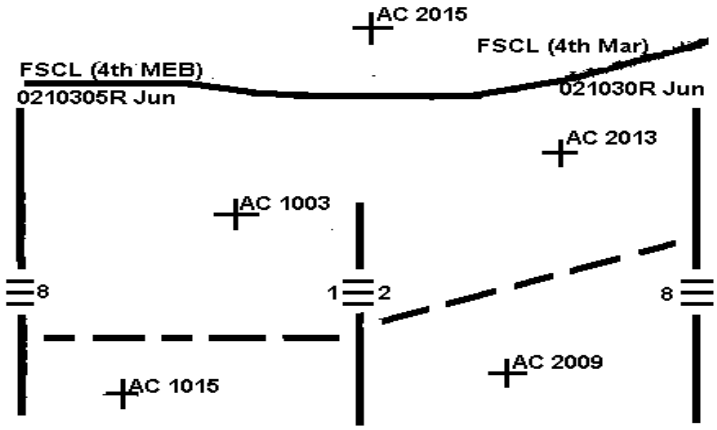


FIGURE 3-2

24. Target number AC2015 lies beyond the FSCL established by the MEF(FWD) commander. Thus, it may be attacked with any fire support means without further coordination.

25. Target number AC2013 lies short of the FSCL within the regimental zone. Since the target is to be attacked by attack aircraft, that attack must be coordinated with the regimental FSCC. Note that coordination may also be required with 2/8, if the aircraft fly through the airspace above the zone of 2/8.

26. Target number AC2015 lies beyond the FSCL. Accordingly, it may be attacked by any fire support means without further coordination.

27. **TRUE**. An FFA is applicable to all fire support means, including aircraft.

28. The purpose of an FFA is to **EXPEDITE THE ATTACK OF TARGETS LOCATED WITHIN THE FFA, WITHOUT REGARD TO MANEUVER UNIT BOUNDARIES**. FFAs are also used as **JETTISON AREAS FOR UNEXPENDED AVIATION ORDNANCE**.

29. The location of the FFA should be based on the recommendation of the **FSO OR FSC**.

30. An FFA may be established by any **MANEUVER** commander, but it is normally established by the **CFL/MAGTF COMMANDER**.

31. **TRUE**. The establishment and location of an FFA should be coordinated with military or civilian officials of the host nation.

32. Which of the following are considerations for choosing the location of an FFA?

    ANSWERS A, B, AND C ARE CORRECTLY IDENTIFIED AS CONSIDERATIONS FOR CHOOSING THE LOCATION OF AN FFA ON THE GROUND. ANSWER D IS NOT CORRECT, AS THERE IS NO REQUIREMENT THAT AN FFA BE CONFINED TO WITHIN THE BOUNDARIES OF A PARTICULAR MANEUVER UNIT.

33. FFAs are graphically portrayed by a **SOLID BLACK LINE ENCLOSING THE AREA OF THE FFA**. They are labeled within the enclosing line with **THE LETTERS "FFA", THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT, AND THE EFFECTIVE DTG**.

34. Once established, the location of the FFA is published by **MESSAGE** and/or **OVERLAY**. The location is disseminated to H**IGHER (IF APPLICABLE), LOWER, AND ADJACENT UNITS**, as well as to **ALL FIRE SUPPORT AGENCIES, INCLUDING THE DASC AND THE ASE, AND OTHER AGENCIES WITHIN THE ACE**.

35. Refer to figure 3-3 on the following page. You should have labeled your FFA as shown.

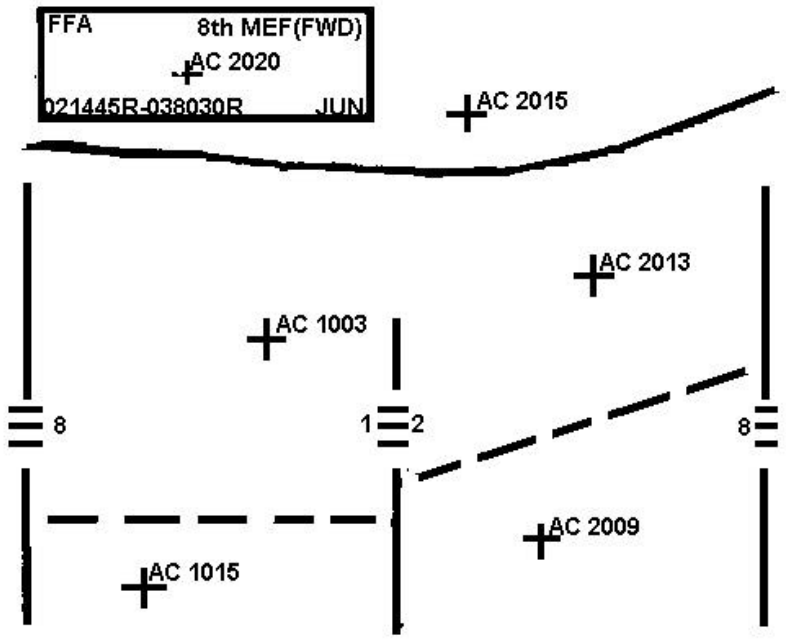


FIGURE 3-3

36. Target number AC2020 lies inside the FFA established by the MEF(FWD) commander. Thus, it may be attacked by any fire support means without further coordination. This permissive situation applies to attack of the target by aircraft as well, even if the target lies short of the FSCL.

37. Target number AC2020 lies inside the FFA established by the MEF(FWD) commander. Thus, it may be attacked by any fire support means without further coordination.

CHATER FOUR - POST TEST

1. TRUE. An RFL is applicable to **ALL** fires delivered by any fire support means.

2. The purpose of an RFL is to **PROVIDE SAFETY TO FRIENDLY FORCES BY REGULATING THE FIRES DELIVERED BETWEEN CONVERGING FORCES**.

3. The location of an RFL should be based on the recommendation of the **FSC OF THE COMMON COMMANDER OF THE CONVERGING FORCES, AND THE FSC'S OF THE CONVERGING FORCES**.

4. An RFL is established by **THE COMMON COMMANDER OF THE CONVERGING FORCES**.

5. The actual location of the RFL on the ground depends on **THE TACTICAL SITUATION, THE INTENTIONS OF THE FRIENDLY FORCES, AND THE SCHEME OF MANEUVER**.

6. If one of the converging forces is stationary, the RFL should be located AS **CLOSE AS POSSIBLE** to the stationary force. If both forces are moving, the RFL should be located **IN SUCH A FASHION THAT IT RESTRICTS EACH FORCE TO THE MINIMUM EXTENT POSSIBLE**.

7. **FALSE**. There is no specific requirement for RFLs to be located on terrain which is readily identifiable on the ground and from the air.

8. RFLs are graphically portrayed by a **SOLID BLACK LINE**. The RFL is labeled above the line with **THE LETTERS "RFL" FOLLOWED BY THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT, AND BELOW THE LINE WITH THE EFFECTIVE DTG**.

9. Once established, the location of the RFL is published by **MESSAGE**, and/or **OVERLAY**. The location is disseminated to **HIGHER, LOWER, AND ADJACENT UNITS**, as well as to **ALL FIRE SUPPORT AGENCIES, INCLUDING THE DASC**.

10. Refer to figure 4-1 on the following page. You should have labeled your RFL as shown:

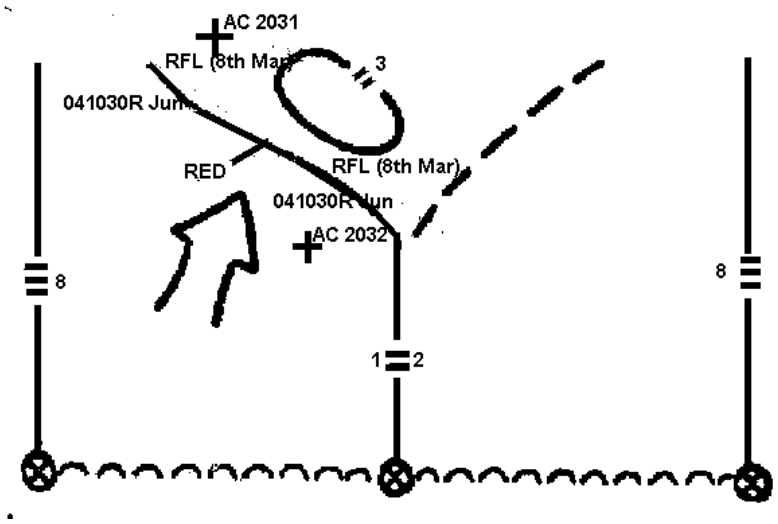


FIGURE 4-1

11. Target number AC2031 lies within the zone of 1stBn 8thMar and short of the RFL. Thus, it may be attacked with any fire support means without further coordination, assuming the effects of that attack do not cross the RFL.

12. Target number AC2032 lies beyond the RFL. Thus, if it is to be attacked by 1/8, the attack must be coordinated with the 3/8 FSCC.

13. Target number AC2032 lies beyond the RFL. Thus, if it is to be attacked by any fire support means at the request of 1/8, the attack must be coordinated with the 3/8 FSCC. Note also, however, that the attack of the target by attack aircraft may require further coordination with the 2/8 and regimental FSCCs, depending on the route of the aircraft to and from the target.

14. A specific area in which specific restraints have been used regarding the delivery of fire support is called an **RFA**.

15. An RFA applies to **ALL FIRE SUPPORT MEANS**, including the effects of those fires, with the exception of those fires which **ARE NOT SPECIFICALLY RESTRICTED BY THE COMMANDER WHO ESTABLISHES THE RFA**.

16. Any fires delivered within an RFA which exceed the specific restrictions imposed must **FIRST BE COORDINATED WITH THE COMMANDER WHO ESTABLISHED THE RFA**.

17. An RFA may be established by **ANY MANEUVER COMMANDER**, based on the recommendation of the **FSC**.

18. The actual location of the RFA on the ground depends on the tactical situation, the integrations of the friendly force, the scheme of maneuver, and **THE**

CONSIDERATIONS INVOLVED IN RESTRICTING FIRES INTO THE AREA IN THE FIRST PLACE.

19. **TRUE**. While there is no requirement in doctrinal publications to this effect, an RFA should be readily identifiable on the ground, as well as from the air.

20. An RFA can be delineated as **THE BOUNDARY OF A SPECIFIC TERRAIN FEATURE, by GRID COORDINATES, OR BY A RADIUS FROM A POINT**.

21. RFAs are graphically portrayed by a **SOLID BLACK LINE ENCLOSING THE AREA OF THE RFA**. The RFA is labeled within the enclosing line with **THE LETTERS "RFA", THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT, AND THE EFFECTIVE DTG**.

22. **TRUE**. The specific restrictions which apply to the RFA must be listed within the enclosing line, or reference must be made to a document which lists those restrictions.

23. Refer to figure 4-2 below. You should have labeled your RFA as shown.

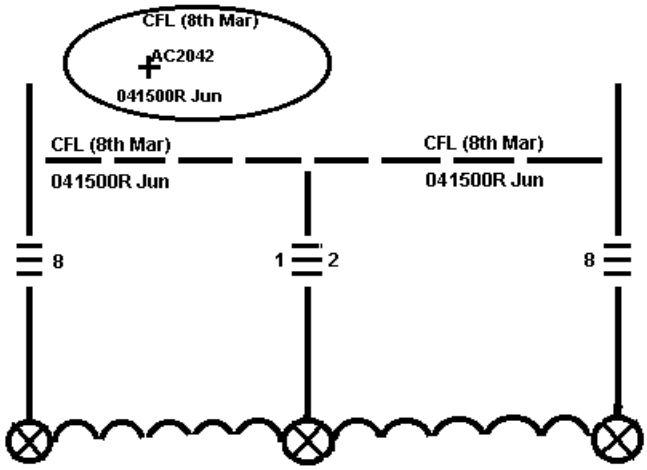


FIGURE 4-2

24. Target number AC2042 lies within the RFA, however the specific restriction which applies to the RFA is a prohibition on the use of white phosphorous ammunition. Since this mission will be fired using high explosive projectiles only, this restriction is not violated. Thus, there is no requirement to coordinate this mission with any other unit. (NOTE: The regimental CFL shown eliminates the necessity to coordinate the mission with the regimental FSCC, even though the target plots beyond the extent of 1/8 zone of action.)

25. Target number AC2042 lies within the RFA, and the specific restriction which applies is a prohibition on the use of white phosphorous ammunition. Since the 81mm mortar FO requested white phosphorous ammunition, one of two courses of action must be taken. The 1/8 FSCC can interject on the 81mm mortar conduct-of-fire net and direct that other projectiles be used, or the 1/8 FSCC can seek approval from the 8th MEF(FWD) Supporting Arms Special Staff (SASS) (the command element which established the RFA) to violate the specific restriction which applies.

26. A specific area into which no fires, or the effects of those fires, may penetrate is called an **NFA**.

27. The purpose of an NFA is to **PROVIDE A RESTRICTIVE FIRE SUPPORT COORDINATION MEASURE TO PROTECT CIVILIAN POPULATION AREAS AND/OR VITAL INSTALLATIONS FROM THE EFFECTS OF FRIENDLY FIRES**.

28. **TRUE**. An NFA applies to all fire support means.

29. There are two exceptions to the prohibition against fires within an NFA. List them in the space provided. #1: **WHEN THE COMMANDER WHO ESTABLISHES THE NFA APPROVES FIRES WITHIN THE NFA ON A MISSION-BY-MISSION BASIS**. #2: **WHEN AN ENEMY FORCE WITHIN THE NFA ENGAGES FRIENDLY FORCES, IS A MAJOR THREAT TO FRIENDLY FORCES, AND THERE IS INSUFFICIENT TIME TO OBTAIN A SPECIFIC EXCEPTION FROM THE ESTABLISHING COMMANDER**.

30. An NFA is established by the **CLF/MAGTF COMMANDER**, based on the recommendations of the **FSC OR FSO**.

31. **TRUE**. The establishment and location of an NFA is best coordinated with civilian and/or military leaders of the host nation.

32. **ANSWER C IS NOT A CONSIDERATION WHEN SELECTING THE LOCATION OF AN NFA. ANSWERS A AND B ARE PROPER CONSIDERATIONS**.

33. NFAs are graphically portrayed by a **SOLID BLACK LINE ENCLOSING THE AREA OF THE NFA**, **WITH DIAGONAL BLACK LINES DRAWN THROUGH THE AREA**. They are labeled within the enclosing line with **THE LETTERS "NFA", THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT, AND THE EFFECTIVE DTG**.
34. Once established, the location of the NFA is published by **MESSAGE** and/or **OVERLAY**. The location is disseminated to **HIGHER (IF APPLICABLE)**, **LOWER, AND ADJACENT UNITS, as well as to ALL FIRE SUPPORT AGENCIES, INCLUDING THE DASC AND ASE, AND OTHER AGENCIES WITHIN THE ACE**.

35. Refer to figure 4-3 below. You should have labeled your NFA as shown:

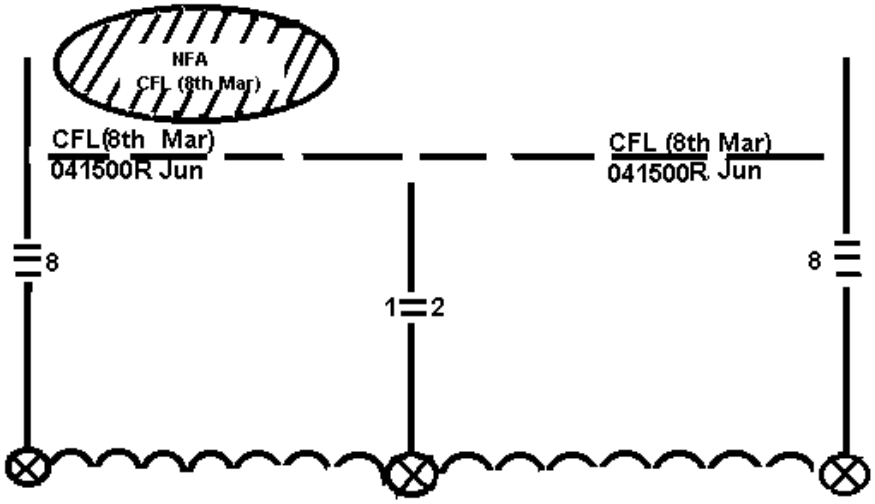


FIGURE 4-3

36. **THE TARGET LIES WITHIN THE NFA. BY DEFINITION, NO FIRES ARE PERMITTED TO BE DELIVERED WITHIN AN NFA UNLESS ONE OF THE TWO EXCEPTIONS APPLY. IN THIS INSTANCE, THE 1/8 FSCC WOULD HAVE TO OBTAIN PERMISSION FROM THE 8TH MEF(FWD) (THE ESTABLISHING COMMAND ELEMENT) BEFORE FIRING AT THE TARGET WITHIN THE NFA**.

37. **THE TARGET LIES WITHIN THE NFA. BY DEFINITION, NO FIRES ARE PERMITTED TO BE DELIVERED WITHIN AN NFA UNLESS ONE OF THE TWO EXCEPTIONS APPLY. IN THIS INSTANCE, BECAUSE THE FRIENDLY PATROL IS UNDER ATTACK FROM AN ENEMY FORCE WITHIN THE NFA, THE REQUESTED FIRES MAY BE DELIVERED WITHOUT PRIOR PERMISSION FROM THE 8TH MEF(FWD), IF THAT IS THE FASTEST AND MOST EXPEDIENT WAY TO DISENGAGE THE PATROL**.

38. An ACA is defined as a **THREE DIMENSIONAL BLOCK OF AIRSPACE IN WHICH AIRCRAFT ARE REASONABLY SAFE FROM FRIENDLY SURFACE-DELIVERED FIRES**.

39. The purpose of an ACA is to **ACT AS A SAFETY MEASURE FOR FRIENDLY AIRCRAFT WHILE ALLOWING OTHER SUPPORT ARMS TO CONTINUE TO FIRE IN SUPPORT OF THE MANEUVER FORCE OR TO SUPPRESS ENEMY SAM OR ADA**.

40. An ACA is both a **PERMISSIVE** and a **RESTRICTIVE** measure.

41. An ACA is either "formal" or "informal". A **"FORMAL"** ACA is defined as a three dimensional block of airspace. An **"INFORMAL"** ACA is defined as procedures used to facilitate immediate CAS missions or routing of helicopters when the implementation time required for formal ACA's is not available. Surface fires and aircraft can be separated by time, altitude or a terrain feature.

42. An ACA may be established by **A MANEUVER COMMANDER AT ANY ECHELON, HOWEVER NORMALLY THEY ARE NOT ESTABLISHED BY COMMANDERS BELOW THE BATTALION LEVEL**.

43. The establishment of an ACA should be based on the recommendation of the **FSC**. (ELO #1)

44. The actual location of the ACA above the ground is based on the tactical situation, **THE NATURE OF THE TARGET TO BE ATTACKED BY AIR, THE INGRESS AND EGRESS ROUTES THE AIRCRAFT WILL FOLLOW, THE TYPE OF AVIATION ORDNANCE BEING DELIVERED ON THE TARGET, AND THE NATURE OF THE ENEMY AIR DEFENSES**.

45. ACAs are graphically portrayed by **A SOLID BLACK LINE ENCLOSING THE AREA (LENGTH AND WIDTH) OF THE ACA**. The ACA is labeled within the enclosing line with **THE LETTERS "ACA", THE IDENTITY OF THE ESTABLISHING COMMAND ELEMENT, THE EFFECTIVE DTG, AND THE MINIMUM AND MAXIMUM ALTITUDES OF THE ACA, EXPRESSED IN ALTITUDE ABOVE SEA LEVEL**.

46. Once established, the location of the ACA is published by message and/or overlay. The location is disseminated to **HIGHER, LOWER, AND ADJACENT UNITS, AS WELL AS TO ALL FIRE SUPPORT AGENCIES, INCLUDING THE DASC AND ASE**.

47. Refer to figure 4-4 on the following page. You should have labeled your ACA as shown:

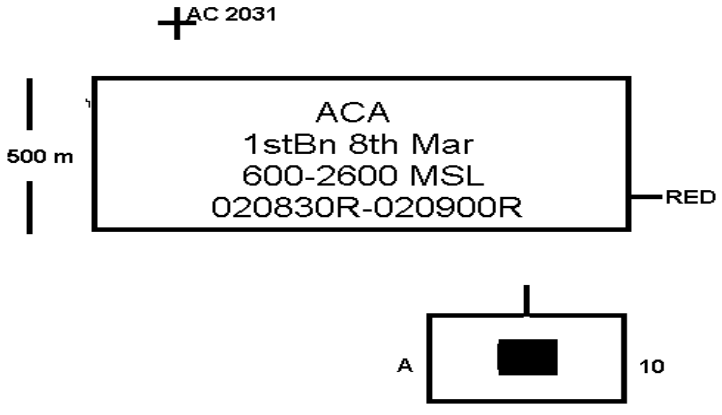


FIGURE 4-4

48. **BASED ON THE INFORMATION PROVIDED, THE TRAJECTORY OF THE PROJECTILES PASSES THROUGH THE ACA. ACCORDINGLY, THIS MISSION MAY NOT BE FIRED, UNLESS COORDINATED WITH 1/8**.

49. **BASED ON THE INFORMATION PROVIDED, THE TRAJECTORY OF THE PROJECTILES WILL PASS OVER THE TOP OF THE ACA. ACCORDINGLY, THIS MISSION MAY BE FIRED**.