
UNITED STATES MARINE CORPS
THE BASIC SCHOOL
MARINE CORPS TRAINING COMMAND
CAMP BARRETT, VIRGINIA 22134-5019

**INTRODUCTION TO FIRE
SUPPORT PLANNING
B2C0319XQ-DM
STUDENT HANDOUT**

Introduction to Fire Support Planning

Introduction

The United States Marine Corps (USMC) is one of the premier fighting organizations in the world. One of the key reasons for this status is due to the USMC's ability to integrate its supporting arms with maneuver forces creating a combined arms effect that facilitates and enables the Maneuver element's ability to accomplish their mission.

Importance

In this platform, we will be discussing how to build and brief a concise Fire Support Plan. This will facilitate the integration of fires into the maneuver scheme of maneuver and enhance combat power in order to accomplish the mission.

In This Lesson

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Learning Objectives

TERMINAL LEARNING OBJECTIVES

1. TBS-FSPT-1001 Given a scheme of maneuver, fire support available, and an order, develop a fire support plan to support the ground scheme of maneuver, in accordance with the commander's intent.

ENABLING LEARNING OBJECTIVES

1. TBS-FSPT-1001b Given an order from higher with a scheme of maneuver and fire support available, plan targets on known, suspected, and likely enemy positions, avenues of approach, or avenues of withdrawal to support the ground scheme of maneuver and meet the commander's intent.

2. TBS-FSPT-1001e Given a mission and a scheme of maneuver, request targets to support the scheme of maneuver.

3. TBS-FSPT-1001f Given an evaluation, identify target, trigger, location, observer, delivery asset, attack guidance, communication net (TTLODAC) in sequence without error.

The Purpose of Fire Support Planning

Fire support planning is the continuous and concurrent process of analyzing, allocating, and scheduling fire support and integrate it with the maneuver forces to maximize combat power. To achieve this, the Maneuver Commander must plan targets necessary to support the scheme of maneuver. The purpose of fire support planning is twofold:

- 1) To achieve effectiveness and efficiency from fire support assets in meeting fire support requirements of the force.
- 2) To determine the proper allocation of fire support.

In addition to the purpose of fire support planning, there are 13 principles that should be considered when developing a plan:

- Plan early and continuously
- Exploit all available targeting assets
- Consider the use of all available fires
- Use the lowest echelon capable of furnishing effective fire support
- Use the most effective fires support means
- Furnish the type of fire support requested
- Avoid unnecessary duplication
- Coordinate airspace
- Provide adequate fire support
- Provide rapid coordination

The Purpose of Fire Support Planning (continued)

- Provide safeguards and survivability
- Establish fire support coordination measures
- Establish communication support

Fire Support Planning Themes

All Fire Support Planning principles can be summed up into three overarching themes. These themes encompass the responsibilities of the platoon commander in developing and implementing a fire support plan during the orders process and execution of the scheme of maneuver.

THEME #1: THE FIRE SUPPORT PLAN MUST SUPPORT THE SCHEME OF MANEUVER

Fire supporting agencies have the unique responsibility to support maneuver elements, whether they be infantry or armor, with timely and accurate fires. The nature of this responsibility effectively places fire support in a supporting role during combat operations. All fires planned must be developed after the scheme of maneuver has been determined in order to ensure support and combat power for the maneuver element as they execute the scheme of maneuver.

THEME #2: THE MANEUVER ELEMENT LEADER MUST PROVIDE BOTTOM UP REFINEMENT

The fires process is not a static process; it requires constant refinement at all levels. Targeting, specifically, is a fluid and deliberate process of developing fires objectives and allowing the Maneuver Commanders that are on the ground to refine and update these objectives. It is the responsibility of the Maneuver Commander to report back all updates on targets and fires objective in order to develop a more holistic view of the battle space.

THEME #3: THE FIRE SUPPORT PLAN MUST BE EXECUTABLE

The nine principles of war are not lost on fire support planning. It is imperative for the Maneuver Commanders to develop and implement fires plans that are in keeping with the principles of war, specifically simplicity. This will allow subordinates to better understand and implement the fire support plan in the absence of the Maneuver Commander.

Targeting

Targeting is the meticulous and deliberate process of selecting fires objectives and matching the appropriate response to those objectives by taking into account the operational requirements and capabilities of available fires assets. This is an integral part of the planning process based on a detailed estimate of the situation (METT-T). The purpose of targeting is to develop a plan that best supports the Maneuver Commander's scheme of maneuver

Targets

A target is any object, or any person, group of persons, or force marked for destruction, damage, injury, or capture because of its direct or indirect use in the conduct or support of an enemy's military endeavor:

Planned Targets: targets planned in advance before execution of an operation. This usually occurs while still in the Assembly Area (AA) or between operations in a relatively "safe" location such as an Objective Rally Point (ORP).

Targets of Opportunity: targets that appear on the battlefield but were not expected or foreseen. These targets can be engaged as they appear using a Call for Fire (CFF). These types of targets are covered in the Call for Indirect Fire Platform.

In the planning stage of an operation, planned targets are crucial in the development of the Maneuver Commander's plan. Planned targets provide combat power to the Maneuver Commander's scheme of maneuver and eases the pressure on the maneuver element. There are four types of planned targets that need to be understood and mastered.

1) On-Call Targets: These are targets that have been coordinated with Higher Headquarters in the form of COC coordination.

- On-call targets have assigned to them a target number facilitating a fast request for fire support.
- On-call targets with their target numbers can be found in the Target-List Worksheet.
- Supporting arms will deliver a predetermined type and amount of munitions when requested.
- Provide responsiveness and flexibility on time of delivery, such as in the defense when we do not know when the enemy will attack.

Example: On-Call target radio transmission

Archangel de Raider FO, Fire Tgt # AB 1000
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Targets (continued)

2) Scheduled Targets:

- Simply on-call targets with a timeline associated with them..
- Fired at a specific time.

Example: Scheduled target radio transmission

Archangel de Raider FO, set Time on Target (TOT) Tgt # AB1001 for 1500
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3) Priority Targets: These targets are primarily used in offense operations such as patrols or Movement to Contact when rapid fires response are needed. These targets are similar to on-call targets, with a few key differences. When requested, priority targets take priority over all other requests. Supporting units set the priority target data on their guns and lay the guns on that target. Priority targets are designated at the discretion of the maneuver commander and may be shifted or changed as the supported unit moves forward. A firing unit can have a priority target or a final protective fire (FPF) but not both.

Example: Priority targets radio transmission

Archangel de Raider FO, establish priority Tgt # AB 1002
Archangel de Raider FO, cancel priority Tgt # AB 1002 and establish priority Tgt # AB1003
Archangel de Raider FO, fire priority Tgt # AB 1003
Archangel de Raider FO, cancel priority Tgt # AB 1003 and establish priority Tgt # AB1004

4) Final Protective Fires (FPF): These are targets are used only in defensive operations. ***The FPF is the only priority target in the defense.***

- Offer an immediately available prearranged barrier of fire designed to impede enemy movement across defensive lines or areas. This allows friendly units to re-deploy to alternate position or to break contact.
- FPFs are always linear targets.
- Only one FPF can be assigned per firing unit. When not engaged in fire missions, artillery and mortar units set FPF data on their guns and lay on their assigned FPF targets.
- The command to fire the FPF can only be given by the Commanding Officer of the unit or, in their absence, the next most Senior Marine present and able to approve the call.

Targets (continued)

Example: FPF target radio transmission

Archangel de Raider FO, Fire the FPF

As Maneuver Commanders develop their fire support plan using the four types of planned targets, they must follow the engagement criteria and order of precedence when planning targets on enemy positions. Fires are planned to target:

Known Enemy Positions: Are enemy units that have been located with a great degree of certainty and there is current visibility to the enemy unit's position or location.

Suspected Enemy Positions: Are enemy units that have been located without a degree of certainty or have been accurately located but are mobile and may move away. This is based on the concept of time. The enemy units were at a location at a certain time, but may have recently moved.

Likely Enemy Positions: This relies solely on the Maneuver Commander's METT-TC analysis. The primary question is where would the Maneuver Commander place his forces if he was the enemy? This is the most subjective of the three criteria and last in precedence when planning.

Targeting tools and techniques

When developing targets there are standardized techniques and graphics that must be used. This allows for uniformity and a clear understanding not just within the Marine Corps but across all U.S. military services.

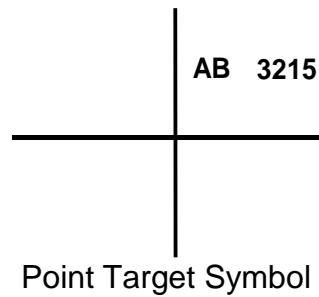
Target Symbols

The basic symbol used in fire support planning is the target symbol. Target symbols relate to personnel, or material that are designated and numbered for reference and / or firing. There are two basic target symbols that must be understood and employed correctly: Point Targets and Linear Targets.

1) Point Targets: The fundamental symbol used for a point target is a cross (tick mark).

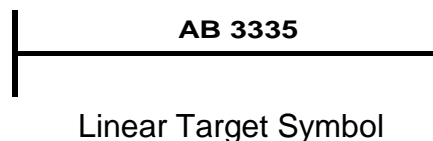
- The location of this target is normally given by a grid zone designator and at least a six-digit grid coordinate.
- Point target symbols are identified by a six-digit alpha numeric number in the upper right quadrant.
- Point target symbols are used for targets that are less than or equal to 200 meters in length and width.
- Point target symbols are drawn and labelled in black

Targeting tools and techniques (Continued)



2) Linear Targets: The fundamental symbol used for a linear target is a straight line with two end marks. The location of this target is comprised of three components: center grid, length, and attitude.

- The center grid is given with a grid zone designator and at least a six-digit grid coordinate. This grid must be the location of the center of the target.
- The length must be greater than 200 meters but less than 600 meters
- The attitude is the orientation of the linear target. This is always given in mils grid between 0 – 3199 mils. Attitude is never given between 3200 – 6399.
- Linear target symbols are identified by a six-digit alpha numeric number above the target symbol.
- Linear target symbols are drawn and labelled in black.



Calculating Linear Target Lengths

Lengths of linear targets are determined by conducting a simple mathematical equation. The Maneuver Commander multiplies the number of tubes / howitzers within a firing agency by the effective casualty radius (ECR). This length provided is the maximum length that firing agency can effect without exterior support.

Targeting tools and techniques (Continued)

For example:

Mortars	
60 mm	(3 tubes in mortar section) x (30 meters ECR) = 90 meter length
81 mm	(8 tubes in mortar platoon) x (35 meters ECR) = 280 meter length
	Or (4 tubes in mortar section) x (35 meters ECR) = 140 meter length
Artillery	
155 mm	(6 howitzers in battery) x (50 meters ECR) = 300 meter length

Calculating attitude on a Linear Target

This can seem like a difficult, if not, confusing task. However, the following steps will facilitate the calculation of attitude on both linear targets and FPFs.

- 1) Plot the center grid of the linear target.
- 2) With a straight edge, draw a line of the desired orientation of the target (i.e. along a road or a terrain feature) from the center grid to the right of the target.
- 3) Place the center of the protractor on the center grid point.
- 4) Where the line intersects the protractor on the right side of the protractor is the attitude of the target expressed in mils grid from 0000 - 3199.

Fire Support Planning Considerations

When conducting fire support planning there are three main considerations that need to be taken into account in order to effectively plan and coordinate fires prior to executing an operation.

Enemy Threat Rings

Enemy threat rings are the distances an enemy's weapon systems can have accurate effects on friendly maneuver forces. This requires the Maneuver Commander to study and understand the enemy's composition, disposition, and strength. Enemy threat rings are solely a consideration not the determining factor of fire support planning. Ideally, the Maneuver Commander wants to employ fires before the maneuver element comes within range of the enemy's weapon systems.

Fire Support Planning Considerations (continued)

Risk Estimate Distances

Risk estimate distances are the distances between friendly troops and friendly fires. Upon employing fires, the Maneuver Commander always takes risk that those fires will also effect friendly units. Risk estimate distances provide the minimum distance a friendly unit can get to fires without suffering catastrophic friendly casualties from friendly indirect fire. This is not to be confused with Danger Close. Danger Close is a warning that friendly troops are in the area. Risk estimate distances are a hard line that limit how close friendly units can get to friendly indirect fire.

System	Description	Range	0.1 % Probability of Incapacitation	
			Standing	Prone
M224	60 mm Mortars	1/3 Max Rg	115 m	115 m
		2/3 Max Rg	125 m	120 m
		Max Range	145 m	145 m
M252	81 mm Mortars	1/3 Max Rg	170 m	160 m
		2/3 Max Rg	195 m	190 m
		Max Range	195 m	185 m
M777A2	155 mm Howitzer	1/3 Max Rg	300 m	285 m
		2/3 Max Rg	460 m	440 m
		Max Range	695 m	665 m

Requesting and Coordinating Fires

The act of requesting and coordinating fires is called COC coordination. During COC coordination, the Maneuver Commander is required to provide documentation with pertinent fire support information in order to facilitate the planning of fires; this document is called the List of Targets. Once the List of Targets (request) is received and approved, the COC will issue another document to the Maneuver Commander called the Target-list Worksheet (confirmation of the request). This document assigns target numbers to the approved targets.

List of Targets: This is a document created and submitted by a subordinate unit to the COC with all targeting information. This list is strictly a request that contains all targets the subordinate commander feels are necessary to be engaged with indirect fires in order to support the scheme of maneuver. ***The List of Targets does NOT have target numbers.***

Target-list Worksheet: This is a formal document created at the highest level of command consolidating all List of Target submitted from all units with redundancies removed. Once the Higher receives and approves targets from the List of Targets, the approved targets are disseminate in the Target-list Worksheet. ***The difference between a List of Targets and Target-list Worksheet is that the Target-list Worksheet WILL HAVE assigned target number.***

Target List Worksheet

TARGET LIST

SHEET ____ OF ____

LINE NO	TARGET NO	DESCRIPTION	LOCATION	ALTITUDE	ATTITUDE	SIZE		SOURCE ACCURACY	REMARKS	A1 C	A2 C	H C	EV
						LENGTH	WIDTH						
1	AC2000	KNOWN EN PLT	UT 657592	440	2400	300							
2	AC2001	SUSPECTED AA	UT 723464	480			1000						
3	AC2002	LIKELY POL SITE	UT 738575	430	1100	400	200		HE/WP				
4	AC2003	SUSPECTED BN CP	UT 725458	490									
5	AC2004	KNOWNZSU 23-4	UT 728461	500									
6	AC2005	LIKELY D30 POS	UT 769541	420									
7													
10													
11													
12													
13													
14													
15													

Target Number. Assigned to each from the block of numbers given to the planning source.

Location and Altitude. Determine grid (at least 6 digits) and altitude (always in meters) as accurately as possible. Grid zone may be required if operating off multiple map sheets.

Description. Use the best available target description. This is key for determining the right ammunition requirements and firing agencies.

Line No. An administrative control measure for internal use for transmitting data by radio/wire. Each target is assigned a line number. Line numbers are assigned consecutively from page to page.

Attitude. Attitude is the orientation of a linear or rectangular target on the ground. It is always a direction in mils. Attitude is always between 0-3200mils. Determination to the nearest 100 mils is sufficient.
 0 mils = N or 0 degrees,
 1600 mils = E or 90 degrees,
 3200 mils = S or 180 degrees
 4800 mils = W or 270 degrees

Size.
 Point Target: no dimensions
 Linear Target: length only
 Rectangular target: length and width
 Circular Target: width (radius) only

Remarks.
 Additional target description or specific ammunition.

These columns are used to help in planning fires in a schedule. When creating the target list, place a "/" in the block opposite the target if it is to be fired in a schedule. Once it has been scheduled (scheduling worksheet), place a "\ in the same box to form an "X".

Priority of Fires

Priority of fires establishes a precedence in which calls for fire will be answered. This only pertains to simultaneous calls for fire. A unit will be designated a priority for a supporting firing agency. Priority of fires may be given for all fire support means in accordance with the relative importance of a unit's mission. Units that have priorities of fire will typically be given priority targets or FPFs to plan.

The Fire Support Plan

A Fire Support Plan is simply a tactical plan containing information necessary for the employment of fire support during an offensive or defensive operation. All pertinent information can be pulled from Higher's order from Paragraph 1 – Situation, sub-paragraph Friendly under Supporting or in Paragraph 3 – Execution, sub-paragraph Concept of Operations under Fire Support Plan.

When Higher provides a fire support intent it will be distributed in three broad categories: Priority, Allocation, Restrictions. From these categories, the Maneuver Commander must create an Essential Fire Support Task (EFST) for each offensive phase or defensive types of fires target.

The Essential Fire Support Task consist of four main parts: Task, Purpose, Method, and Effect.

- 1) Tasks:** Task are enemy centric that describes the targeting objective that fires must achieve against a specific enemy formation's function or capability.
- 2) Purpose:** The purpose is friendly focus and emphasis the "why" of the operations. This should reinforce the supporting role of fires in relation to the scheme of maneuver.
- 3) Method:** The method is the targeting information and fire asset that will be used to accomplish the objectives of the FSP. This consists of seven elements: **T**arget, **T**rigger, **L**ocation, **O**bserver, **D**elivery System, **A**ttack Guidance, and **C**ommunication Net (TTLODAC)
- 4) Effects:** Attempts to quantify successful accomplishment of the task. It provides a measure of effectiveness for the task.

Creating a Fire Support Task

When creating a Fire Support Task there are five steps that must be followed in order to effectively create a plan that will support the scheme of maneuver.

- 1) Determine the critical event for the phase
- 2) Determine the appropriate sequence of events to ensure mission accomplishment

The Fire Support Plan (Continued)

- 3) Set conditions t
- 4) Identify and assess the fire assets available
- 5) Develop your FSP based off this analysis

Once availability of fires and need of fires has been determined, the Maneuver Commander must create the Method portion of the EFST. This consists of creating a TTLODAC that will be briefed during the orders process.

TTLODAC

Target: This consists of two parts: the target number and target description.

- 1) Target Number: comes from the Target-list Worksheet where higher has approved the target and provided an identification number.
- 2) Target Description: provides a description of what is targeted. This must be prefixed with known, suspected, or likely. It is essential to be clear and concise, and briefly describing the target. If you have not received a Target List Worksheet from higher, it is appropriate to just use a target description.

Tigger: This is the condition to fire the target. At the occurrence of that event, the target must be fired. For scheduled targets, the trigger will be associated with a time. At no point is it acceptable to make the trigger on order or on signal. The trigger is always associated with an event.

Location: This consist of a grid zone designator and at least a six-digit grid. Eight digit grids are preferred.

Observer: There must always be a Primary and Alternate observer assigned to any target. The Observer will always be an individual that can best observe the effects of the fires requested. This may not always be the Platoon Commander or Squad Leader. However, it must be a Marine that is trusted with the responsibility to execute and observe fires.

Delivery System: Here is where the Maneuver Commander assigns the fire support asset to be used in the execution of the fire support plan. There must be a primary and alternate weapon system in order to ensure redundancy in fires planning.

Attack Guidance: Here is where the Maneuver Commander delineates what type of ammunition is to be used during the fire mission based on the target description provided above. This section must also be divided into primary and alternate ammunition based on the fire support asset requested in the delivery system section. Also, special instructions for each target can also be conveyed in this section.

The Fire Support Plan (Continued)

Communication Nets: These are the nets that will be used to access both the primary and alternate fire support asset. There are three communication nets that must be known and understood in order to correctly communicate with the appropriate firing agency.

Example Fire Support Plan:

Fire Support Plan – Target 1

Target: AB 1010 / Likely EN LP/OP

Trigger: Upon visual of LP/OP

Location: TH 870 663

Observer: Primary: 1st FT Leader / Alternate: 1st Sqd Leader

Delivery System: Primary: 60mm Mortar / Alternate: 81mm Mortars

Attack Guidance: Primary: HE/Prox / Alternate: HE/ Prox

Comm Net: Primary: Co TAC Net Freq 455 / Alternate: Bn Mortar Net Freq 450

Fire Support Plan – Target 2

Target: AB 1015 / Known EN Fire TM (+)

Trigger: As the Sqd departs the Aslt POS online

Location: TH 874 667

Observer: Primary: Sqd Leader / Alternate: 1st FT Leader

Delivery System: Primary: Artillery / Alternate: 81mm Mortars

Attack Guidance: Primary: HE/PD / Alternate: HE/ Quick

Comm Net: Primary: Arty COF Freq 500 / Alternate: Bn Mortar Net Freq 450

SUMMARY OF FIRE SUPPORT PLAN:

Fires are employed in a supporting role in order to enable and facilitate the accomplishment of the mission. When creating and briefing the Fire Support Plan it must always be briefed using TTLODAC. The effective use of supporting arms can mean the difference between victory and defeat. The tools presented in this lesson, along with the practical application training you will execute during the platform are the first steps in understanding how to best use this force multiplier.

References

Reference Number or Author

Reference Title

MCTP 3-01D

Tactical Employment of Mortars

MCWP 3-31

Marine Air-Ground Task Force Fires

MCTP 3-10F

Fire Support Coordination in the Ground Combat Element

MCWP 3-16.6A

Supporting Arms Observer, Spotter, and Controller (JFIRE)

FM 3-60

The Targeting Process

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.